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COMMONS CELL
NATIONAL LAW SCHOOL OF INDIA UNIVERSITY
Nagarbhavi, Bangalore 560072

ONE WEEK TRAINING PROGRAMME

FOR

INDIAN FOREST SERVICE OFFICERS

ON

# "INTERNATIONAL AND NATIONAL ENVIRONMENTAL ISSUES AND MITIGATION MEASURES"

2nd TO 6th DECEMBER, 2013,

AT

NATIONAL LAW SCHOOL OF INDIA UNIVERSITY, BANGALORE,
ORGANISED IN ASSOCIATION WITH
MINISTRY OF ENVIRONMENT AND FORESTS,
GOVERNMENT OF INDIA, NEW DELHI.

## PREFACE

*Dear Participants,*

*Welcome to the National Law School of India University, the Citadel of Learning and skill-building in Law, in India. The one week long legal Capacity-enhancing exercise for the Senior Officers of the Forest and Wildlife Service, from all over India, backed by the Ministry of Environment and Forests, requires knowledge enhancement and sharpening skills in International and Domestic Forest- related laws, in the Managers of the Forest and Wildlife Environment. The Programme is hosted by the Commons Cell and the Centre for Environmental Law Education , Research and Advocacy (CEERA), in the National Law School of India University (NLSIU), which is celebrating its Silver Jubilee this academic year. While the Sessional Presentations and Participation are expected to help build the skills of application of the law, the Course Material on hand is expected to contribute to widening the horizons of understanding and deepen the insights of the participant.*

*As the contents reveal, the materials are organized to align with and supplement the sessional deliberations, each day. The materials for the first day would have reflections on the developments at the international level that have a bearing on environmental governance in general and Forest and Wildlife Administration in particular. Readings for the Day Two focus on the developments in the Biodiversity-related laws that are bound to attract the attention of the Foresters in the years to come. Day Three Browsings include issues of and interpretations over Forest Conservation and Eco-System Conservation as a Heritage. Communitarian engagement in Forest Management gets its due attention in the Materials for the Fourth Day and the Final Day Readings round up the jurisprudential discourse with writings that include, Wetlands Conservation and Trade in Endangered Species. The materials so made available to you are intended to serve as appetizers, inviting the interested ones to the treasure trove of knowledge stored in our library and available online in our Web Portal www.nlsenlaw.org.The expectation is that the participant, required to arrive the day prior to the commencement of the Training, would be in the know of and prepared for deliberations of the next day, before the commencement of the days' proceedings.*

*The materials are assembled by our young and talented team led by Mr.Manjeri Subin Sunder Raj, Senior Research Officer and Mr.Chiradeep Basak, Research Officer with the assistance of Mr. Zahid Nazir, Mr. Yadukrishnan, Ms. Jaya Chaturvedi, Ms. Soumyanetra, Ms. Darshana and Mr. Anil Sebastian, Research Fellows, Commons Cell and CEERA. They were also ably assisted by Ms.Baba, Secretary and Ms.Pushpa Shinde, Web Portal and Documentation Consultant. The entire effort, including the Training Progrmme is inspired, blessed and guided by Prof (Dr.) R.VENKATA RAO, our Vice Chancellor, for whose support and help I remain grateful.*

*Once again, Welcome to a reading of the Course Materials.*

*Dr.M.K.Ramesh*

*Professor of Law*

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# 20th Anniversary of the Rio Summit

## Taking a Look Back and at the Road Ahead

*Rio+20 should be a time of reflection and decision. Despite considerable institution building since the UNCED in 1992, many sustainability issues, including climate change, biodiversity loss, poverty, and access to basic human needs (e. g., clean water and sewerage treatment), remain. Rio+20 needs to focus greater attention on the barriers to progress as well as possible solutions, such as greater attention to the potentials offered by a green economy. Rio+20 must also set new concrete goals and targets for action that take into account the natural and resource constraints facing the planet.*

*Miranda A. Schreurs*

**20th Anniversary of the Rio Summit. Taking a Look Back and at the Road Ahead**

*GAIA* 21/1 (2012): 13–16 | **Keywords:** Agenda 21, biodiversity loss, climate change, green economy, Rio+20, sustainable development

Introducing our focus, ***Rio+20 – 20 Years after the Earth Summit,*** *Miranda A. Schreurs* reflects on the development of global environmental politics. *Daniel Wachter* then takes stock of two decades of national sustainable development strategies, based on the Swiss experiences. *Beate Jessel's* article discusses the success and failure of the *Convention on Biological Diversity (CBD)* and its influence on conservation policy. Finally, *Ulrich Brand* takes a critical stance on the promises of a green economy, one of the main topics of *Rio+20*.

The *Rio+20 Conference* is an important chance to consider how we as a global community are doing in dealing with pressing global problems, including climate change, biodiversity loss, resource depletion, and large-scale social inequalities. To what extent has the concept sustainable development been embraced and institutionalized? What are the main barriers to progress? We must use the opportunity offered by *Rio+20* to focus attention on what additional steps can be taken to address these critical issues given the many barriers to action that exist.

### *Stockholm 1972:* Global Environmental Issues Receive International Recognition

The 1972 *United Nations Conference on the Human Environment* (*UNCHE* or *Stockholm Conference*) is widely recognized as the first truly global conference to focus attention on the environmental pressures facing the planet and the living conditions of the poorest. Much of this conference concentrated on the need to introduce structures and institutions for pollution control and to push for the use of environmental impact assessments. Pressure was placed on states to introduce measures to control air, water, and soil pollution, to monitor environmental conditions, and evaluate progress. Developing countries voiced their concerns that not enough was being done to address worldwide poverty.

The common effort to develop an international environmental politics is reflected in the 26 principles of the *Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration)*. Principle 2 of the *Stockholm Declaration* calls attention to the importance of preserving the environment for not only the current but also future generations: "The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate". Principle 4 points to our responsibility to protect and "wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled (...)". Principle 5 highlights the importance of safeguarding against the danger of the future exhaustion of non-renewable resources of the earth and ensuring that benefits from their use are shared by all. And, principle 6 points to the need to control the release of toxic and other substances that "exceed the >

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capacity of the environment to render them harmless (...) in order to ensure that serious or irreversible damage is not inflicted upon ecosystems".

In many ways, it can be argued that the *Stockholm Declaration* was the first effort to address sustainability concerns at the international level, and to have this embodied in an internationally agreed manifesto. Many of the principles issued speak to the basic sustainability concerns that still must be addressed at *Rio+20*.

Certainly much progress has been made (primarily in wealthier countries) in improving air quality, reducing water pollution, banning or controlling the use of many toxic chemicals, and finding new, ecologically less hazardous ways to manufacture many products. Capacities for environmental governance were strengthened through the creation of particular national administrations, framework legislation, and various international bodies, including the United Nations Environment Programme (UNEP). Moreover, the number and kinds of environmental actors grew steadily – international, national, and local groups, think tanks, international bodies addressing these critical matters, and green-leaning political parties.[1]

Yet, basic economic growth models remained largely unchallenged, and environmental protection was dominated by end-of-pipe pollution control solutions. It was not until the Brundtland Commission report in 1987, *Our Common Future*, that a global debate about the need for new approaches to growth and development that recognize resource constraints, address global inequalities, and protect the environment for the enjoyment and use of this and future generations was initiated.[2]

## *Rio 1992:* An All Encompassing Approach, but with Limited Results

By the time of the 1992 *United Nations Conference on Environment and Development (UNCED)* in Rio de Janeiro there was growing global concern that in our rush to develop, the very future of the planet was being put at risk. Building on the success of the Montreal Protocol that was formed in 1987 to ban chemical substances (primarily chlorofluorocarbons) that destroy stratospheric ozone, there was a sense of urgency about developing similar global agreements to address the pressing problems of climate change, biodiversity loss, and tropical deforestation, and promoting sustainable development.[3] The *UNCED* concluded with the formation of the *Convention on Biological Diversity (CBD)*, a largely forgotten set of forestry principles, and the *United Nations Framework Convention on Climate Change (UNFCCC)*. It also led to the formation of *Agenda 21*, an action plan for sustainable development. Let's have a closer look at the achievements and deficits of each of these.

### Biological Diversity

The *CBD* was established to address the rapid extinction of plant and animal species as a result of human settlements, economic and agricultural activities, land use change, pollution, poaching, and other factors. It has three straight forward objectives, as article 1 states: "(...) the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources (...)". In 2002, the *World Summit on Sustainable Development* endorsed a goal of achieving a significant reduction in the current loss of biodiversity by 2010. It was not met.

At the meeting in Nagoya, Japan, in 2010, several new targets were established: to cut in at least by half the loss of natural habitats, expand nature reserves to 17 percent of global land area by 2020 (current levels are about ten percent), and expand marine protected areas from about one percent of the world's seas to ten percent. Countries are expected to draw up national plans for biodiversity preservation. Agreement was also reached in a Nagoya Protocol for rules on how countries should share benefits derived from genetic resources. Despite inadequate funding and a failure to meet initial biodiversity loss reduction goals, there has been less political acrimony in relation to the biodiversity negotiations than has been the case in the climate change negotiations. Land under some form of protection status is undoubtedly increasing. Still, more needs to be done to prioritize biodiversity preservation and to convince governments and societies of the importance of protecting especially the most biodiverse areas of the planet.[4]

### Climate Change

In relation to climate change, article 2 of the *UNFCCC* called for a "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". Notably, the preamble to the convention also addressed the importance of inter-generational equity calling for the protection of "global climate for present and future generations of mankind". In 1997, the Kyoto Protocol was negotiated with great fanfare and eventually came into force in 2005.

Yet, at the beginning of the 2010s, global greenhouse gas emissions continue to grow at alarming rates. Few countries are on a trajectory to reduce their greenhouse gas emissions or growth in those emissions on the magnitude that will be necessary to limit global warming below levels considered dangerous by the scientific community.

Moreover, the Kyoto Protocol has lost the support of key countries. Although the Protocol did set into place new institutions for addressing greenhouse gas emissions both nationally and internationally (e.g., the Clean Development Mechanism, Joint Implementation, emissions trading) and helped to raise awareness in many parts of the world about climate change, it was not

1 For a useful overview of 40 years of efforts to address global environmental and sustainability challenges see Conca and Dabelko (2010).
2 An in-depth exploration of the concept of sustainable development is provided by Baker (2006).
3 The development of international environmental law between Stockholm and Rio and its limitations are discussed in Paellemaerts (1992).
4 For a thorough discussion of the success and failure of the *CBD* and its influence on conservation policy see Jessel (2012, in this issue).

ratified by one of the biggest emitters – the United States. They criticized the agreement as ineffective and unfair as it did not require developing countries to take action to limit the growth in their emissions. More recently, Canada, which has seen its greenhouse gas emissions rise enormously over the past two decades, has formally withdrawn from it. Although the European Union was able to keep the Kyoto Protocol alive in the Durban climate negotiations, reaching a common accord on a second phase of the agreement to cover the period from 2013 to the still undecided date of either 2017 or 2020, Japan and Russia have indicated that they will not take on any new commitments. Thus, while the Kyoto Protocol was salvaged in Durban, its future looks dim.

There is still some hope that an international climate agreement could be reached in the coming decade. In Durban, a consensus was forged to continue to work towards the establishment of a new climate agreement by 2015 that should be enforced by 2020. But what it is to look like and whether key countries will ratify it, remains an open question. In the meantime, the international community is also guided by the Cancun Agreement, a non-legally binding statement of national intentions for cooperation on climate change. Its objective is to keep global average temperatures from rising above two degrees Centigrade above pre-industrial levels. Under the agreement, countries set voluntary greenhouse gas emission targets for 2020 and established new mechanisms for aiding developing countries with addressing and adapting to climate change (the Green Climate Fund, a Technology Mechanism) and deforestation *(REDD, Reducing Emissions from Deforestation and Forest Degradation)*. Yet, whether the international community will reach a settlement which can slow the growth in global greenhouse gas emissions and eventually reduce those emissions, remains highly uncertain.

### Sustainable Development

*Agenda 21* is an action plan established at the *UNCED* with 40 chapters addressing areas for action for sustainable development. They focus on such issues as poverty, consumption, human health and settlements, combating deforestation, protecting oceans, workers' rights, children's rights, and means for implementing these and other goals. In many ways, *Agenda 21* was broad and encompassing, trying to integrate thinking related to environmental degradation, poverty, governance and participation. In response to *Agenda 21* a Commission on Sustainable Development was formed and many countries established national level sustainable development commissions.[5]

The *World Summit on Sustainable Development* in 2002 in Johannesburg, South Africa, reaffirmed the importance of the issues addressed in *Agenda 21* as well as the *Millennium Development Goals* – targets for measuring progress on some of the most basic human needs and rights. The *Millennium Development Goals* call for the eradication of extreme hunger and poverty, achieving universal primary education, promoting gender equality, reducing child mortality rates, improving maternal health, ensuring environmental sustainability, combating HIV/Aids, malaria, and other diseases, and promoting a global partnership for development. 2015 has been set as a date for achieving specific targets related to these various goals.

Some of the *Millennium Development Goals*, for example reducing by half the number of people without access to safe drinking water, appear to be on target. Yet, some of them, for example reducing by half the number of people without access to sanitation services appear unlikely to be met. Above all, over a billion people still live without access to electricity and millions live on the edge of survival. Clearly much more needs to be done.

To sum up, when we take stock of *CBD, UNFCCC,* and *Agenda 21*, it becomes clear that international efforts to address these challenges remain insufficient. The snail's pace at which the international climate negotiations have moved forward and the failure to slow the pace of biodiversity loss are matters of great concern. 20 years of international efforts to deal with climate change and biodiversity loss through the formation of global agreements have met with only limited success.[6] While it is important not to abandon these efforts, it is equally important to simultaneously pursue alternate paths of action.

## *Rio+20* and the Road Ahead

What does all this mean for *Rio+20*? Many of the most basic matters related to sustainable development, environmental protection, poverty, global biodiversity loss and climate change have been on the international negotiating table for between 20 and 40 years. There has been progress in moving from broad statements to more concrete, measurable, and verifiable goals. There has been considerable capacity building for environmental protection and sustainable development, and there is a far greater understanding of the pressures facing the planet.

Yet, with the global population now at seven billion – compared to an estimated 1.2 billion in 1850 – and expected to grow to at least nine billion by 2050, the pressures on the planet are enormous and certain to get heavier. This is despite the fact that population declines are being experienced in parts of Europe, Japan, South Korea, and Russia.

There is also the problem that income inequalities remain extreme within many countries as well as between them. A very small share of the world's richest people are responsible for the vast majority of global resource consumption.

At the *Rio+20 Conference* to be held in Rio de Janeiro in 2012, attention needs to focus on some of the underlying problems that continue to hinder progress on achieving climate change, biodiversity protection and sustainable development goals as well as developing effective global agreements. >

5 For a broader discussion of national sustainable development strategies see Wachter (2012, in this issue).

6 In reviewing trends in the emphasis placed on different environment and development priorities in over three decades of UN-based negotiations, Galizzi (2005) emphasizes the need to focus more attention on environmental risks in the negotiations.



3

To remove structures that support unsustainable economic activities is one pressing matter. Many apparent and hidden subsidies help preserve the environmentally harmful exploration and exploitation of energy and mineral resources. Subsidies, be it for the use of fossil fuels, or be it for the promotion of agricultural development at the expense of biodiversity and nature conservation, should be phased out.

Financial institutions can be named, too. Their lending practices often pay no heed to the environmental sustainability and social impacts of the supported projects. Therefore, sustainability criteria should be tied to (international) financing operations.

Green public procurement should also be promoted. Governments tend to be the largest consumers of energy and resources in most countries. With the introduction of green purchasing requirements for energy, products, and resources, governments can reduce their environmental footprints and lead the way for industries and consumers to follow. Sustainability requirements can also be linked to all government supported projects. For example, publicly funded construction should pay attention not just to short-term economic costs, but also to the construction materials used in their building and to the sustainability of their long-term demands for energy for heating and cooling. Positive incentives for the use of renewable resources and renewable energies should be encouraged through feed-in-tariff and quota schemes. Luxury consumption should be more heavily taxed.

*Clearly, more needs to be done to think about where the planet's ecological limits are.*

Many of these ideas can be subsumed under the concept of green growth. Governments and economic actors need to be won over to the idea that long-term well-being is linked to economic development that is energy and resource efficient and protective of biodiversity.[7] Despite an awareness of the health and environmental consequences of pollution, there remains a strong belief in many parts of the world that environmental protection can only be achieved after economies develop. This mindset needs to be changed. Development and environmental protection must come hand in hand. More industrialized countries have an obligation to be first movers, shifting away from the many unsustainable economic structures and practices of the past to cleaner, more resource respecting economic processes. They also need to significantly strengthen partnerships that can facilitate action in developing countries.

In essence, greater attention needs to be returned to some of the most basic points raised in the *Stockholm Declaration* in 1972: the need to manage wisely the limited and non-renewable resources of the planet and the importance of respecting the rights and interests of future generations.

More needs to be done to think about where the planet's ecological limits are – points beyond which tipping points could be reached (e.g., with climate change, biodiversity loss, over-fishing, mineral extraction), and what can be done to reduce the possibility of coming close to such dangerous limits (e.g., Rockström et al. 2009). Similarly, much as was started with the *Millennium Development Goals*, a wider and more ambitious set of goals needs to be set for the future. They should be tied to an understanding of the ecological limits facing the planet. They should include short-, medium-, and long-term time horizons.

*Rio+20* could do much to reemphasize the importance of the concept of sustainable development. This is a concept that has both benefited and suffered from its broad, integrated approach to looking at development, environment, and societal issues. It is precisely these interactions that will determine the quality of life and the availability of natural resources for this and future generations.

The tasks ahead remain daunting – and it is easy to become pessimistic. Yet, human creativity is a powerful force. What we now need is the political will to support action towards greater sustainability.

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7 For a critical view on green economy strategies see Brand (2012, in this issue).

# Green India Mission:
# India's REDD+ Action Plan to disempower and evict forest communities from their own homelands

EQUATIONS

December 2011

*The Government of India announced it's first ever National Action Plan on Climate Change (NAPCC) in June 2008 to identify measures and steps to advance climate change-related actions in its domestic sphere. One of the eight missions is the Green India Mission (GIM), which was 'launched to enhance eco-system services including carbon sinks to be called Green India.' This paper highlights the international political agenda motivating the agenda of the Mission as well as how it impacts communities, forest governance and therefore access to forest rights.*

**Background**

Government of India announced it's first ever National Action Plan on Climate Change (NAPCC) in June 2008 to identify measures and steps to advance climate change-related actions in its domestic sphere. Eight National Missions in the areas of solar energy, enhanced energy efficiency, sustainable agriculture, sustainable habitat, water, Himalayan ecosystem, increasing the forest cover and strategic knowledge for climate change were incorporated under the Plan by the Prime Minister's Council on Climate Change.[1] reflecting India's vision and domestic strategies for sustainable development and the steps it must take to realize it.

In its overview, the NAPCC document says, "Recognising that climate change is a global challenge, India will engage actively in multilateral negotiations in the UN Framework Convention on Climate Change in a positive, constructive and forward looking manner. Our objective will be to establish and effective, cooperative and equitable global approach based on the principle of common but differentiated responsibilities, enshrined in the United Nations Framework Convention on Climate Change (UNFCCC)."

The overview also makes it clear that NAPCC will be guided by the following principles:

- Protecting the poor and vulnerable sections of society through an inclusive and sustainable development strategy, sensitive to climate change.
- Achieving national growth objectives through a qualitative change in direction that enhances ecological sustainability, leading to further mitigation of greenhouse gas emissions.
- Devising efficient and cost-effective strategies for end use Demand Side Management.
- Deploying appropriate technologies for both adaptation and mitigation of greenhouse gas emissions extensively as well as at an accelerated pace.
- Engineering new and innovative forms of market, regulatory and voluntary mechanisms to promote sustainable development.
- Effective implementation of programmes through unique linkages, including with civil society and local government institutions and through public-private-partnership.
- Welcoming international cooperation for research, development, sharing and transfer of technologies enabled by additional funding and a global IPR regime that facilitates technology transfer to developing countries under the UNFCCC.

**National Mission for a Green India**

According to the NAPCC, the Green India Mission, being one of the eight National Missions, was 'launched to enhance eco-system services including carbon sinks to be called Green India.'

"The Mission on Green India will be taken up on degraded forest land through direct action by communities, organized through Joint Forest Management Committees and guided by the department of forest in state governments", the NAPCC document stated.

The Mission has two focused objectives – increasing forest cover and density as a whole of the country and conserving biodiversity and recommended implementation of the already announced Greening India Programme.

An initial corpus of over Rs.6,000 crores was earmarked for the programme through the Compensatory Afforestation Management and Planning Authority (CAMPA) to commence work.

**NAPCC and Green India Mission (GIM): lack of public participation and limited consultations**

To the civil society in general, and those groups in India working on climate change issues, in particular, the announcement of NAPCC came as a bolt form the blue. The process through which NAPCC was drafted was not inclusive and the draft was not forwarded for wider public consultation. In a letter dated June 27, 2009, around 20 national level organizations wrote to the Prime Minister saying that "There was no participatory or transparent process in formulation of NAPCC or even the specific mission plans. When this issue was raised before the joint secretary, Union Ministry of Environment and Forests in September 2008, he said that participatory process should be taken up during formulation of the mission plans, but that too has not happened. This cannot be an acceptable situation in any democracy."[2] The same letter was sent to the PM's Council on Climate Change, Ministers and Secretaries of concerned Ministries, Members of Planning Commission of India and a large number of Members of Parliament.

Continuing with the exclusionist policy on climate change, the Ministry of Environment and Forests (MoEF), Government of India, put the draft Green India Mission (GIM) document on its website on 23rd May 2010 calling for limited public consultations and comments on the draft to be sent to the Ministry. Public Consultations were organized in Guwahati, Dehradun, Bhopal, Pune, Vishakhapatnam and Mysore between June 10 and July 15, 2010. A large number of forest groups and communities were, therefore, excluded from the purview of public consultations in the States of West Bengal, Jharkhand, Orissa, Chhattisgarh, Gujarat, Rajasthan and the highly forested Arunachal Pradesh, Sikkim, Nagaland, Manipur and Mizoram.

The second draft of the GIM, with pubic comments incorporated, was submitted to the PM's Council on Climate Change on September 16, 2010. And the Mission was adopted by the Council only in February 2011. By then, without formal consultation and policy decision, the MoEF on November 30, 2010, days before the Cancun COP, in a document titled "India's Forests and REDD+", hailed the draft GIM as India's REDD+ Action Plan.

**Green India Mission: the key elements**

GIM puts "greening" in the context of climate change adaptation and mitigation. Greening is meant to enhance ecosystem services such as carbon sequestration and storage (in forests and other ecosystems), hydrological services and biodiversity; as well as other provisioning services such as fuel, fodder, small timber and non-timber forest products (NTFPs).

The Mission aims at responding to climate change by a combination of adaptation and mitigation measures, which would help:

i. enhancing carbon sinks in sustainably managed forests and other ecosystems;
ii. adaptation of vulnerable species/ecosystems to the changing climate; and
iii. adaptation of forest-dependant communities.

The objectives of the Mission are:

a. Increased forest/tree cover on 5 m ha of forest/non-forest lands and improved quality of forest cover on another 5 m ha (a total of 10 m ha).
b. Improved ecosystem services including biodiversity, hydrological services and carbon sequestration as a result of treatment of 10 m ha.
c. Increased forest-based livelihood income of about 3 million households living in and around the forests.
d. Enhanced annual CO2 sequestration by 50 to 60 million tonnes in the year 2020

The Mission will have clear targets for different forest types and ecosystems which will enable achievement of the overall objectives of the Mission. The Mission targets 10 m ha of forest/non-forest lands and includes:

a. qualitative improvement of forest cover/ecosystem in moderately dense forests (1.5 m ha), open degraded forests ( 3 m ha) , degraded grassland (0.4 m ha) and wetlands 0.1 m ha;
b. eco-restoration/afforestation of scrub, shifting cultivation areas, cold deserts, mangroves, ravines and abandoned mining areas (2 m ha); and
c. bringing urban/ peri-urban lands under forest and tree cover ( 0.20 m ha); and d) agro-forestry /social forestry (3 m ha).

The Mission also targets improvement of forest- based livelihoods for about three million households living in and around forests.

The key highlights of the Mission strategy are:

1. The scope of greening will go beyond trees and plantations to encompass both protection and restoration. Emphasis will be placed on restoration of degraded ecosystems and habitat diversity. The greening will not only strive to restore degraded forests, but will also contribute in the protection and enhancement of forests with relatively dense forest cover.
2. Criteria for selection of project areas/sublandscapes/sub-watersheds under the Mission will include projected vulnerability to climatic change, potential of areas for enhancing carbon sinks and the significance of the area from ecosystem services angle, such as biodiversity and hydrological services.
3. The Mission will foster an integrated approach that treats forests and non-forest public lands as well as private lands simultaneously. Livelihood dependencies, for example firewood needs and livestock grazing, will be addressed using inter-sectoral convergence (e.g., livestock, forest, agriculture, rural development, and energy)
4. Local communities will be required to play a key role in project governance and implementation. The Mission will bring primacy to Gram Sabha as an overarching institution to oversee Mission implementation at the village level. The committees set up by the Gram Sabha, including revamped JFMCs, CFM groups, Van Panchayats, Committees set up under Forest Rights Act; Biodiversity Management Committees etc., will be strengthened as the primary institutions on the ground for nested decentralized forest governance in rural areas. Similarly in the schedule VI areas, the traditional village level institution/village councils will be supported. Likewise, the Mission will support revamping/strengthening of the Forest Development Agencies to support the field institutions.
5. The Mission will invest in the development of a cadre of community-based change agents from amongst educated community youth. These community foresters will facilitate planning, implementation and monitoring of the Mission activities at the local level. This will provide skilled employment opportunity to about one lakh educated community youths.
6. A comprehensive monitoring framework at four different levels is proposed. In addition to on-the-ground self-monitoring by multiple agencies, including communities, the Mission will support the use of modern technology like Remote Sensing with GPS mapping of plot boundaries for monitoring at the input /output/ outcome level. The Gram Sabha will carry out the social audit of the Mission activities at the village level.
7. The Mission will identify research priorities in support of the Mission aim and objectives. The Mission will set up a cell under the overall guidance of MoEF to link to REDD Plus activities in the country. The Mission will implement its strategy through a set of five Sub Missions and cross-cutting interventions.



Equations

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The proposed budget for the GIM is pegged at a staggering Rs.46,000 crores.

**Improving forest cover: evicting forest people from last of their habitats**

The GIM talks of not only increasing the forest cover through the usual afforestation programme and plantations but emphasizes on improving the quality of forest cover in 4.9 million ha of forest and non forest areas representing diversity in forest density, tenure and ownership. This include 1.5 million ha of moderately dense forest, 3 million ha of open forests and 0.4 million ha of grasslands.

So far, there is limited research and information on silvicultural and management practices for restoration of moderately dense and open forests in India. In India the focus has largely been on afforestation of degraded forests, wastelands and farmlands. The State Forest Departments are familiar with routine afforestation programmes, largely dominated by the monoculture species, including eucalyptus, *Acacia auriculiformis*, teak (*Tectona grandis*), sal (*Shorea robusta*), pines, poplar, *Acacia tortilis*, etc. In that case, the GIM document does not shed any light on how the quality of forest cover and eco system services will be improved. There is no particular mention of specific scientific studies to be pursued, capacity building of the implementing agencies including the forest department or involving the expertise of any group or institute outside the ambit of the government forestry administration.

India has diverse forest vegetation types – from tropical evergreen forests to alpine meadows. Each of these forests have different flora and fauna, wildlife, biodiversity and other living species and have diverse relationships – both economic and cultural – with the forest communities. One, therefore, cannot have a single solution for all.

And, that is precisely what the GIM does. Regarding the moderately dense forest cover the document says, "these forest/ecosystems are subjected to degradation on account of recurrent fire, unregulated grazing, invasive species, shifting cultivation and illicit felling etc." [5.2 a)] Therefore, it advocates, "Better protection, fire management (both prevention and detection and control), regulated grazing, invasive species eradication, management of insects and other pathogens, improving hydrological regime through infiltration zone identification and protection, soil/ moisture conservation (on ridge to valley basis) would form some of the key interventions."

If we take out the scientific verbose, we are left with a scenario where the axe is going to fall on the forest communities – stop grazing and shifting cultivation and blame them for illicit felling of timber.

The eco-restoration of degraded open forests with a target area double that of the moderately dense forest cover will have more profound impact on the forest communities. The majority of the forest people in India, today, have shifted to or being expelled to these open forests which are of less intrinsic value and considered uneconomic.[3] Forest communities extract fuelwood, fodder, and small timber from these forests and graze their cattle. The Green India Mission targets these areas for large scale afforestation programme with fast growing native species and closure to grazing on rotational basis thereby preparing the ground for displacing the forest communities from these last of the forest areas depriving them of their habitat and livelihood options.

At the cost of the communities, the restoration of these degraded open forests is seen to be enhancing carbon sinks substantially.

**Hiding deforestation**

The Ministry of Environment & Forests (MoEF) has emphasized largely on improving the quality of forest cover and restoration of eco-systems while being silent on the continued deforestation of our forests through mining, indiscriminate industrialization and mega infrastructure projects.

Towards shoring up the data on forest cover, India's forest cover now includes both forest and non forest areas. In other areas it records forest cover beyond the recorded forest area. Recorded forest cover refers to all the geographical areas recorded as forests in the government records, where as the term forest cover as used in the State of Forest Report (SFR) refers to all land more than one hectare in area with a tree canopy density of more than 10% irrespective of land use and ownership. All perennial woody vegetation (including bamboos, palms, coconut,

apple, mango, neem, peepal, etc.), agro forestry plantations, fruit orchards, tea and coffee estates with trees, etc. have been included as forest cover.

While the recorded forest area in India today is 23.41% of the total geographical area, the forest cover as reported in SFR 2009 is only 21.02%, much below the recorded forest area indicating huge loss of forests within the recorded forest area. This loss is neither critically recorded nor analysed by the MoEF or Forest Survey of India in any of its documents.
According to the National Forest Commission, about 41% of the country's forest cover has already been degraded and dense forests are losing their crown density and productivity continuously. At present, 70% of forests have no natural regeneration and 55% are prone to fire.

SFR 2003 reveals a decrease in dense forest cover to the tune of 26,245 $km^2$ (6.30%) and the open forest cover increased by 29,040 $km^2$ (11.22 %). Between 1980 and 2007, 1,140,177 ha of forest land were diverted for non-forest purposes. Out of this a whopping 311,220 ha were cleared between 2003 and 2007.[4] And this large scale deforestation due to diversion of forest land continues with another large chunk of close to 500,000 ha earmarked for coal mining by the MoEF.

The GIM does not address this large scale deforestation even though India's REDD+ Action Plan to which they have now dovetailed GIM, talks of 'compensated reduction' on account of reducing deforestation and degradation.

Under the REDD+ Action Plan, the GIM aims at increasing the forest and tree cover by taking into account tree cover on farm lands and on urban and peri-urban landscape. The SFR 2009 has already paved way for this cover up mechanism to hide deforestation in Indian forests.

According to SFR 2009, tree cover refers to tree patches of size less than 1 ha outside the recorded forest area as represented by the 'green wash' area on the Survey of India toposheets. It further calculates an increase in forest cover to 22.26% if the geographical area above the tree line (approx.4,000 m height) is reduced from the total geographical area of the country. To this forest cover if the tree cover is added the total forest and tree cover in India reaches 25.25%.

This calculation fulfills the objective of both the GIM and India's REDD+ Action Plan to show an increase in carbon stock and thereby enhancing carbon sinks.

**Undermining FRA and community forest governance**

As part of democratic decentralization, the GIM emphasizes on the centrality of the Forest Rights Act 2006 and its compliance as a pre-condition for release of funds for implementing GIM. The Gram Sabha Committees under FRA have been regarded as part of the institutional landscape within the GIM.

But, taking umbrage to its reform agenda, the MoEF and the forest bureaucracy defines their concept of decentralized governance to include revamped Joint Forest Management Committees (JFMCs) under the Gram Sabha and the revamped Forest Development Agency (FDAs) as part of the implementation machinery. The GIM also pitches for legal standing of the JFMCs under the Gram Sabha in the Forest Rights Act. It further talks of including SHGs, Forest User Groups and creating jobs for a pool of 100,000 community youth as foresters.

The FRA has no provisions to include JFM and JFMCs or such other bodies which do not emanate out of the decision making process of the Gram Sabha in its institutional mechanism. JFM has no legal standing and participatory regime that it represents is very different from that promoted and facilitated by the FRA. Where as the FRA moves towards a decentralized regime of community forest governance, the JFM is dominated by the centralized forest department and the JFMCs are controlled by the officials of the forest department. In a recent National Consultation in Delhi organized by the Council for Social Development and National Forum of Forest People and Forest Workers (NFFPFW), Shri V Kishore Chandra Deo, the Minister of Tribal Affairs categorically stated that the Ministry has no intention to include JFM or JFMCs within the ambit of FRA and any amendment to FRA can only be initiated by the nodal Ministry of Tribal Affairs under Section 11 of the FRA 2006. MoEF has no Constitutional Standing as far as FRA 2006 is concerned.

In the name of decentralized forest governance, the MoEF and its forest bureaucracy, therefore, want to impose JFM, JFMCs and such other bodies controlled by the forest department, giving lip service to FRA and completely undermining the Gram Sabha. The GIM and its institutional framework, thus developed, is not only to subvert FRA but to continue with the control of the forest bureaucracy and centralized governance in Indian forests.
Resorting to FRA 2006, Gram Sabha and participatory governance regime is a façade to promote REDD+ and garner funds globally.

**Up for sale: Carbon market and forests as tradable commodity**

Green India Mission represents an institutional mechanism to promote India's REDD+ ambitions. REDD+ "has specifically opened the possibilities for the country to expect compensation for its pro-conservation approach and sustainable management of forests resulting in even further increase of forest cover and thereby its forest carbon stocks."[5]

Indian government feels that through its sustained efforts for conserving and expanding the country's forest and tree resources there exists a possibility of being rewarded for providing carbon service to the international community and estimated that a REDD+ programme for India could provide capture of more than 1 billion tonnes of additional CO2 over the next 3 decades and provide more than USD 3 billion as carbon service incentives under REDD+.

India's submission to UNFCCC indicates that "carbon is saved through reducing deforestation and degradation' and 'carbon is added through conservation, sustainable management of forests and increase in forest cover (A & R)'. It expects annual payments in lieu of maintaining baseline stocks of carbon through not deforesting its forests and thereby foregoing its development opportunities and carbon offset money from the global carbon market for enhancing its carbon stocks. India also advocated reduced tariffs for forest product exports for undertaking REDD, SFM and A&R action in line with the forest carbon stock maintained and change in flow of forest carbon.

It has already been openly stated by the ICFRE (Indian Council of Forestry Research and Education), in many international forest meets and recent UNFCCC meetings that from 1995 to 2005, carbon stocks stored in India's forests have increased from 6244.78 to 6621.55 million tonnes (mt) registering an annual increment of 37.68 mt of carbon which is equivalent to 138.15 mt of CO2 and this annual removal by forests is enough to neutralize 9.31% of India's total annual emissions of 2000. The countdown to sell our forests had already started.

"Indian forests(like any other tropical forests) are part of a larger, dynamic, and ever-changing socio-political and socio-ecological discourse(or multiple such discourses). Mathematical calculations and simulated models to project sequestration of carbon in forests can never be expected to assimilate the innumerable, essentially asymmetric and 'truant' variables that such discourses contain; neither hypothetical baselines nor imaginary 'future' scenarios can explain/interpret/predict contextually related but often spatially separated sets of uncertain social, political and ecological events influencing deforestation events. This methodological impossibility, coupled with doubtful and unverified official forest cover estimates, makes an estimation of all carbon stock in the in Indian forests downright impossible."[6] Even assuming that India's forest cover will remain constant, and in ideal conditions for over a long period of time, estimates of long-term sequestration potential of Indian forests (by different investigators/agencies) vary widely.

With this kind of a scientific impossibility around, India's obsession with forest carbon stocks and its carbon sequestration potential as promoted through GIM, reflects commodification of forests, converting people's homelands and livelihood resources into tradable commodities through the system of carbon trading. This will likely involve private companies as well, triggering land grabbing and corporate control over large pool of resources.

The carbon storage figures that are given are clearly aimed at establishing a basis for such a system. Forests do not consist of just standing trees – trees grow, fires and other disasters take place, people and wildlife consume non-timber forest produce, etc. Forests are constantly changing. An obsession with carbon storage and incentives in the form of trading will lead companies and the government to shut off forests from all use by people, on the one hand, and on the other will encourage fictional carbon storage figures.[7]

The introduction of the forest certification in the GIM "required for eco-labelling and related chain-of-custody (CoC) and legality verification, thereby promoting ethical trade and market for timber and non-timber forest products as well as socially responsible procurement policies and green consumerism" is an open invitation for selling our forest resources and commodifying its services. In 5.6 b), the GIM document states that "Certification promotes and assures Sustainable Management of Forests , taking explicit account of environmental, economic, social and cultural dimensions of forest management, conservation and development in a holistic manner." Not forgetting that it has to keep the democratic façade of incentives for communities, it further goes on to say, 'certification can help in securing local biodiversity and watershed services as well as social benefits of fair trade that benefit communities. Community-oriented carbon sequestration projects typically require forest certification of some sort.'

The MoEF is not ashamed to openly declare that forest certification system will 'enable unbridled access to ethical trading and market arenas with price premiums.' It does not matter whether the same forests and its resources belong to the forest communities or such decisions on carbon trading, forest certification cannot be taken in the post-FRA 2006 period by the ever-autocratic forest bureaucracy.

**An institutional mechanism to promote and expand the power of forest bureaucracy**

The institutional framework developed to implement GIM is a contradiction in itself. Beginning with the centrality of community participation and governance as envisaged in FRA 2006 and autonomy of the Gram Sabha, the framework, as it goes higher up the ladder, lands itself up at the door of the well entrenched forest bureaucracy in the Ministry of Environment & Forests. Starting from revamped JFMCs, forest user groups, revamped FDAs, strengthened state forest departments, and then through ICFRE the mechanism finally reaches its masters at the REDD+ Cell in the Ministry of Environment and Forests. In this whole framework, the Gram Sabha and the forest communities are rendered minorities while the entire policy decisions and implementation are controlled and governed by the forest mandarins.

That the forest bureaucracy is out to expand its power beyond the forests is reflected in the fact that GIM is a REDD+ Action Plan encompassing fringe forest and non forest areas, farm lands, and urban and peri urban areas also.

**Conclusion**

The true impact of any policy is shaped not by its ambitious rhetoric but by its institutional structure. GIM does not stand for what it professes in favour of forest communities. Neither does it support decentralised governance and rights of communities nor does it have any demonstrable mechanism for incentives going to forest communities as mandated in UNFCCC REDD.

Without addressing mechanisms to stop deforestation, the GIM sets ambitious targets to increase forest cover only to show an increased forest carbon stock and create a financial value for that.

Undermining the FRA 2006 and the provisions providing community rights to forest resources in the post FRA regime, the GIM tries to unleash the market forces in the Indian forests and ushering in our forests to a global commodity trade regime completely circumventing the all important issue of the community rights, access and ownership of the forests and its resources, and who can govern forests.

The democratic framework that GIM espouses should begin with a framework that, in particular, disempowers the forest department and the bureaucracy, and creates the space for genuine empowerment of the forest communities. Otherwise, India's ambitious REDD+ Action Plan will only result in impoverishment, displacement, conflict and resistance.

**Note:**

The principle researcher for this study is Souparna Lahiri who was commissioned by EQUATIONS to do the study

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# The CBD – Key Characteristics and Implications for Implementation

*Désirée M. McGraw*

## INTRODUCTION

The UN-sponsored series of world summits throughout the 1990s was an important innovation in global governance. The first of these, the 1992 United Nations Conference on Environment and Development (UNCED), provided an unprecedented forum for focusing worldwide attention and action on sustainable development. As the largest gathering of heads of state and government in human history, the UNCED also served as a crucial incentive for concluding two treaties: the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). At the UNCED, a record 157 countries signed the CBD. Following ratification by the requisite number of countries, the CBD entered into force in December 1993.[1]

Ten years after the Convention's adoption, policy makers and academics are now taking stock of its achievements. Indeed, high-level deliberations are taking place with a view to improving the overall effectiveness of multilateral environmental agreements (MEAs),[2] which provide the legal backbone of international environmental governance – a key agenda item for the World Summit on Sustainable Development (WSSD) scheduled for August–September 2002 in Johannesburg.[3]

What is most striking about the CBD is that it reflects concessions secured by developing countries, which they had been unable to obtain in other multilateral negotiations, whether on trade, security, or even on other environmental issues such as climate change. Throughout the course of negotiating the CBD, the bargaining position of developing countries was significantly enhanced by their possession of a preponderance of the assets under negotiation. As the collective repository of four-fifths of the world's biodiversity,[4] developing countries successfully secured sovereign rights over the biological resources within their respective borders and can now better control the terms of access to these assets.

As a result, attempts by powerful State and non-State actors to create a convention aimed solely at *conserving* biodiversity were thwarted. The CBD goes beyond environmental preservation and provides for the sharing – with communities and countries of origin – of benefits arising from the *use* of genetic resources.[5] The enormous revenues derived from these resources – which are the raw material for multi-national, multi-billion dollar (US) industries in agriculture, biotechnology and pharmaceuticals[6] – raise the issue of who owns, controls and profits from the genetic information stored in species. Because the CBD addresses these economic issues, it is far more than an environmental treaty. Its cutting-edge approach to conservation has implications for intellectual property rights,

[1] Article 36 of the CBD specifies that 30 countries must depose an 'instrument of ratification, acceptance, approval or accession' in order for the Convention to enter into force. As of December 2001, 181 countries and the European Community were parties to the CBD; 12 governments – including, most notably, the USA – have signed the treaty but have yet to ratify it. For an analysis of the 'continuing significance of the US "No" in Rio', see B. Bramble and G. Porter, 'Non-Governmental Organizations and the Making of US International Environmental Policy', in A. Hurrell and B. Kingsbury (eds), *The International Politics of the Environment: Actors, Interests and Institution* (Clarendon, 1992), 313–353; D. Bell, 'The 1992 Convention on Biological Diversity: The Continuing Significance of US Objections at the Earth Summit', 26 *George Washington Journal of International Law and Economics* (1993), 479–537; and K. Rosendal, 'Implications of the US "No" in Rio', in V. Sanchez and C. Juma (eds), *Biodiplomacy: Genetic Resources and International Relations* (African Centre for Technology Studies, 1994), 87–105.

[2] See D.M. McGraw, *Options for Improving Coordination and Coherence among Multilateral Environmental Agreements* (International Policy and Cooperation Branch, Environment Canada, July 2001).

[3] In the lead up to WSSD, UNEP has convened a series of conferences and consultations involving governance experts, civil society representatives and governments (the latter culminating in a special meeting of the Global Ministerial Environment Forum held in Cartagena, Colombia in February 2002). These meetings have in turn produced a plethora of proposals for strengthening or reforming the existing international environmental architecture.

[4] Article 2 of the Convention defines biological diversity as 'the variability among living organisms from all sources, including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems'.

[5] Article 1 of the Convention outlines its three main objectives: conservation, sustainable use and benefit sharing.

[6] For an extensive survey of the commercial uses of biodiversity, see K. ten Kate and S. Laird, *The Commercial Use of Biodiversity: Access to Genetic Resources and Benefit-Sharing* (Earthscan, 1999).

trade, technology, human health and culture.[7] Indeed, international lawyers have characterized the CBD as part of a new generation of international legal instruments that seek to reconcile the development imperatives of the South with the environmental exigencies of the North.[8]

Ten years after the CBD's adoption, this article examines the implications of the treaty's history, as well as its core characteristics, for its current implementation and overall operational effectiveness. The CBD is a framework agreement based on three central principles: national implementation, cooperation with other agreements and post-agreement negotiation of annexes and legally binding protocols, as well as non-binding work programmes. This article will review the Convention's structure, then assess three of the key features that characterize the CBD, both as a legal and as a political document: comprehensiveness, complexity and compromise. In so doing, the article considers the implications of each of these 'three Cs' for the Convention's current implementation and, ultimately, for its overall effectiveness as a regime.

# THE CBD'S CORE CHARACTERISTICS AND SOME IMPLICATIONS FOR IMPLEMENTATION

## FRAMEWORK AGREEMENT

Unlike its climate change counterpart, the CBD does not contain the term 'framework' in its formal title. Despite this oversight,[9] it is widely regarded as a framework convention.[10] According to Winifred Lang:

> a framework convention sets the tone, establishes certain principles and even enunciates certain commitments . . . As a rule, it does not contain specific obligations . . . nor does it contain detailed prescriptions of certain activities.[11]

Various authors seem to equate a framework treaty with a lowest-common-denominator outcome – one which represents 'the beginning of increasingly serious and concerted attention to the problem' and which seeks to 'define a general direction' and to 'inform a process' rather than 'seek to foresee the detail in circumstances in which the words will be brought to bear'.[12]

As early as 1976, Alexandre Kiss described a framework convention as a document establishing, not substantive rules, but the institutional framework for producing such rules. Kiss writes that a framework convention

> lays down the basic principles regarding the form of cooperation and the objectives for which the institutional framework is created. The hallmark of a framework agreement, therefore, is that it is followed by additional protocols or even complementary instruments, which are related to the main instrument but are partially or completely independent.[13]

**Framework versus Umbrella Conventions** It is important to distinguish a framework convention from an umbrella convention.[14] Although the terms are often used interchangeably, they are different in two important respects. While both umbrella and framework agreements set out basic principles and general objectives to be further specified through subsequent instruments, these are generally regional in scope, in the case of the former, and issue-specific

[7] In addition to the 'intrinsic value of biological diversity', the CBD Preamble underscores the 'ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components' as well as its importance for 'evolution and for maintaining life sustaining systems of the biosphere'.

[8] C. Tinker, 'A "New Breed" of Treaty: the United Nations Convention on Biological Diversity', 12:2 *Pace Environmental Law Review* (1995), 191.

[9] In 1990, the Ad Hoc Group of Experts on Biological Diversity instructed the Executive Director of UNEP to convene an Ad Hoc Group of Legal and Technical Experts on Biological Diversity with a mandate to negotiate an international legal instrument, 'possibly in the form of a framework convention', for the conservation of biological diversity. Despite these instructions, the term 'framework' was not carried forward to the treaty's formal title. The author's interviews with several delegates suggest that this aspect was simply overlooked in the final rushed hours of the CBD negotiations.

[10] The CBD has been referred to as, alternately, the 'Biodiversity Framework Convention' (see P.H. Sand, 'International Cooperation: The Environmental Experience', in J.T. Mathews (ed.), *Preserving the Global Environment: The Challenge of Shared Leadership* (W.W. Norton & Co, 1991), 236–279); a 'framework convention' (see L. Glowka *et al.*, *A Guide to the Convention on Biological Diversity* (IUCN, 1994), at 14); 'largely a framework agreement' (see Sanchez and Juma, n. 1 above, at 322); or 'more than a framework convention' (McGraw interview with M.K. Tolba, New York, 25–26 April 2000). The author has only come across one important dissenting view in the literature – perhaps not surprisingly from an American negotiator (M. Chandler, 'The Biodiversity Convention: Selected Issues of Interest to the International Lawyer', 4 *Colorado Journal of International Environmental Law and Policy* (1993), 141–175.

[11] W. Lang, 'International Environmental Cooperation', in G. Sjöstedt and S. Uno, *International Environmental Negotiations: Process, Issues and Contexts* (The Swedish Institute of International Affairs, 1993), at 19.

[12] A. Chayes and A.H. Chayes, 'Adjustment and Compliance Process in International Regulatory Regimes', in J.T. Mathews (ed.), n. 10 above, at 284, 289.

[13] A.C. Kiss, *Survey of Current Developments in International Environmental Law* (IUCN, 1976), at 95.

[14] For an analysis of the relative merits of umbrella and framework conventions, see McGraw, n. 2 above.

sub-agreements (or protocols), in the case of the latter. Moreover, an umbrella convention (such as the UN Convention on the Law of the Sea (UNCLOS)) has legal ramifications for pre-existing agreements under its remit, while a framework convention only impacts subsequent agreements. It is this 'retroactivity' which essentially distinguishes an umbrella convention from a framework convention. Whereas an umbrella convention absorbs (or supersedes) related treaties, a framework convention builds upon (or supplements) existing agreements. While both umbrella and framework conventions lay the ground for future agreements (proactive), only the former has a legal impact on previous agreements (retroactive).

In conceptualizing a global biodiversity convention, several key State and non-State actors originally envisioned the creation of an umbrella convention which would harmonize existing biodiversity agreements. However, this proposal was rejected in the first round of CBD negotiations due to the 'numerous practical, political and legal obstacles' it posed.[15]

In this context, it is clear that the CBD is a framework agreement in at least three important ways.[16] First, the CBD creates a global structure to promote continued international cooperation and to support national implementation. Indeed, the CBD emphasizes national action relating to biodiversity within State jurisdictions, establishing a framework of general, flexible obligations that parties may apply through national laws and policies. Elements included in the original structure (for instance those specified in the Convention text itself) as well as a sample of subsequent bodies produced through post-agreement negotiations are outlined in box 1 overleaf.

Second, the CBD allows for its own further development through the negotiation of annexes and protocols. The contemporary 'framework-protocol' approach to multilateral environmental treaty making has proven effective in transforming the often ambiguous and 'soft' legal content of environment and/or sustainable development conventions into more precise and binding provisions.[17] For example, the Vienna Convention led to the Montreal Protocol on Ozone Depleting Substances and the UNFCCC prompted the Kyoto Protocol. The Cartagena Protocol represents the first effort to operationalize a key and contentious part of the CBD. However, the decision to address biosafety as the first protocol under the CBD[18] has been cited as powerful proof of the treaty's lack of science-based prioritizing. Indeed, the Convention's detractors dismiss it as a prisoner of its own politics rather than being based on sound science.[19]

> For many developed nations [particularly the United States], the link between biodiversity and the safety of biotechnology is contrived. Indeed, a [United Nations Environment Programme (UNEP)] study,[20] commissioned in the period preceding the formal treaty negotiations, found almost no links between the two, with those that were found tending to benefit biodiversity. However, the treaty text clearly presumes otherwise.[21]

Third, the CBD builds upon existing agreements – unlike an umbrella convention, which, as noted above, absorbs related treaties. In contrast to previous biodiversity instruments, which target specific species, sites and/or activities, the CBD adopts a broad ecosystem approach to conservation, thereby establishing a wider context for the protection of biological diversity.[22]

[15] See Proceedings of the Ad Hoc Working Group on the Work of its First Session, *UNEP/BioDiv.1/Inf.2* (Geneva, 16–18 November 1988). It is important to note that the relationship with other conventions, which was the central issue of UNEP Governing Council Decision 14/26 for the Rationalization of International Conventions on Biodiversity, was largely ignored in later meetings. However, the matter was taken up again at the very end of the negotiations and, ultimately, was addressed in Article 22 (Relationship with Other Conventions) of the CBD. See F. Burhenne-Guilmin and L. Glowka, 'An introduction to the Convention on Biological Diversity', in A.F. Krattiger *et al.* (eds), *Widening Perspectives on Biodiversity* (The World Conservation Union and The International Academy of the Environment, 1994), 14–18.

[16] See Glowka, n. 10 above, at 1–2.

[17] The development of sub-agreements (or protocols) has at times served to reinforce, rather than resolve, many of the political tensions inherent in the original UNCED agreements (see D. McGraw, 'Multilateral Environmental Treaty-Making', in G. Boutin *et al.* (eds), *Innovations in Global Governance – ACUNS Policy Brief* (Academic Council of the United Nations System and American Society of International Law, 2000), at 7. See website available at <http://www.yale.edu/acuns/publications/Policy_Brief/index.html>.

[18] A number of protocols under the CBD have been proposed with varying degrees of support. One proposal called for a protocol based on CBD, Article 8(j); another on alien invasive species. In November 1996, the COP indicated that it would consider, among other possibilities, a revised FAO International Undertaking on Plant Genetic Resources as a protocol to the CBD (see COP Decision III/11, at para. 18 and discussion below). The eventual success of these proposals is likely to depend on political considerations, such as which groups and countries are championing a particular cause.

[19] For a presentation of scientific and political arguments against singling out biosafety as the first protocol under the CBD, see J. Vogler and D.M. McGraw, 'An International Environmental Regime for Biotechnology? The case of the Cartagena Protocol on Biosafety', in J. Vogler and A. Russell (eds), *The International Politics of Biotechnology: Investigating Global Futures* (Manchester University Press, 2000), 123–141.

[20] Ad Hoc Group of Experts on Biological Diversity, Biotechnology and Biodiversity, *UNEP/Bio.Div./SWGB.1/3* (14 November 1990).

[21] K. Raustiala and D.G. Victor, 'Biodiversity since Rio: The Future of the Convention on Biological Diversity', 38:4 *Environment* (1996), at 7.

[22] Of course, the CBD articulates new norms that could also apply to pre-existing agreements. In this sense, the CBD may have the normative character of an umbrella convention without possessing its legal status. See C. de Klemm and C. Shine, *Biological Diversity Conservation and the Law: Legal Mechanisms for Conserving Species and Ecosystems* (IUCN, 1993); S. Lyster, *International Wildlife Law: An Analysis of International Treaties Concerned with the Conservation of Wildlife* (Grotius Publications, 1985).

**BOX 1: THE CBD'S OPERATIONAL STRUCTURE**

The CBD explicitly provides for the establishment of the following bodies:

- pursuant to Article 40, a secretariat to administer the CBD and coordinate with other relevant bodies. Following the CBD's entry into force, a secretariat was set up by the UNEP on an interim basis in Geneva. Following a vote at the Second Conference of the Parties (COP-2), the secretariat officially established its 'permanent'[23] headquarters in Montreal in May 1996;
- pursuant to Article 17, a clearing-house mechanism to exchange and share information in support of scientific and technical cooperation;[24]
- pursuant to Articles 21 and 39, a multilateral fund to help finance implementation in developing countries, supported mainly by the Organization for Economic Cooperation and Development countries[25] and currently operated by the Global Environment Facility;[26]
- pursuant to Article 23, a COP to oversee the process of implementing and further elaborating the CBD. The COP is the main policy and priority-setting body (trying to manage an ambitious agenda); and
- pursuant to Article 25, a subsidiary body to provide the COP with scientific, technical and technological advice (SBSTTA).[27]

These permanent bodies in turn have produced a plethora of subsidiary processes, including:

- a Meeting of Parties (MOP) scheduled to begin its work around COP-6 in 2002 (assuming the Protocol has entered into force by then). In the interim, an Intergovernmental Committee for the Cartagena Protocol (ICCP) has been established;
- an ad hoc open-ended inter-sessional working group on Article 8(j) has met twice, first in March 2000 and again in February 2002, both meetings building on the work of a formal workshop on traditional knowledge (held in November 1997);
- an ad hoc open-ended working group on access and benefit-sharing (ABS) was convened in October 2001, building on the work of a panel of experts on ABS which met twice (October 1999 and March 2001); and
- ongoing rosters of experts on thematic work programmes such as marine and coastal biodiversity, forest biodiversity, agricultural biodiversity, inland waters, dry and sub-humid lands as well as cross-cutting issues such as biodiversity indicators, incentive measures, sustainable tourism, ecosystem approach, and education and public awareness.

There are at present over 300 multilateral environmented agreements (MEAs).[28] Of these agreements, approximately 30% address biodiversity, either in full or in part. Most are aimed at protecting specific species and sites as well as regulating particular activities. In addition, while the majority of biodiversity-related MEAs are regional in scope,[29] several are global. These are outlined opposite in box 2.

Among these agreements, the World Conservation Union (IUCN) identifies four major global conventions based on the criteria of 'recency' and relevancy.[30] These conventions are: the Convention on Wetlands

[23] Canada's status as host country came under pressure at COP-5 both by developing countries (calling on Canada to renew its annual US $1million contribution to the operation of the Secretariat) and by some European counties (mainly for having taken such a hard line in the biosafety negotiations) – in particular Germany (seeking to co-locate the CBD alongside the UNFCCC and United Nations Convention to Combat Desertification (UNCCD) Secretariats already established in Bonn). In addition, it has been suggested that the CBD be headquartered alongside the secretariats of other global biodiversity-related treaties (in Geneva, Bonn or Nairobi) in order to strengthen synergies and rationalize resources. The outcome of these proposals will depend largely on broader debates regarding international environmental governance (see n. 3 above).

[24] According to the CBD website, the clearing-house mechanism's mission is threefold: '[to] promote and facilitate technical and scientific cooperation, within and between countries; [to] develop a global mechanism for exchanging and integrating information on biodiversity; [and to] develop the necessary human and technological network' (see website available at <http://www.biodiv.org>).

[25] It is noteworthy that the mechanism is to function 'under the authority and guidance of, and be accountable to, the Conference of the Parties'. This language is stronger than the relevant wording in the UNFCCC, according to which the financial mechanism is to function under the 'guidance of the Conference of Parties' (UNFCCC, Article 11).

[26] The GEF was initially designated as the institutional structure to operate the financial mechanism on an interim basis, subject to the condition that it be fully restructured in accordance with the requirements of Article 21 of the CBD, for the period between the CBD's entry into force and the first meeting of the COP 'or until the COP decides which institutional structure will be designated in accordance with Article 21'. Although the GEF appeared to be the only realistic candidate, and despite having met several requirements (most notably, a more democratic and transparent system of government), COP-5 called for a second review of its effectiveness during the period from November 1996 to June 2001.

[27] In its earlier days, the SBSTTA was dubbed a 'mini-COP'. Some actors (mainly in the industrialized world) contend that the effectiveness of the CBD will depend on the extent to which the SBSTTA can provide sound scientific advice as a basis for the COP's policy decisions. Others (mainly representing developing countries which feel at a disadvantage in strictly scientific bodies, which tend to be dominated by Western-educated experts) have argued the need for a subsidiary body on implementation.

[28] See Open-Ended Intergovernmental Group of Ministers or their Representatives on International Environmental Governance, Multilateral Environmental Agreements: A Summary, *UNEP/IGM/1/INF/1* (30 March 2001).

[29] Indeed, a much greater number of regulatory arrangements (for the environment in general and biodiversity in particular) have been made under regional treaties. In the category of regional biodiversity treaties, there are more than two dozen with a general environmental focus. Some three dozen seek to conserve specific species such as fish and other marine resources (over 20), land animals (six), plants (three) and birds (one); see Sanchez and Juma, n. 1, at 297.

[30] See Glowka, n. 10 above.

**BOX 2: PRE-1992 GLOBAL AGREEMENTS RELATED TO BIODIVERSITY**

**International legal instruments that are concerned with wider environmental issues, but which address at least one aspect of biodiversity, include:**

- the Convention on the High Seas (Geneva, 29 April 1958);
- the Convention for the Conservation of Antarctic Seals (London, 1 June 1972);
- the Convention concerning the Protection of World Cultural and Natural Heritage (Paris, 23 November 1972);
- the Convention on the Conservation of Migratory Species of Wild Animals (CMS) (Bonn, 23 June 1979);
- the United Nations Convention on the Law of the Sea (UNCLOS) (Montego Bay, 10 December 1982);
- the International Tropical Timber Agreement (ITTA) (Geneva, 18 November 1983).[31]

**International legal agreements that deal squarely with the conservation and management of the flora, fauna and habitat include:**

- the Convention Relative to the Preservation of Fauna and Flora in their Natural State (London, 8 November 1933);
- the International Convention for the Regulation of Whaling (Washington DC, 2 December 1946);
- the International Convention for the Protection of Birds (Paris Convention) (Paris, 18 October 1950);
- the International Plant Protection Convention (IPPC) (Rome, 6 December 1951);
- the Convention on Fishing and Conservation of the Living Resources of the High Seas (Geneva, 28 April 1958);
- the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) (Ramsar, 2 February 1971);
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Washington DC, 3 March 1973).

of International Importance, Especially as Waterfowl Habitat (the Ramsar Convention); the Convention concerning the Protection of World Cultural and Natural Heritage (the Paris Convention); the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and the Convention on the Conservation of Migratory Species of Wild Animals (CMS). While the first two are aimed at specific activities (CITES) or species (CMS), the latter focus on specific sites (Paris) or habitats (Ramsar). Lyster singles out these four particular treaties in his renowned book, *International Wildlife Law*[32] and Bilderbeek[33] cites these four treaties as 'positive sources of international law' on biodiversity. Each of these treaties took between 2 to 4 years to enter into force (in contrast to the CBD's 18 months) and the numbers of parties range respectively from 30 to 100 (in contrast to the CBD's near-universal membership).

Biodiversity-related agreements remain poorly integrated and could benefit from a significant organizational overhaul. However, the political processes underlying the various biodiversity MEAs are more important than the technical cooperation and memoranda of understanding agreed upon by their respective secretariats. Indeed, the group's diversity (constituent MEAs are administered by different bodies) and entrenched institutional history (biodiversity MEAs are championed by well-established constituencies and therefore subject to significant 'turf battles') make substantive coordination difficult. Moreover, the group is dominated by two treaties with very different approaches to biodiversity: while CITES is aimed at protecting specific species, the CBD takes a comprehensive and cutting-edge approach to biodiversity conservation, including the sustainable use of its components and benefit sharing. Many developing countries who saw their bargaining positions enhanced in the CBD negotiations would likely object to harmonization with other more traditional biodiversity-related conventions. Indeed, attempts to identify critical conservation areas, which are common to all or most other biodiversity-related agreements, have proven problematic and politically divisive under the CBD.

Current intergovernmental discussions aimed at improving environmental governance have focused on coordinating MEAs according to various criteria – ranging from substance (for example grouping MEAs with common issue areas, objectives or problem structures) and function (for example pooling activities common to many MEAs such as reporting and monitoring, scientific and environmental assessment, financial and technical cooperation) to location (either co-locating the secretariats of new MEAs or relocating existing ones) and legal status (for example renegotiating, with a view to merging existing MEAs into umbrella conventions).[34] One way forward has been to

[31] Although these last two instruments were concluded in the 1980s, negotiations began in the 1970s.

[32] See Lyster, n. 22 above.

[33] See S. Bilderbeek, *Biodiversity and International Law: The Effectiveness of International Environmental Law* (IOS Press, 1992).

[34] Given that each coordinating option has important institutional and organizational implications, additional research is needed to evaluate both their desirability (need) and feasibility (costs and benefits). For a critical analysis of these different coordinating mechanisms, see McGraw, n. 2 above.

**TABLE 1** GLOBAL AGREEMENTS AND REGIMES RELATED TO THE CBD ACCORDING TO SCOPE AND OBJECTIVE/FOCUS

| *SCOPE:* | *ENVIRONMENT* ⇐==========⇒ *ECONOMY/TRADE* | | | |
|---|---|---|---|---|
| *OBJECTIVES/FOCUS* | *CONSERVATION* | *SUSTAINABLE USE/DEVELOPMENT* | *BENEFIT SHARING* | *OTHER* |
| *TIME PERIOD*<br>1970s–1980s | • CITES<br>• CMS<br>• Wetlands<br>• World Heritage<br>• UNCLOS | • CITES<br>• ITTA | • FAO International Undertaking on PGRFA<br>• UNCLOS Deep Seabed Mining (both according to the Common Heritage of Mankind principle) | • Vienna Convention and Montreal Protocol<br>• Basel Convention<br>• Convention on Long-Range Transboundary Air Pollution |
| 1990s | • CBD<br>• UNCLOS (Fish Stocks)<br>• ICRI | • CBD<br>• UNFCCC<br>• UNCCD<br>• UNCLOS (Fish Stocks)<br>• ICRI | • CBD<br>• Revised integrated pollution prevention and control (IPPC) | • WTO trade-related intellectual property (TRIPs)<br>• Basel Protocol<br>• Kyoto Protocol |
| 2000 and beyond | • Potential protocols under CBD | • Potential protocols under CBD | • Potential protocols under CBD<br>• International Treaty on PGRFA | • Cartagena Protocol<br>• Rotterdam Convention<br>• Stockholm Convention |

place the CBD into two groupings (or 'clusters'): one with the other biodiversity-related agreements (focusing on their common conservation element); and another which includes the UNFCCC and UNCCD (focusing on their common sustainable development objectives). Together, the three 'Rio agreements' enjoy a special status within the UN system, as they are among 25 treaties identified in the Secretary-General's *Millennium Report* as central to the UN's mission.

Not only is the CBD qualitatively different from previous biodiversity agreements, it also distinguishes itself from its more contemporary counterparts. Notably, unlike its sister agreements on climate change and desertification, the CBD enters a legal field crowded with global agreements. Legal instruments are particularly prolific in relation to the CBD's first objective, that of biodiversity conservation. In line with this goal, the CBD builds on pre-existing biodiversity conservation agreements such as the CMS, Paris and Ramsar Conventions and, to some extent, CITES. In relation to its second objective, that of sustainable use, the CBD echoes contemporaneous (1992) sustainable development regimes such as the UNFCCC and the UNCCD as well as subsequent agreements such as the International Coral Reef Initiative (ICRI) and the Convention on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Species negotiated under UNCLOS. As it seeks to address its third objective, benefit sharing, the Convention establishes a new regime for the international exchange of genetic resources. In so doing, it overlaps with regimes concerning extractive natural resources, such as the recently revised Food and Agricultural Organization International Undertaking on Plant Genetic Resources for Food and Agriculture (FAO International Undertaking on PGRFA) (see the discussion regarding this international treaty below) and the International Union for the Protection of New Varieties of Plants recently revised International Plant Protection Convention (IPPC).[35] The CBD also has implications for other

[35] Prior to their recent revision, these regimes had operated largely according to the principle of 'common heritage of mankind' (CHM) – a principle which views certain resources as public goods and, thus, not subject to access restrictions or usage fees. However, the proposition that biodiversity should be viewed as the common heritage of humankind was rejected at an early stage of the CBD's negotiation, on the grounds that biodiversity does not constitute a 'global commons' (as with the oceans and atmosphere). Indeed, most of its components are situated in areas under national jurisdiction or even on privately owned property. Instead, a firm emphasis was placed on sovereign rights over biological resources, while recognizing that biological diversity itself is a common *concern* of humankind. 'Common concern' implies a common but differentiated responsibility among developing and industrialized countries; it recognizes the international community's concern for biodiversity without making biological resources its common heritage, or indeed property. Thus, broadly speaking, biodiversity-rich countries and communities may restrict access to their biological resources to those who have

regimes in the areas of trade and intellectual property such as the World Trade Organization (WTO) and the World Intellectual Property Organization (WIPO).[36] With the adoption of the Cartagena Protocol on Biosafety, it remains to be seen whether the CBD facilitates the creation of a new biosafety regime or whether it simply extends or challenges existing regimes, particularly in the area of trade.[37] Table 1 opposite categorizes international agreements, which impact on at least one aspect of the CBD (and vice-versa) according to both subject matter and duration.

## COMPREHENSIVENESS

The CBD's comprehensive rather than sectoral approach to conservation makes it a landmark treaty in the environmental field. The Convention goes beyond the conservation of biodiversity *per se* to encompass such issues as the sustainable use of biological resources,[38] access to genetic resources, the sharing of benefits from the use of genetic material, and access to technology, including biotechnology.[39] It has been argued that the Convention's central focus is on the conservation of biological resources, and that 'all the rest [of the Convention] is the methodology of how to conserve'.[40] By bringing these 'non-traditional' issues into the bargain, the CBD becomes a courageous political document, but also a rather clumsy and cumbersome legal text. Of course, some maintain that the CBD's near-universal membership is a reflection of its weakness; that countries sign on precisely because there is no effective way of monitoring or enforcing compliance provisions which have been described as 'vague and voluntaristic' (at best) and 'confusing and contradictory' (at worst).[41] Moreover, because so many different groups see their interests mirrored in the treaty, it has been dubbed the 'Omnibus Convention' or the 'Convention for all life on Earth'.[42]

The sheer proliferation of programmes and processes established under the CBD reflects both its breadth and depth. However, the very comprehensiveness which makes the CBD unique among global biodiversity agreements also makes it vulnerable to over-extension. The COP's over-crowded agenda (particularly in the first 4 years) and the proliferation of subsidiary bodies and processes have resulted in a diffusion of limited energy, attention and resources among State and non-State actors alike. If the issues and interests it encompasses are not carefully managed, the CBD could collapse under its own weight. Fortunately, the parties have taken steps to address these pitfalls. Not only have they organized a series of special meetings to examine the Convention's operations, a strategic plan is also being developed for adoption at COP-6 to be held at the Hague in April 2002.[43]

## COMPLEXITY

A second feature of the CBD is the complexity (and, some would say, ambiguity) not only of the Convention text but also of the biodiversity issue-area itself. Two aspects of this complexity are 'issue salience' and the 'veil of uncertainty'.

### ISSUE SALIENCE

The CBD reached its peak in popularity when the US announced it would not sign in Rio. Since that time, the Convention has received negligible coverage in the mainstream media – especially when compared to its ozone and climate change counterparts. If the CBD is indeed viewed as both less popular and less prestigious than these other agreements, it is in part due to the nature of the issue-area itself. Both the breadth and depth of biodiversity make it difficult to define a clear *problématique*. In essence, biodiversity lacks 'issue salience'.[44]

agreed to share the benefits arising from the use of these resources. Operationalizing this principle (and its qualifiers) into concrete arrangements has been the focus of protracted discussions and arrangements – bilateral as well as multilateral.

[36] For an analysis of the relationship between the CBD and the GATT, see D. Downes, 'The Convention on Biological Diversity and the GATT', in R. Housman *et al.* (eds), *The Use of Trade Measures in Select Multilateral Environmental Agreements* (UNEP, 1995), 197–251.

[37] For a regime analysis of the biosafety negotiations, see Vogler and McGraw, n. 19 above.

[38] According to Article 2 of the CBD, 'biological resources' include 'genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity'.

[39] 'Biotechnology', as defined in Article 2 of the CBD, means any 'technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use'.

[40] See McGraw interview with Tolba, n. 10 above.

[41] In this connection, it is worth noting that one of the reasons cited by the US for not signing the CBD in Rio was that the government took its international commitments seriously enough *not* to sign this particular treaty (see Chandler, n. 10 above).

[42] McGraw interview with A. Campeau (Montréal, Canada, 30 October 1997).

[43] For actions taken in this regard, see, for instance, Note by the Executive Secretary on the Strategic Plan for the Convention on Biological Diversity to the Open-Ended Inter-Sessional Meeting on the Strategic Plan, National Reports and Implementation of the CBD, UNEP/CBD/MSP/2 (Montreal, 19–21 November 2001), 1–8.

[44] An issue's saliency is derived from its simplicity, clarity, and/or familiarity. According to O.R. Young and G. Osherenko, '[s]uccess is often linked to the ability of those formulating proposals to draft simple formulas that are intuitively appealing or to borrow formulas or approaches from prior cases with which negotiators may already be familiar. The influence of salience lies in its capacity to facilitate the convergence of expectations in international bargaining'. See O.R. Young and G. Osherenko, *Polar Politics: Creating International Environmental Regimes* (Cornell University Press, 1993), at 14–15.

In essence, biodiversity does not offer an uncomplicated formula that advocates can explain to policy makers in straightforward terms and that journalists can encapsulate in headlines for public consumption. Whereas the impacts of atmospheric change, such as ozone depletion and global warming, are beginning to be understood by the average person, comprehending the 'web of life' – from microscopic organisms to entire ecosystems – is an extremely elusive matter, and indeed forms a topic of continuing research and discussion among ecologists. Even within the scientific community, the reality and potential repercussions of biodiversity loss have really only been recognized by ecologists, taxonomists and biologists. Moreover, even though a number of environmental groups are working to preserve 'nature', the biodiversity cause *per se* has yet to be championed by a popular group (environmental lawyers and taxonomists can hardly be said to capture the public's imagination). Again, this is in contrast to global atmospheric issues taken up by popular professionals such as astronauts and medical doctors.

The species-specific and site-specific treaties that pre-dated the CBD made it easier for the public to embrace 'charismatic animals', such as pandas and seal pups, and to explore 'exotic sites' such as the rainforests of Borneo and Brazil. When countries such as Brazil and Malaysia effectively neutralized the forests issue within the UNCED process and they (and others) opposed any lists of globally important species and spaces within the CBD (the term 'global' does not even appear in the agreed text),[45] many of the familiar connections that people had with biodiversity were lost.

Although the comprehensive manner in which the CBD addresses the biodiversity issue-area may be laudable from a substantive or scientific point of view, it also serves to magnify the issue's complexity and, consequently, to diminish both the Convention's general appeal and the political will necessary for its implementation. The remedy, however, is not necessarily to return to the traditional ways of conveying the importance of biodiversity. Indeed, conservation campaigns focusing on specific sites and species are best left to well-established conservation organizations. Instead, the CBD should focus on its unique nature or, in management terms, its 'core competency'. This entails the integration of the CBD's three key objectives of conservation, sustainable use and benefit sharing (as set out in Article 1 of the Convention).

The current lead-up to the World Summit on Sustainable Development presents an opportunity to showcase the CBD as a true sustainable development treaty. As one of two legally binding agreements to emerge from the 1992 UNCED, the CBD is well positioned to serve as a global focal point for measuring progress since the Rio Earth Summit. The standing of the CBD (and its Cartagena Protocol) as a sister agreement to the UNFCCC (and its subsequent Kyoto Protocol) should be emphasized. By clearly identifying and creating links with climate change and other issues that rank high on domestic agendas (such as health and safety) as well as international agendas (such as trade and security), the political and public profile of the CBD, and biodiversity in general, would be enhanced.[46]

Fortunately, the COP recognized the importance of these issues and, at its fifth meeting, called for the creation of a 'Consultative Working Group of Experts on Biodiversity Education and Public Awareness'. Although this joint CBD/UN Educational, Scientific and Cultural Organization initiative is to be applauded, it clearly illustrates the same conceptual ambiguities that continue to plague the CBD in general. This confusion arises primarily from the fact that the working group's mandate is too broad. Rather than develop initiatives that focus on the CBD, the group attempts to address all of biodiversity. This approach rests on the misguided view of the CBD as an umbrella convention (one that consolidates pre-existing biodiversity agreements) rather than as a framework sustainable development convention (which overlaps with agreements beyond the environmental realm). A cross-cutting education and communications strategy based on the CBD itself (as a first focal point of biodiversity) would allow for involvement by a range of relevant institutions and instruments beyond biodiversity conservation *per se*. In addition, the composition of the working group itself does not encompass the expertise required to effectively fulfill its own mandate. As with many processes established under the CBD, the 'expert group' itself reflects a narrow range of expertise, comprising mostly scientists, career diplomats and programme officers with little experience in developing education or communications programmes. Those in the group who do possess this expertise have developed it almost exclusively in relation to biodiversity conservation. Such a focus is likely to lead to educational and public awareness programmes which emphasize the CBD's first objective over the other two, rather than its key innovation – the interrelationship between conservation, sustainable use and benefit sharing.

[45] Although such opposition may be understood on purely political grounds, it has exacerbated the CBD's lack of issue saliency.

[46] At the November 2002 meeting of the Open-Ended Inter-Sessional Meeting on the Strategic Plan, National Reports and the Implementation of the Convention (MSP), the Government of Canada sponsored a panel on 'raising the public and political profile of the CBD', particularly in the lead-up to WSSD.

## VEIL OF UNCERTAINTY

While the uneven scientific knowledge among diplomats involved in the CBD negotiations proved problematic, the lack of information (or 'veil of uncertainty'[47]) regarding the various values of biodiversity may have facilitated the negotiation process. Indeed, the bargaining position of the South was significantly strengthened by the negotiators' lack of data regarding the commercial value of biodiversity within their borders (*in situ*). While developing countries are the historic holders of biodiversity, many of the relevant products (in particular, plant genetic resources for food and agriculture or 'PGRFA') can be derived from the gene banks of the North (*ex situ*).[48] This fact has led some observers to conclude that any claim to victory by the South *vis-à-vis* the CBD is, in essence, a moral one.

Certainly, in the 10 years since the Convention's adoption, the implications of its provisions have come into sharper focus. Among other factors, current studies of the commercial value of biodiversity have in effect weakened biodiversity-rich countries' leverage in post-agreement negotiations. This author views the recently concluded negotiations aimed at harmonizing the 1983 FAO International Undertaking on PGRFA with the CBD as a case in point.[49] On 3 November 2001, after 7 years of protracted negotiations, the Thirty-First Session of the Conference of the FAO voted to adopt the International Treaty on Plant Genetic Resources for Food and Agriculture.[50] However, many of the guiding principles, such as 'farmers' rights'[51], found in the original G77 proposal, were diluted in order to secure an agreement. According to a non-government organization statement issued upon the treaty's adoption, the result is:

> a weak [t]reaty that poses few challenges to the dominant trade policy environment, technological developments and intellectual property rights regimes which tend to serve the interests of OECD countries.[52]

Furthermore, unlike the CBD with which the new treaty was initially intended to be harmonized, the agreement has been criticized for its lack of fairness, equity and comprehensiveness.[53] Notwithstanding these apparent 'weaknesses', the treaty was adopted with 116 votes in favour, none against, and only two abstentions from the US and Japan.

As the knowledge about issue-areas addressed under the CBD evolves (and as those issues themselves evolve and are operationalized through various mechanisms, including protocols), so too do the negotiating groups. Rather than following traditional UN regional groupings, unconventional alliances now form around specific interests and issue-areas.

Events leading up to the conclusion of the Cartagena Protocol on Biosafety provide a compelling illustration of this phenomenon. The biosafety negotiations avoided polarization along a strictly North–South axis. As negotiations clarified the outlines of a protocol, the essential unity of developing countries (which had characterized the negotiation of the CBD itself) began to erode. Countries with nascent biotech industries, or with interests in large-scale agricultural exporting, re-considered their interests and alignments. The most striking example of this evolution was the split within the group of Latin American and Caribbean countries (GRULAC): Argentina, Chile and Uruguay joined Australia, Canada and the United States to form the 'Miami Group'; while Brazil chose to retain its leadership role within Latin America and the rest of the developing world (the so-called Like-Minded Group). Industrialized countries also took up divergent positions (mainly according to their exporter/importer status), thus resulting in an important split within the OECD. The EU (notwithstanding major differences among its Member States) tended to move toward a more sceptical attitude regarding the benefits and safety of biotechnology and, in any event, defended its own precautionary procedures for living modified

[47] According to Young, parties involved in institutional bargaining regularly act under a 'veil of uncertainty' regarding the future distribution of benefits from a regime. However, since institutions are never easily changed once they are established, this 'veil' creates incentives for the parties to opt for institutional arrangements that are more equitable so that they are acceptable to countries with different positions, interests and resources (O.R. Young, *International Cooperation: Building Regimes for Natural Resources and the Environment* (Cornell University Press, 1989); see also A. Hasenclever *et al.*, *Theories of International Regimes* (Cambridge University Press, 1997), at 73).

[48] Some countries, in particular the USA, claim that they recognized that the commercial value of *in-situ* biodiversity was overplayed during the CBD negotiations. This contention might help explain why American negotiators were less willing to give in to what they considered to be unreasonable demands by developing countries, with the Nordic Group often acting as mediators.

[49] The complex and critical issue of *ex-situ* collections of genetic resources acquired prior to the CBD's entry into force and the question of 'farmers' rights' were left unresolved by the Convention negotiators. Resolution 3 of the Nairobi Final Act recognizes the need to address effectively these matters and also recognizes the FAO as an appropriate forum to do so. Both issues remained major stumbling blocks in protracted negotiations (1994–2001) under the auspices of the FAO's Commission on Plant Genetic Resources for Food and Agriculture.

[50] To view the text of the Treaty, see the FAO Commission on Genetic Resources Secretariat website, available at <http://www.fao.org/ag/cgrfa/default.html>. See also the article by D. Cooper in this issue of *RECIEL*.

[51] Developing countries sought to establish an international benefit-sharing mechanism for ensuring farmers' rights, but the new treaty effectively subordinates these to national laws.

[52] See *Statement by Public Interest, Non-Profit Civil Society Organizations to the 31st FAO Conference* (3 November 2001), available at <http://www.iisd.ca/biodiv/iu.html>.

[53] Ibid. For an analysis of the treaty negotiations, see T. Barnes and S. Burgiel, 'IU-WG Final Summary', 9:213 *Earth Negotiations Bulletin*, 1–14. The article may be found at <http://www.iisd.ca/biodiv/iu.html>.

organisms (LMOs). The Miami Group maintained the view that anything more than a limited coordination of existing national regulations would amount to a restriction of trade based on unspecified dangers of LMOs.

As the veil of uncertainty (which favoured developing country interests during the initial CBD negotiations) lifted around biotech and other key issue areas under the Convention, old alliances are replaced with newer and, arguably, more innovative ones.[54] Indeed, it is doubtful that the CBD could have been concluded according to its existing terms in current conditions of greater issue clarity.

## COMPROMISE

From the beginning of the biodiversity negotiations, it was clear that in order to ensure a successful outcome, the divisive issue of global economic disparities, which had historically characterized negotiations between the North and the South, would have to be addressed. The task was to convince developing countries that the industrialized world's apparent resolve to save the globe's fast disappearing biological resources reflected good faith rather than maintenance of the *status quo*. Equally essential was the task of getting industrialized countries to bind themselves to provide the necessary funds, technology and capacity upon which the practical implementation of the CBD would depend. To a great extent, the CBD succeeded in both tasks. Through a complex bargaining process, the CBD reflects a network of compromises. The Convention's adoption can be attributed not so much to the fact that both industrialized and developing countries found many areas of common ground; rather, it demonstrates that each negotiating group had a substantial portion of their respective vital demands met within the framework of the agreed text. As table 2 on negotiation trade-offs demonstrates, the CBD was the result of a distributive rather than integrative bargaining process.[55]

The focal issues of the biodiversity negotiations can be divided into two categories, according to the divergent interests that underlie them. The first category of issues consists of concessions or commitments by industrialized countries (with developing countries pressing for the strongest commitments possible). The second group of issues includes those issues that reflect concessions or commitments by developing countries (with industrialized countries pressing for the strongest commitments possible). A survey of key trade-offs (with corresponding CBD Articles) within the biodiversity negotiations is presented in table 2 below.

The ultimate compromises that were achieved are reflected in the text of the CBD itself. Trade-offs took place within individual Articles, between Articles, between contemporaneous conventions (such as the UNFCCC), and even with pre-existing ones (such as CITES or UNCLOS). While developing countries' concessions and commitments (such as access to genetic resources, conservation and sustainable use, impact assessment and national reporting) were largely negotiated in the first working group (WGI), those of industrialized countries (such as benefit sharing, financial resources, and scientific, technical and technology cooperation) were addressed in the second working group (WGII). On several occasions, progress in WGI was blocked or slowed when developing countries perceived lack of progress in WGII.[56] However, the fact that the converse was rarely true may demonstrate that, although the development of a biodiversity convention was originally a Northern government/non-government organization initiative, the South was better able to exercise its bargaining power throughout the negotiations.

## CONCLUSION

Assessing the major trade-offs made by both developing and industrialized countries in the course of the CBD's negotiations highlights the ways in which often divergent positions were resolved (or not) within the CBD. Despite the apparent common interest in and 'perception of an integrated, interdependent ecosystem' which frame global environmental issues, the negotiation of the CBD accentuated many of the issues that divide these countries.[57] Indeed, the CBD represents a network of North–South compromises achieved through a complex bargaining process.

[54] The creation of the Compromise Group, itself accommodating various positions, was particularly instructive in this regard. One delegate described the group as an 'international lab' in which various proposals could be tested for broader agreement. Another innovation was the return to a diplomatic tradition called the 'Vienna Setting' – one which involves representation from all stakeholder groups at the negotiating table. The openness and transparency of the process made it difficult for any government or interest group to stall the process or disown the end result. Again, this outcome stands in stark contrast to the original CBD negotiations as reflected by reservations formally expressed by several governments upon the Convention's adoption.

[55] Whereas distributive or positional bargaining involves staking out definite positions which may be mutually exclusive (often resulting in 'zero-sum' outcomes), integrative or productive bargaining involves searching for mutually beneficial (or 'win-win') solutions (see O.R. Young, 'The Politics of International Regime Formation: Managing Natural Resources and the Environment', 43 *International Organization* (1989), at 361, 366–367).

[56] U. Svensson, 'The Convention on Biodiversity: A New Approach', in G. Sjöstedt and S. Uno, n. 11 above, 164–191.

[57] M. Miller, 'The Biodiversity Regime', in M. Miller (ed.), *The Third World in Global Environmental Politics* (Lynne Rienner Publishers, 1995), at 109.

**TABLE 2** TRADE-OFFS BETWEEN INDUSTRIALIZED AND DEVELOPING COUNTRIES[58]

| TYPES OF TRADE-OFFS | CONCESSIONS BY DEVELOPING COUNTRIES | CONCESSIONS BY INDUSTRIALIZED COUNTRIES |
|---|---|---|
| Trade-offs regarding the objectives of the CBD. | Objectives (Article 1):<br>• Conservation and sustainable use<br>• Access to genetic resources | Objectives (Article 1):<br>• Benefit sharing<br>• Technology transfer<br>• Funding |
| Trade-offs between the principal sets of obligations under the CBD:<br>• States have sovereign rights over their own biological resources, but they also have a responsibility to conserve and sustainably use these resources. | • General measures for conservation and sustainable use (Article 6)<br>• Identification and monitoring (Article 7)<br>• *In-situ* conservation (Article 8)<br>• *Ex-situ* conservation (Article 9) Sustainable use of components of biodiversity (Article 10) | • Recognition of national sovereignty over natural resources (Article 15(1))<br>• Information exchange (Article 17)<br>• Technical and scientific cooperation (Article 18) |
| Trade-offs between access to genetic resources (largely in the South) in exchange for access to the results and benefits of biotechnologies (developed largely in the North). | • Access to genetic resources (Article 15(2)) | • Benefit sharing/biotechnology (Articles 15(6), 19(1)–(2)) |
| Trade-offs between intellectual property rights (IPR) and patents (largely held by the multinational corporations and research agencies of the North)[59] and technology transfer and the rights of indigenous peoples' and local communities' rights, on the other. | • Protection of IPR (Article 16(2)–(3)) | • Technology transfer (Article 16(3)–(5))<br>• Indigenous peoples and local communities (Artilce 8(j)) |
| Trade-offs between the withdrawal of lists of globally-important biodiversity (Global Lists advocated by several industrialized countries) and the acceptance (by developing countries) of a scientific body to advise the COP (Article 25) along with their acceptance of national reporting (Article 26) and impact assessments (Article 14). | • Subsidiary Body on Scientific, Technical and Technological Advice (Article 25)<br>• Reporting (Article 26)<br>• Impact assessments (Article 14) | • No 'Global Lists' |
| Trade-offs regarding the financial resources of the CBD. Developing countries accepted both eligibility criteria and 'agreed incremental costs' in exchange for the North's provision of 'new and additional financial resources' (Article 20(2)). | • Eligibility criteria (Article 20(2))<br>• Agreed incremental costs (Article 20(2)) | • Provision of new and additional financial resources (Article 20(2)) |
| Trade-offs regarding the financial mechanism of the CBD. In exchange for the South's concession that no multilateral fund be explicitly mentioned, the North accepted Article 21's mechanism for the provision of financial resources to developing countries under the authority and guidance of the COP. The decision to designate the Global Environmental Facility (GEF) as the institutional structure to operate the financial mechanism on an interim basis is a compromise between North and South: the former had hoped that the GEF would be designated on a permanent basis, while the latter originally proposed the creation of a new and separate fund for the Convention. | • No multilateral fund explicitly mentioned<br>• GEF explicitly mentioned (Article 39) | • Mechanism for the provision of financial resources to developing country parties under the authority and guidance of the COP (Article 21)<br>• GEF only interim institutional structure (Article 39) |

[58] Table adapted from V. Koester, 'The Biodiversity Convention Negotiation Process – And Some Comments on the Outcome', in E.M. Basse (ed.), *Environmental Law: From International to National Law* (Gad Jura, 1997), 205–258.

[59] The protection of IPR (Article 16(2)–(3)) is qualified both within the latter paragraph and by the two ensuing paragraphs ((4)–(5)) as well as by the rights of indigenous peoples and local communities (Article 8(j)).

In balancing divergent interests and positions, the final text of the CBD was more acceptable to the vast majority of States involved in its negotiation. Viewing the CBD as the best possible outcome, Veit Koester, the Chair of the Intergovernmental Negotiating Committee Working Group that negotiated the most contentious aspects of the CBD, concluded that 'the Convention represents a North–South compromise, therefore the art of the possible'.[60] Yet, opinion concerning both the process and outcome of the biodiversity negotiations is divided. According to the Chief Legal Advisor to the US Delegation:

> It is regrettable that a legal instrument as ambitious as the Biodiversity Convention should suffer from basic conceptual and drafting deficiencies. The structure of the negotiations, the haphazard way in which crucial issues were considered, and the pressures of time contributed to a legal instrument which should cause distress for international lawyers and policy-makers.[61]

By contrast, two environmental lawyers, who helped author the original IUCN draft convention, hailed the CBD as a 'landmark'.[62] Moreover, as argued by Swanson:

> the CBD came into existence because there exists a common interest in the coordinated management of domestic resources, not on account of a joint interest in a common resource. The recognition of this more complicated form of commonality is an achievement in itself.[63]

The CBD reflects the interaction of a variety of forces in the politics of its formation and, now, its operation. As elaborated above, the following factors played a key role in producing this outcome:

- the nature and salience of the issue area (particularly the complexity and breadth of biodiversity and the attendant difficulty in establishing causality regarding biodiversity loss);
- professional networks (particularly lawyers, economists, natural and social scientists);
- private-sector and non-profit lobby groups (or the notable lack of participation by non-State actors in pre-agreement negotiations in contrast with active non-government organization participation in post-agreement negotiations);
- leadership (structural, entrepreneurial, intellectual and/or moral);
- non-government, inter-government and intra-government coordination;
- regional and economic bloc positions (both within and among G-77 and OECD countries);
- previous, parallel and pending negotiation sets (such as CITES, the General Agreement of Tariffs and Trade, UNCLOS, UNCED and UNFCCC); and
- the evolution of international law (such as the framework protocol approach to developing multilateral environmental agreements).

Since many of the most contentious issues were left unresolved at the time of the CBD's adoption, the post-agreement negotiations have proven particularly challenging. The level of implementation and enforcement of the CBD will be the ultimate test of whether the compromise achieved during the Convention negotiations was a true success or merely an illusory one.

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[60] McGraw interview with V. Koester (Jakarta, 15 November 1995).
[61] Chandler, n. 10 above, at 174.
[62] Burhenne-Guilmin and Glowka, n. 15 above, at 17.
[63] T. Swanson, 'Why is there a Biodiversity Convention? The International Interest in Centralized Development Planning', 75:2 *International Affairs* (1999), at 281–282.

# Convention on Biological Diversity National Biodiversity Act & their implications on WTO agreements

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Human beings have been using biological resources in order to sustain their lives, resulting in a symbiotic relationship between humans and the physical and ecological surroundings since long. This has led to evolution of tremendous amount of variability both of biological resources and their uses, depending upon the kind of ecosystems and the diversity in the life style of the peoples. The specificity of the ecosystem and the range of diversity also provided opportunities to people to generate a generations old system of traditional knowledge based on specific uses particularly in the field of forestry and agriculture (Chauhan, 2001).

Even as local communities and tribals were strengthening the traditional knowledge base, there was also a significant increase in modern technological innovations to increase the efficiency of resource utilization during Industrial Revolution. Subsequently, an 'Intellectual Property Rights' (IPRs) regime was evolved in order to encourage the innovation skills of scientists and technologists, and also to protect the interest of the innovators. Different forms of IPRs were used as tools to enhance applications of innovation to accelerate the industrial activity and also to maximize the economic returns from such applications. However, the use of biological resources and associated traditional knowledge were considered as 'Common Goods' belonging to the "Intellectual Commons", and so were kept out of the purview of the IPRs, but were treated as free raw material for industrial use in certain circumstances (Chauhan, 1997).

This paper analyse the inherent conflicts in implementation of various international agreements such as the WTO agreements, especially Trade Related Intellectual Property Rights (TRIPs) and Convention on Biological Diversity from the view point of trade and conservation and sustainable use of biological resources.

The World Trade Organisation (WTO) and Trade Related Intellectual Property Regime (TRIPs). The WTO was set up in 1995 after the conclusion of the Uruguay Round of multilateral trade negotiations, which was signed by 132 countries in Marrakesh in 1994. The basic objectives of the WTO are to provide regulatory and institutional framework for the world trading system and also

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regulate national trade related policies. These agreements are binding upon all WTO members and now are referred as WTOs rules. Most relevant are:

a. The General Agreement on Tariffs and Trade (GATT), 1994. The important elements of the GATT is to forbid members from treating foreign products from one or another countries less favourably than domestic 'like products' (Articles III and I).

GATT also prohibits most quantitative restrictions on imports and exports of goods, such as quotas or bans (Article XI). However, the Article XX provides exception to these rules such as measures necessary to protect human, animal, or plant life or health (Article XXb), to the conservation of exhaustible natural resources taken in conjunction with domestic restriction (Article XXg) and to protect public morals (XXa) in conjunction with the chapeau to this Article. It remains uncertain how the obligations and exceptions contained in various articles would relate to provisions of the CBD, such as import restrictions on 'Living Modified Organisms LMOs) to protect the environment or export restrictions upon genetic resources to promote benefit sharing.

b. The Agreement on Trade Related Aspects of Intellectual Property (TRIPs). Categories of intellectual property rights covered by this agreement include copyrights, patents, plant variety protection (PVP), industrial designs, geographical designations, layout-design of integrated circuits, and trade secrets along with certain minimum standards for protection of intellectual property by the member nations. The agreement also requires parties to provide fair, effective judicial procedures and remedies for right holders claiming infringement (Articles 42-49). Grace period to implement the provisions of this agreement for developing countries is five years (Article 65) and eleven years for least developing countries (Article 66). The member nations are to observe the principles of national treatment and most favoured nation with respect to intellectual property (Article 3-4) to avoid any kind of discrimination among inventions by nationals of different foreign countries. The TRIPs requires countries to recognise patents and provide basic elements of patents such as both products and processes in most area of technology (Article 27). Article 27.3(b), however, allows WTO members to maintain exceptions from patenting for plant and animals and essentially biological processes, but they must provide for patenting of modified micro-organisms and 'microbiological processes'. This article also requires countries to protect plant varieties either through patent or 'an effective sui generis system or both. In addition, members may exclude products or processes from patenting where "the prevention within [national] territory of [their] commercial exploitation is necessary to protect ordre public [public order] or morality, including tom protect human, animal or plant life or health or to avoid serious prejudice to the environment"

(Article 27.2). The agreement also set out limiting conditions in governments may authorize use of patent against the will of patent holders subject to compulsory license (Article 31). The TRIPs Council is established under Article 68 to monitor the operation of the agreement, monitor WTO Members' compliance with its terms, and provide a forum for consultations on trade related aspects of intellectual property. Consequently punitive mechanism has been made very effective.

c. The Agreement on Technical Barriers to Trade (TBT). This agreement is intended to ensure that the contracting parties do not use technical regulations and standards as disguised measures to protect domestic industries from foreign competition and also to reduce the extent to which these regulations and standards operates as barriers to market access leading to harmonisation in the international trade. Under the agreement's Code of Good Practice for the Preparation, Adoption and Application of Standards, a member is obligated to 'take such reasonable measures as may be available ' to ensure compliance with the code of private voluntary programmes within its territory, including its most favoured nation and national treatment obligations. The rules of this agreement prohibit both regulations and standards from discriminating between domestic and foreign products that are alike (national treatment) and between 'like' products from different WTO members ("most favoured nations). It may be pointed out that there is no explicit environmental exception in this agreement except in its preamble language, which is similar to the environmental exception of Article XX of the GATT. Article 2.2 provides that the 'legitimate objectives' of technical regulations and standards include "protection of human health or safety, animal or plant life or health, or the environment".

d. The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS). The SPS agreement establishes trade disciplines for regulations aimed at protecting human, animal and plant health from risk due to diseases, pests, disease carrying organisms, addictive contaminants, toxins or disease causing organisms in foods, beverages or feed stuffs and also to "ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect the human, animal and plant life or health based on scientific principles" (Article 2.2). In cases where relevant scientific evidence is insufficient, a member may provisionally adopt such measures on the basis of available information, including from SPS measures applied by other members (Article 5.7). In addition members must ensure that their SPS measures are consistent with non-discrimination principles of most favoured nations and national treatment. Furthermore SPS measures "shall not be applied in a manner which would constitute a disguised restriction on international trade" (Article 2.3). Measures that 'conform to" international standards are presumed to be consistent with the SPS Agreement and the GATT (Article 3.2). The SPS Agreement would apply to regulations to protect the environment and biodiversity against introductions of alien species and LMOs

via trade pursuant to the Article 8(g) and 8 (h) of the CBD.

e. The Agreement on the Subsidies and Countervailing Measures. This agreement places restriction on the power of WTO member governments to provide subsidies to industry. It defines subsidy broadly to include the conferral of a benefit to industry resulting from a financial contribution by a government or any public body within a Member's territory as provided under the Article XVI of the GATT. If a subsidy is 'actionable' as defined under the Agreement, it can be challenged by another Member through the WTO dispute resolution procedure. To be actionable, a subsidy has to be 'specific'. The Subsidies Agreement creates an opening for members to grant certain types of subsidies, within strictly defined limitations if they notify other Members of the existence of the subsidies (Article 8.2c). However, subsidies in agriculture, one of the major sector affecting biodiversity, are exempted entirely form this agreement, and cannot be challenged under its provisions.

(f) The Agreement on Agriculture. The Agreement of Agriculture is aimed at reducing ' agricultural support and protection...[to correct and prevent] restrictions and distortions in world agricultural markets' (preamble). It includes measures to constrain government subsidies to some extent and to reduce import barriers, in part through 'tariffication' in which barriers are converted to tariffs. The agreements make Members to commit in gradually reducing the level of subsidization of agricultural products in designated categories. The members are obliged to make concessions to other members to enhance access to their markets of designated products. However, the Agreement has no legally binding language on environmental and developmental issues.

g. The WTO Understanding on the Settlement of Disputes. A 'Dispute Settlement Body' has been established to address any dispute between the members arising out of any irregularity in implementation of the various provisions of the WTO Agreements and sufficient punitive measures have been put in place to punish the concerned members.

**The Convention on Biological diversity (CBD):**

The 23 preambular paragraphs of the CBD recognise and reaffirm the intrinsic value of biological diversity; the sovereign rights of States over their biological resources; the fundamental requirements of in situ conservation of ecosystems and natural habitats; the supporting role of ex situ conservation; the vital role of local communities and women in the conservation and sustainable use of biological diversity; the desirability of equitably sharing the benefits arising from the use of traditional knowledge, skills, innovations and practices; the importance of and need to promote regional and global cooperation for conservation; and the need for

substantial investments to conserve biological diversity. Recognition and reaffirmation of these elements crystallize the aims of the CBD -- the conservation of biological diversity, sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of the genetic resources.

The CBD contains 42 Articles dealing with recognition to sovereign rights of the nations over their biological resources (Art. 3); calling Contracting Parties for taking general measures for conservation and sustainable use (Art. 6); identification and monitoring (Art.7); in situ and *ex situ* conservation (Art.8 and 9); sustainable use of the components of biological diversity (Art. 10); providing incentive measures (Art.11); research and training (Art.12); public education and awareness (Art. 13); and impact assessment and minimising adverse impacts (Art. 14). In addition, it facilitates access to genetic resources on "mutually agreed terms" and with the "prior informed consent" of the country providing the resources, with the recipient country being committed to share the accruing benefits (Art. 15). It also makes provision for the access to and transfer of technologies, including biotechnologies, on "fair and most favourable" terms. from the developed to developing countries, which are the main providers of genetic resources (Art. 16). Moreover, the CBD calls on the private sector to facilitate access to and transfer of such technologies developed by them (Art. 16.4). The Contracting Parties are to cooperate in this regard to ensure that patents and other 'Intellectual Property Rights (IPRs)' are supportive of, and do not run counter to, the objectives of the CBD (Art.16.5). The Parties are also to take measures to facilitate access on a 'fair and equitable' basis, and on 'mutually agreed terms', to the results and benefits arising from biotechnologies (Art 19.2) It commits the Parties to consider the need for, and modalities of, a protocol in the field of safe transfer, handling and use of any living modified organisms resulting from biotechnologies (Art. 19.3). The developed Country Parties are committed to contribute to a fund to enable developing Country Parties to meet the 'agreed full incremental cost' for implementing the provisions of the CBD (Art. 20.2). This financial mechanism is to 'operate within a democratic and transparent system of governance' and 'function under the authority' of the Conference of Parties (COP) as per the Article 21 (Chauhan, 1996). It creates an international structure to support national implementation and to promote continued international co-operation through a permanent Secretariat, a Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), a Clearing House mechanism and a Multilateral Fund operated by Global Environment Facility (GEF) to help finance implementation in developing countries. In short the basic obligations of the CBD are summarized as follows:

 Recognises the sovereign rights of the states over their biological resources (Article 3 and 15).  Stipulates that access to biological resources can

only occur with the 'prior informed consent' of states (Article 16.5).  Requires to protect and promote the rights of communities including farmers in terms of their biological resources and traditional knowledge (Article8j and 10). Establishes access to the biological resources of developing countries on a quid pro quo basis with technology transfer from the industrial countries (Article 16). Requires the equitable sharing of benefits arising from the commercial use of biological resources and associated traditional knowledge (Article 15.7). Asserts that intellectual property rights must not conflict with the conservation and sustainable use of biodiversity (Article 16.5).

**The Framework of WTO and CBD- some observations**

The relationship between the various agreements of WTO and sustainable use of bio-diversity, as intended in CBD, has brought in sharp focus the growing trade off between trade promotion and environment protection. There are several agreements within WTO, which directly or indirectly affect biodiversity conservation, especially TRIPS (Article 27(3)b). This agreement covers seven forms of intellectual property protection which are; copyrights; patents; plant variety protection; industrial design; geographical indications; lay out design of integrated circuits and trade secrets. The member States are required to observe the principles of national treatment and most favoured nation with respect to intellectual property (Articles 3 & 4). Out of these seven forms three are most important for our present analysis, they are patents, Plant Variety Protection (PVP) and geographical indications. Article 27 of TRIPs sets the framework of patent regime while Article 31 provides for compulsory licensing; Article 27(3)b allows WTO members to maintain exemption from patenting of plants and essential biological processes. However, there is compulsion for providing patents for LMOs and micro-biological processes. This Article has also become important, because of the fact that, it also requires countries to protect plant through patent or "effective sui generis system" or both. There are several attempts to suggest that International Union for the Protection of New Varieties of Plants (UPOV) provides the only effective system for protection of plant varieties. Some authors explain the emerging pressure to accept UPOV as an effective system for plant variety protection and suggest to think beyond that. It was being expected that the contents of Article 27 (3)b would be further strengthened to accommodate the larger interest of biotechnology industry at the WTO meeting at Seattle. It was being expected that there was an inclination to remove the expansion for plant and animal patenting and possibly narrow the flexibility to create *sui generis* plant variety protection. However, developing countries have been of the view to enhance flexibility so as to incorporate the CBD spirit.

Among various Articles, there are three specific Articles of CBD, which have assumed greater relevance since the emergence of WTO regime. They pertain to the rights over genetic resources (Article 15.1); the whole issue of

technology (Article 16) and the Article 8 (J), which is related to the preservation, and maintenance of traditional knowledge systems of local communities, through equitable sharing of the benefits. Though Article 8 deals broadly with the in situ conservation the last section categorically mentions that each Contracting Party would respect and preserve the knowledge, innovations and practices of indigenous and local communities embodying traditional life styles relevant for the conservation and sustainable use of biological diversity and promote their wider application of such knowledge. This situation imposes a major responsibility on the Contracting Parties, to implement the CBD, in terms of establishing a critical balance between biodiversity conservation and the protection of the rights of the indigenous and local communities. It would be appropriate to look into the possibility of extending the CBD activities to the following areas: (1) *ex-situ* collection (both prior to and after CBD came into force) facilities for developing countries especially for preserving agro-biodiversity; (2) facilities for inventorisation and characterisation of such crops (on the basis of sources of origin) of such collections; and (3) conditions for transfer of advanced technologies to the Third World countries for maintenance of such facilities.

The long-standing debate on IPRs and on Article 8(J) has taken an interesting turn at the COP-5 meet held at Nairobi in May 2000. The Working Group II in its Ad Hoc Working Group report recommended continuous involvement of indigenous people while the intellectual regime is being implemented. It also called for, inter-alia, full and direct participation of indigenous and local communities including women; recognition of the collective dimension of indigenous knowledge and sue of MATs/PIC; and direct involvement of indigenous technical experts. In this context, India demanded continuous collaboration with World Intellectual Property Organisation (WIPO) while the European Union (EU) underlined the need of development of legal and other systems to protect traditional knowledge. The report request parties to support development of traditional knowledge registers. It recognizes that traditional knowledge's maintenance depends on maintaining cultural identities and material base and emphasize the need for arrangements to control and be determined by indigenous and local communities to ensure that they can make informed decisions. The Ad Hoc Working Group has adopted a two phase approach for complete implementation of legal aspects of Article 8 (J). The programme in first phase includes task under elements addressing participatory mechanism, strategies and trends, benefits sharing, exchange and dissemination of information and other legal elements. While the consequent phase includes elements of participatory process for conservation and systematic use and other monitoring elements.

The Article 16, "Access to and Transfer of Technology", gives special emphasis on inclusion of bio-technology in the scheme of things, and that

both access to and transfer of technology among Contracting Parties are essential elements for attaining all the objectives of CBD. It also lays emphasis on the fact that transfer of technology should be provided and or facilitated under fair and most favorable terms. In the case of technology, especially to patents and other property rights, such access and transfer should be provided only after honoring intellectual property rights.

However, it further stipulates that measures should be taken at the policy level to ensure that private sector facilitates access to joint development and transfer of technology, subject to national and international laws. This is attached with the rider that these laws should not be against the spirit of CBD. The emergence of biotechnology and developments in genetics have given a major boost to the scanning of genetic structures and commercial viability of such ventures. Here, the subsequent article of CBD becomes very important to develop an understanding about the strategies for Article 16. The Article 17 mentions that, "Contracting Parties shall facilitate the exchange of information from all public ally favorable sources relevant to the conceming—and sustainable use of bio-technology facility taken into account the special need for developing countries". This article also talks about repatriation of information. The Article 19 specifically deals with handling of biotechnology and distribution of its benefits. This very well appreciates the position that the raw material for development of biotechnology is basically coming from the developing countries. It suggests that mutual understanding should be evolved by the contracting parties especially developing countries for distribution of benefits arising from biotechnology based on genetic resources. The Article then talks about LMOs, for which a legally binding Protocol on Biosafety has been recently concluded at Cartagena to deal with the environment protection from risks posed by the transboundary movement of the LMOs along with its safety aspects (Chauhan and Tyagi, 2000).

Another important Article, which assumes greater relevance, is Article 15, which refers to access to genetic resources. This article provides an over all frame work for driving home the point that States have sovereign right over their natural resources. It mentions that access to genetic resources shall be subject to 'PIC' of the Contracting Parties providing such resources. PIC is an important mechanism as it ensures community participation in decision-making. The Kani tribe experiment in India is being seen as one of the important examples of this intention. Similar experiments have also been done in countries like Colombia, which have been elaborated in other sections of this paper. At the COP-5 Working Group-II (WG-II) discussed, the access to genetic resources and benefit showing. The WG-II appreciated the inter-linkages between Article 8 (J) and Article 16.

India along with Nigeria highlighted the need for legislation and control measures in recipient countries of genetic resources to complement legal

measures in resource provider countries. Ethiopia and India also highlighted the issue of IPRs and endorsed their commendation to further explore the compatibility of the objectives and the agreement on TRIPs. The WG II has decided to go into details of CBD and TRIPs; and ex situ acquired prior to the CBD entry into force and not addressed by the FAO Commission on Genetic Resources with regard to Access and Benefit Sharing (ABS), parties have been requested to designate a national focal point and one or more competent national authorities to be responsible for providing information on ABS arrangements. Parties have also been urged to ensure that national biotechnology strategies as well as legislative, administrative or policy measures on ABS contribute to conservation and sustainable use objective. One of the important recommendations of the Group to the Parties is to report on their implementation, in terms of Article 15 (access to genetic resources), Article 16 (access to and transfer of technology) and Article 19 (handling of bio-technology distribution of its benefits of the convention). It requests all countries the providers and the recipients of genetic resources to adopt legislation, administrative or policy measures that are supportive of efforts made by provider countries to ensure that access is subject to Article 15, 16 and 19. This has brought in sharp focus the importance of PIC and MAT for implementation of ABS. It has further been requested that while developing national legislation on access, Parties would allow for development of a multilateral system to facilitate ABS in the context of International Undertaking on Plant Genetic Resources (IU). This would require completion of work at FAO Commission on Genetic Resources as early as possible. The group has also called for CBD to acknowledge WTO provisions and to take into account the entire relatedness of the CBD and the TRIPs Agreement.

The Table briefly summarises the various emerging conflicts between CBD and TRIPs of WTO. For instance, CBD emphasises on national sovereignty in terms of biological Table showing conflict between TRIPS and CBD* TRIPs says CBD says The Conflict Biological resources should be subject to private intellectual rights.

Compulsory licensing, in the national interest, should be restricted Nations states have sovereign rights over their biological resources National sovereignty implies that countries have the right to prohibit IPRs on life forms (biological resources). TRIPs overlooks this right by requiring the provision of IPRs on micro-organisms, non-biological and microbiological process, as well patents and/ or *sui generis* protection on plant varieties. Patents must be provided for in all fields of technology, therefore the use or exploitation of biological resources must be protected by IPR. There is no mechanism for sharing benefits between patent holders in one country from which the invention is derived. The use or exploitation of biological resources and its associated traditional knowledge, practices and innovations must give rise to equitably shared benefits. CBD gives nations

a legal basis to demand for equitable benefit sharing arising from the use of biological resources. TRIPs negates that legal authority.

There is no provision requiring prior informed consent for access to biological resources, which may subsequently be protected by IPR. Access to biological resources requires the prior informed consent of the country of the origin. It also requires the 'approval and involvement' of the local communities. CBD gives states legal authority to provide access to biological resources based on 'prior informed consent' and 'mutually agreed terms'. TRIPs ignores this authority.

The safeguarding of public health and nutrition, and the public interest in general, shall be subject to the private interest of IPR holders as reflected in the provisions of the TRIPs Agreement. States should promote the conservation and sustainable use of biodiversity as a common concern of humankind taking into account all rights over biological resources CBD places the public interest and common good over the private property and vested interest. TRIPs does the opposite.

* Based on GRAIN (1999). Global Trade and Biodiversity in Conflict. Genetic Resources Action International (GRAIN), Spain, resources while TRIP mentions that biological resources should be subject to private intellectual property rights. It further mentions that compulsory licensing in the national interest should be restricted. The CBD refers to equitable distribution of benefits arising out of usage of bio-diversity or traditional knowledge system. While the IPRs regime set out by TRIPs suggest that patents must be provided for in all fields of technology and, therefore, the user exploitation of biological resources must be protected by IPRs. TRIPs are completely silent about benefit sharing. Similarly, CBD lays emphasis on the principle of prior informed consent whenever access to biological resources is demanded. However, the IPRs regime does not seem to believe in such a principle.

**Implications of the Conflict**

Besides above mentioned conflicts, there are some major areas where provisions of both WTO Agreement and CBD do not show compatibilty and may cause serious problems in their implementation. These areas are:

- The enhancement of the global trade by implementing the WTO Agreements may result into more unsustainable use of biodiversity. This may be totally against the objective of the CBD.
- The increased transportation activity and infrastructure development to promote global trade may have adverse impact on the ecosystem functioning which may result into loss of biodiversity.
- Transport of biological products, including 'Living Modified Organisms' in trade may result in the accidental introduction of alien species which may result into destabilization of native species.

- Liberalisation of trade and investment may intensify direct and indirect adverse impact on biodiversity and the habitats supporting it.
- The WTO Agreements may interfere with the international/ national conservation laws and policies which seek control of traded goods eg. GATT vs Tuna-Dolphin harvesting from the Sea, Provisions of CITES and Subsidies as incentives to the industry.
- Some of the policy interventions for sensitising of production-processing methods, incentive mechanism built into the economic system, preferences expressed by import/export firms, distributors and consumers built into the WTO Agreements may completely ignore the environmental cost needed for maintaining the functions of the major habitats and may not lead to sustainable production or trade in certain sectors.

**Resolving the Conflict:**

If the WTO Agreements and CBD are to be implemented in the interest of the humanity's survival and well-being, urgent measures are require to be taken to ensure that the objectives of the CBD are not undermined by the narrow agenda of WTO Agreements, particularly so of TRIPS. These are:

-Nations should recognise and affirm in law the primacy of the CBD over the TRIPs in the areas of biological resources and traditional knowledge systems.

-During the review of TRIPs, the governments should ensure that TRIPs provides the option to exclude all life forms and related knowledge from IPR system.

-Implementation of TRIPs in developing countries should be challenged so as to make them compatible to the provisions of the CBD.

-The Collective Rights of indigenous and local communities to freely use, exchange and develop biodiversity should be recognized as a priori rights and be placed over and above private intellectual property rights. This has to be reflected in legislation and public policy at the national level.

-The CBD should be fully developed as an international instrument to promote the sustainable use and conservation of biodiversity, based on community control of resources. The CBD should not be allowed to degenerate into a marketplace for the commercialization of biological resources and related knowledge.

Once these measures are taken by the governments, the Convention on Biological Diversity can provide an innovative approach to the interplay of trade and environmental concern and has to be considered as precedent setting 'sustainable trade agreement and biological resources' can sustainably utilized on a equitable basis for the welfare of human kinds.

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# *CHASING* 'BENEFITS'

## Issues on Access to Genetic Resources and Traditional Knowledge with reference to India's Biodiversity Regime

A post-Nagoya Protocol view on Access and Benefit Sharing

**Kanchi Kohli and Shalini Bhutani**

**KALPAVRIKSH**

# Understanding Access

Access with respect to biological resources has today become increasingly synonymous with trade. The world's crops, cures and cosmetics are derived from these resources and the knowledge associated with them. Globally the interdependence of countries with varying biological resources and therefore the need for access is taken as a given. But nationally, given the fact that bio-trade seems to dominate and both local communities and *in situ* conservation have not proportionately benefited, there is no consensus on whether access to biological resources and people's knowledge should at all be allowed by governments for corporations.

Access under the Convention on Biological Diversity (CBD) is meant to be of genetic resources from countries of origin or those countries that have acquired the resources as per CBD-compliant rules. The Convention (1993) and its Bonn Guidelines (2002) preceding the ABS Nagoya Protocol (2010) explicitly set the facilitation of access to genetic resources as a main objective. This approach makes it difficult for provider countries to refuse access to genetic resources. The default assumption is that a national level authority *will* grant access. Hence every refusal will have to be grounded, and every refusal can be appealed.

The practise of the National Biodiversity Authority (NBA) in India (set up under the Biological Diversity Act, 2002 hereafter referred to as BD Act) too has shown that access is granted more often than not (Kalpavriksh and GRAIN, 2009)[2]. In the words of officials from the overseeing Ministry of Environment and Forests (MoEF), India believes in *facilitative* access and not in *prohibitive* access to biological resources. And so even though the implementing Biological Diversity Rules (2004) give the NBA power to restrict or prohibit the request for access to biological resources on six grounds, including adverse environmental impact, genetic erosion or national interest, this provision has hardly ever been invoked.[3]

A big 'stakeholder' that cuts across all countries is industry, which has made huge inroads in these past nine years. The bio-industry and the governments supporting it are the key players in the rule-setting on access. As of date, 193 countries of the world are part of the CBD (with the exception of USA). Each of these, depending on the extent of biological wealth they possess and the technological prowess they command, is either a user and/or provider country of *genetic resources*. The idea of an international regime (IR) had emerged in the CBD meetings to develop a set of globally applicable rules when genetic material, related knowledge and products developed from either of them move across borders. But access of the nature dealt with is talked of as per the requirement of the (biotechnology) industry, including researchers and not as for local communities. When this material or knowledge is used by industry to derive 'benefits', how these will be shared and to what extent has long been an issue.

What also needs to be stated is that neither the CBD, nor the BD Act in India (as discussed in the next section) use the words Access and Benefit Sharing (ABS) together. However, given the context in which

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[2] *6 Years of the Biological Diversity Act in India* - A status report compiled by Kalpavriksh and GRAIN, January 2009

[3] Rule 16 of the Biological Diversity Rules, 2004

the global treaty and national legislation operate, ABS has begun to be spoken as a fixed term, inseparable and interlinked. But that is not the reality on the ground. For the practices worldwide point to the fact that access takes precedence over any benefit-sharing for both communities and conservation. It is no win-win for either of those. This is the case with both genetic resources and traditional knowledge.

### a) Genetic resources (GR)

Communities on the ground do not perceive their local resources as 'genetic resources'. That viewpoint comes from both the science and commerce that is focussed on the gene. The dominant technological discourse also prevailed in the negotiations on an IR on ABS at the CBD. The bio-rich countries fought hard in the days before the Protocol to have *derivatives* covered by the rules of the Protocol. To them it was not enough that simply access to 'genetic materials' be made subject to globally agreed rules. The industry actually uses derivatives to make commercial products and not always simply the genetic material. Thus industry is particularly interested in the final shape both global and local rules will take and what they will cover. As even the definition of genetic resources determines for what and how much they will need to share. Yet, industry is not putting all its eggs in one basket. Already, two other globally agreed ABS frameworks for genetic resources have been developed outside of the CBD. One in the context of exchange of crops and forages important to the world's food and agriculture in FAO's Plant Treaty Multilateral System.[4] The other for sharing influenza virus samples under WHO's Pandemic Influenza Preparedness Framework.[5]

### b) Traditional knowledge (TK)

This is by far the most complicated to 'regulate' under dominant access regimes. It is at the insistence of the developing countries that access to TK finds mention in specific stand-alone Articles in the Protocol.[6] Procedures for access to TK, if they are also to respect Article 8(j)[7] of CBD, ought to insist on both *prior informed consent* (PIC) and *mutually agreed terms* (MAT) requirements when access has to take place. Yet the issue of access to publicly available TK is still a thorny one. India was the one to insist that such TK ought not be available sans PIC and MAT. Meanwhile, attempts are being made for the 'protection' of TK outside of the CBD processes, both at the global and the national level. The World Intellectual Property Organisation (WIPO)'s Inter Governmental Committee (IGC)[8] is moving into text-based talks with an eye on a future treaty on TK protection. In India, under a WIPO-supported endeavour, the Federation of Indian Chambers of Commerce and Industry (FICCI) is tasked by India's Department of Industrial Policy and Promotion (DIPP) to develop a draft TK law for India. How these will influence a fledgling Protocol and its access requirements with respect to TK, is to be seen.

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[4] International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and its provisions on Access in Article 12 and Benefit Sharing in Article 13 www.planttreaty.org/mls_en.htm

[5] *Landmark agreement improves global preparedness for influenza pandemics* www.who.int/mediacentre/news/releases/2011/pandemic_influenza_prep_20110417/en/index.html

[6] Articles 5 bis and 9 of the Nagoya Protocol

[7] Article 8(j) states that each contracting Party shall, as far as possible and as appropriate, subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge innovations and practices. (http://www.cbd.int/traditional/)

[8] Established by the WIPO General Assembly in October 2000 , the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) is undertaking text-based negotiations with the objective of reaching agreement on a text of an international legal instrument (or instruments) which will ensure the effective protection of traditional knowledge (TK), traditional cultural expressions (TCEs)/folklore and genetic resources. [http://www.wipo.int/tk/en/igc/]

# India's "Regulated" Access

Access to biological resources and people's knowledge for research, for commercial utilisation including intellectual property rights (IPR) was in parts unregulated and in parts dealt with on a case-by-case basis in India. This was until the Biological Diversity (BD) Act, 2002 was legislated. With the increase in instances of bio-piracy and growing emphasis on bio-trade, the clear need to regulate access was felt. In the decade after which India became signatory to the CBD in 1993 and the BD Act was enacted in India, the discourse had moved towards establishing a global access regime.

There were also two notable and related changes in India's position at international fora. One, its paradigm shift from 'no patents on life forms' to patents on biological resources on fulfilment of certain conditions.[9] Two, its pushing of a so-called 'biodiversity amendment' of the WTO TRIPS Agreement premised on the rationale that an international IPR law such as TRIPS can be wed with a multilateral environment agreement like CBD, without divorcing either's opposing objectives. This brought to the fore that fact that the CBD too was, for those who were now driving it, ultimately about trade. Meanwhile, ABS negotiations at the CBD have continued. But the question to ask upfront is whether the discussions around both determining access and sharing of benefits (as its necessary corollary) did create a robust system whereby bio-piracy could be checked.

The same year the BD Act was passed in both houses of the Indian Parliament, the call for the implementation of the CBD's benefit sharing provisions was given at the World Summit on Development at Johannesburg.[10] Interestingly, the discussions on ABS at the global level and those at the national level in India have run in parallel these last nine years. So there was ample opportunity for the Indian side to inform the global discussions with its experiences from the ground and influence the outcomes of the developing IR on ABS.

The BD Act has three stated objectives derived from the CBD. These are conservation, sustainable use and equitable sharing of benefits arising out of that use. These three tenets by virtue of their inclusion in a legal framework have ensured that access to both genetic material and traditional knowledge can be obtained if a due procedure is followed. Anything acquired outside of that would be regarded as illegal access. It also presumed that many of the larger ethical and social issues that centred around the purposes and nature of access were thus "resolved". Once a regulatory structure facilitating access was put into place, there could not be any further debate on whether such access should have been allowed in the first place. Therefore when an application is received, there is no longer a debate on the merits of the use of such material or knowledge for trade, commercially driven research or IPR application. The debate has centred around the nature of agreements and contractual obligations both with respect to access or benefit sharing that is to follow.

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[9] A patent is an exclusive right granted by a government patent office to an inventor for a term of twenty years giving him/her a bundle of economic privileges and legally enforceable rights vis-a-vis the invention.

[10] Johannesburg Summit 2002 – the World Summit on Sustainable Development www.johannesburgsummit.org/html/basic_info/basicinfo.html

The BD Act does not lay out a specific definition of what it prescribes as access. However the nature of what is sought to be accessed is inherent in the procedures that the law lays out for both foreign and Indian entities. The Act lays out a fairly straightforward procedure to access for the purposes of research, commercial use or transfer to an agency outside India. The procedure includes submission of an application to the National Biodiversity Authority (NBA) for foreigners and intimation to a State Biodiversity Board (SBB) when it comes to Indian entities. In both instances a final agreement cannot be signed unless there is consultation with the concerned Biodiversity Management Committee (BMC)/s at the village or urban ward level.

The request for access to biological resources or traditional knowledge is required to be made to the NBA in prescribed Forms listed at the end of the Biodiversity Rules, 2004. Once the request is accepted, agreements in the prescribed format are signed between the NBA and the applicant. Today, at the most the agreements between the NBA and the applicant require payment of a royalty fees. which *change(s) on a case to case basis and will be regulated by the ABS Guidelines.* NBA imposes an upfront administrative and service charge equivalent to 5% of assessed benefits in every case. This is in line with Biodiversity Rule 20(9) as standard operating procedure. In some instances a user agency has stated a commercial purpose upfront, yet NBA has limited itself to this percentage.

In early 2010 much after several approvals for access were granted, the NBA put out a draft set of Guidelines on ABS for public comments on its web site (See Annexure I). These were prepared by a legal consultant engaged by the NBA who has corporate experience and training on IPR from a WIPO programme.[11] The maximum comments on the draft were received from FICCI.[12] On content, these Guidelines are narrow in terms of how they interpret benefit sharing in particular. Even within the existing limitations of the very concept of ABS, the BD Act allows for non monetary benefits, opening possibilities of being able to move beyond mere monetary contractual settlements. The NBA's ABS Guidelines instead of broadening the scope of the various mechanisms of benefit sharing which could also include continued access to that particular resource or knowledge by communities, gave prominence to monetary benefits and possible ways to have accessors deposit money in the National Biodiversity Fund. Non-monetary benefits therein are merely sought as an optional extra. The NBA has since neither moved forward on the draft ABS Guidelines. Nor has the NBA yet made any significant progress on the issue per se, particularly in the absence of an NBA Chairperson – the position lying vacant since last year (2010).

Currently there are two Expert Committees appointed under the NBA to look into the matter of ABS. They are (kindly see Annexure II for full list of members):

1. Expert Committee on Access and Benefit Sharing for Processing the Applications (EC-ABS)
2. Expert Committee to study the existing Agreement Formats and suggest amendments

In 2009 it was decided that the expert committee on access, patent, transfer of research results and third party transfer and expert committee on determination of benefit sharing would be merged into one. So EC-ABS is a merger of both. It is considered as a standing committee.

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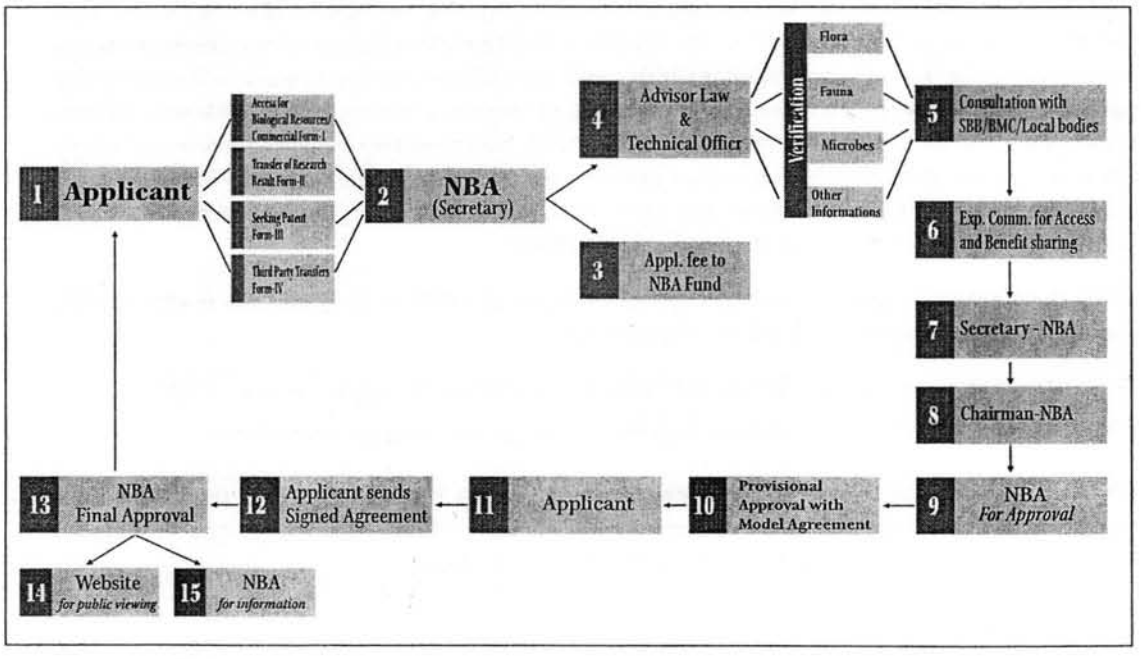
[11] http://www.entetelegale.com/PDF/DRAFT_ABS_GUIDELINES_NBA_INDIA.pdf

[12] National Consultation on Access and Benefit Sharing (ABS) – Comments received http://nbaindia.org/whatsnew/pdf/ABS_Comments_received-12th_April_2010.pdf

There are some specifics about how the access regime has been working:

- As of early 2011 the NBA has granted approval for access, IPR and transfer of research results in 607 instances. Out of this 437 were permissions for applying for IPR alone.
- In none of these instances have there been any mandatory local level consultations with the relevant BMCs out of the total 31,542 across India today.
- The NBA has only two reported instances to show for benefit sharing. These are still in the process of being finalised. In one instance the NBA has received a royalty amount from an Indian firm Bio India Biologicals, towards the export of neem leaves. INR 20,000 (approx 312 EUR) of this amount received has been transferred to the Amarchinta BMC. The BMC has reportedly utilised the money for awareness programmes, planting of saplings and fencing.
- The NBA in 2007 entered into a benefit sharing agreement with PepsiCo India Holdings Private Limited. The company paid INR 37.26 lakhs (approx 62,400 EUR) to the NBA for a type of dry sea weed (Kappaphycus alvarezi) accessed from the Gulf of Munnar area in the southern Indian State of Tamil Nadu. PepsiCo signed a yearlong agreement with the NBA to export this to Indonesia, Malaysia and the Philippines for commercial utilisation in the food and cosmetics industry. In reply to a Right to Information application, in July 2010 the NBA admitted that the money received is "yet to be ploughed back to the benefit claimers". The delay is explained by the fact that guidelines for utilisation of such monies deposited in the National Biodiversity Fund are yet to be finalised.[13]

**Schematic presentation of processing of applications under Biological Diversity Act, 2002 and Rules 2004**




*Source: NBA Annual Report 2009-2010*

[13] For more on this read *of Brackets and Brass Tacks* http://www.cbd.int/ngo/square-brackets/square-brackets-2010-10-en.pdf



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- Novozymes Biologicals Inc. of USA, has been granted approval to access for commercial purposes bacteria of Bacillus and Psuedonomas to screen for plant growth from Malampuzha forest division in Kerala. This will be used in a laboratory for the promotion of crop production of tomato, lettuce, rice etc. Novozymes is a multinational corporation with expertise in microbiology, biotechnology and gene technology. The NBA has charged Novozymes 5% annual royalty from the sale of the product derived from biological resource.

The fact is India's ABS regime today is more an access regime sans much 'BS'. As the above discussion shows approvals for access continue to be given. But the benefit sharing framework is still in-the-making. Thus after all these years of the Act, Rules, Committees and Draft Guidelines in India there are hardly any benefit sharing cases to speak of. (The only case talked about as the Indian example, that of the Kani tribes in Kerala was pre-CBD.) On the other hand, access has been so tight so as not even allow bona fide Indian researchers to use biological materials without long bureaucratic hurdles.[14]

Perhaps the point to take note of is that the access is not people-friendly for a provider country's own peoples. In fact one big set of people, despite the law that otherwise defines them as legitimate benefit claimers, are in practise not even present in the application and approval procedures between government departments and applicants (who are largely companies or public sector institutes). So a non-inclusive process can not effect inclusive growth and guarantee a share from the trade. And even if there is 'consultation' as the law prescribes, it entails bringing to the same table people with highly unequal tools, powers, visions and interests, and forces them to engage as though they share a level ground. The results of this type of situation will always overwhelmingly be in favour of the most powerful.

[14] For more on this issue please see *Biological Diversity Act, 2002: Shadow of permit-raj over research* http://eprints.atree.org/90/

# 'Benefits' revisited

Benefits that might ensue from the use of genetic resources are perceived very narrowly in ABS regimes. These may include the sharing of the results of research, the training of local scientists, etc., which supposedly will contribute to development of capacity in the provider countries. The Convention and rules or laws under it are premised on the belief that technology transfer is making sustainable development possible! If what are being transferred in return for access are the likes of genetic manipulation (GM) technologies (that too IPR-ridden) with possible risks to human and ecological health and large social fall-outs, then they are neither neutral nor desirable for 'development'. In such a scenario how can that access to technology be regarded as a 'benefit'?

The most perverse aspect of the "sharing back" that companies do is that they will by contract force communities to accept patents and other forms of intellectual property over life forms and knowledge. This will restrict the latter's own access and freedom to use biodiversity. The sharing so far seems to be a one-way road in which local communities are expected to give, pass on and share their know-how with the formal scientific system or enter it in formal collections – registers, databases, or through audio-visual medium, etc. But the products derived from the use of that are not available freely for sharing! They are subject to IPR and accessible only on payment of royalties and with the permission of the "inventor". This is a world-wide trend that neither CBD nor the new IR laid out in the Protocol helps to challenge.

India's BD Act has clear definitions of who constitutes "benefit claimers". They are conservers of biological resources, their by-products, creators and holders of knowledge and information relating to the use of such biological resources, innovations and practices associated with such use and application.[15] The Act also elaborates what can comprise fair and equitable sharing on benefits once access is permitted and benefit claimers identified. These include grant of joint ownership of IPR, transfer of technology, location of production, research and development units in the area of access, and creation of an association of Indian scientists, benefit claimers and the local people with research and development in biological resources and biosurvey and bioutilization.[16] There are also direct financial mechanisms that can be proposed as benefit sharing which include setting up of venture capital funds and payment of monetary compensation to the benefit claimers as the NBA may deem fit. The NBA also is mandated under the law to frame guidelines to effect benefit sharing.[17]

The guidelines also need to regulate the activities of state agencies. Bio-piracy also occurs by the public sector from the informal sector. This is something most national ABS laws ignore. For example, in the USAID-funded Bt brinjal development programme for South and South East Asia, public sector agricultural universities passed on local varieties of brinjal/eggplant to Monsanto in India, which inserted its proprietary transgenic event into them.[18] Farmers are feeling violated by their own National Agriculture Research System (NARS), which they thought would keep their varieties 'safe'.

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[15] Section 2(a) of the Biological Diversity Act, 2002

[16] Section 21 of above

[17] Section 21(2)(4)

[18] The Agricultural Biotechnology Support Program II www.absp2.cornell.edu/; The NBA MAHYCO Agreement http://www.nbaindia.org/approvals/form-ii/agr-pdf/ag_form2_68_usha.pdf

Research itself can create benefits, but for one side! In parts of Asia, the Japan Bioindustry Association (JBA) has been actively involved in the CBD-ABS implementation since over 15 years, for instance through mainstream research cooperation in Malaysia, Thailand and Indonesia and in being part of processes leading up to other provider countries' rule-making on ABS, as in India.[19] Its objective is to provide support first to the bio-industry and academe/researchers keen to access germplasm from bio-rich regions of the world. Many Japanese companies have or are in the process of establishing their laboratories in the provider countries. This is the kind of market, research too can open up for user countries' – another 'win' situation for the industry. Because of power differences, if a company decides not to pay back anything, countries and communities will have no tools to prevent it, except maybe refusing access the next time that company requests a permit. But then the company will go to a different place to obtain what they want. There is little evidence of the "trickle-down" of wealth.

In India the NBA sharing some of the practical problems it faces in identifying the rightful "benefit claimers", points to the illegal trade in medicinal plants both across borders and within the country, which makes it impossible to trace the community or local healers that know of or grow these. In such a case recovery of "benefits" from the pharmaceutical company making the money from commercialisation becomes a challenge.[20]

The industry has a vested interest in saying "benefit sharing" does work, for it wants continual "access" and limits on the benefits to be shared. So the first thing to correct in this situation is to recognise and acknowledge that SHARING is NOT taking place and might never.

When India signed on to the Protocol, the representative of MoEF, stated that:

> *"genetic resources and associated traditional knowledge can be used to develop a wide range of products and services for human benefit, such as medicines, agricultural practices, cosmetics etc. It is expected that the ABS Protocol which is a key missing pillar of the CBD, would address the concern of misappropriation or bio-piracy of genetic resources.* He also remarked that *(t)he Protocol will contribute to the meaningful implementation of two objectives of the CBD relating to conservation and sustainable use, since benefits accruing from utilization of genetic resources would act as an incentive for biodiversity-rich countries and their local communities to conserve and sustainably use their biodiversity."*[21]

If local peoples are kept bereft from benefits derived from their biological resources and the knowledge they have of them, then this will be a denial of biodiversity justice. Next the issue of justice for biological resources themselves. In defence of ABS regimes it is being argued that the monetary benefits generated from the grant of access to use biological resources, will support conservation itself. The funds from access agreements collected under the BD Act and deposited in the National Biodiversity Funds and State Biodiversity Funds, are meant to be utilised for conservation of biological resources and socio-economic development of bio-rich areas.[22] The development is put on hold till any 'benefits' actually accrue. So if ABS systems don't deliver, then the so-called 'incentive' for conservation and sustainable use will also be lost. These are critical concerns vis-a-vis benefit sharing.

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[19] *Making Access to Genetic Resources Possible: Experiences from India* www.ias.unu.edu/sub_page.aspx?catID=35&ddlID=194

[20] At the National Forum for Policy Dialogue on "Six Years of the Implementation of the Biological Diversity Act 2002" co-organised by Kalpavriksh and GRAIN at New Delhi on 3rd February 2009

[21] *21 Parties have now signed the Nagoya Protocol CBD* Secretariat Press Release, 11 May 2011 http://www.cbd.int/doc/press/2011/pr-2011-05-11-nagoya-en.pdf

[22] Articles 27 & 32 of the BD Act

# The Protocol

The main outcome of the CBD COP10 gathering of governments and peoples in the city of Nagoya, Japan that will be remembered is the Nagoya ABS Protocol. It is here that an IR on ABS was agreed upon by 193 countries. The IR contained in the Protocol lays down a text by which 'benefits' arising out of any kind of use of biological material and associated traditional knowledge when accessed need to be followed through. But the question is whether it makes things any better for providers countries, and in doing so does it guarantee 'benefits' to local communities or further conservation?

The Nagoya Protocol is a compromise text and almost never saw the light of day. In fact even after the Protocol was issued out, countries in the Latin American region have put on record at CBD that they do not accept a Protocol that does not meet the minimum requirements of preventing bio-piracy. The text and its 30 articles have not been able to settle legal uncertainties on ABS procedures per se.

Yet at New York on 2nd February 2011, representatives of Colombia, Yemen, Brazil and Algeria signed the Nagoya Protocol. The Mexican Government followed on 24th February, 2011. India's Union Cabinet gave its consent to the Protocol on 20th April 2011. Subsequently, India signed the Protocol on 12th May 2011. The Protocol is open for signature for another year until February 1, 2012. As of May 2011, over 20 countries have signed on.

There are a few key contentious issues with the Protocol's premise, which echo the very concerns articulated when the CBD Ad hoc working group was first set up.[23] The Protocol in its preamble emphasises limitedly the economic value of both the biological resources and associated traditional knowledge. If the profits are shared as benefits, it would encourage conservation, it states.

The Protocol also accepts that biological matter is the raw material for seed, medicines and the energy industry, most of which are either controlled by or physically based in the global North i.e. the 'developed' world. It is bio-rich countries like India (in the South) where these industries find their leads and will be invited to trade in genetic material and associated knowledge.

Some of the other core concerns with the Protocol are:

- **Creating Biological Commodities:** The Protocol presumes that genes and know-how can be regarded as the property of one or a few. With this Protocol the CBD drops any pretence about treating our biological world as a service, which can be sold and traded. It turns away from the fact that many local uses and traditional practises cannot be attributed to one person or a few territories. Over the years biological materials and their uses have traveled across villages, states and even international boundaries. Thereby, attributing its association with "identified" benefit claimers or granting ownership to a few makes it impossible to be fair and equitable in determining shares.

[23] An Ad hoc Open-ended Working Group on ABS (WG ABS) set up under CBD in 2000.



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- Isolating Access, Conservation Imperative missing: With this Protocol, the CBD has further accepted that the use of biological resources for research or commercial purposes is a given, even though it prefixes the word 'sustainable' use to it. While, CBD can do little to take action when countries by their use deplete or threaten biodiversity, the industry has shown little commitment to conservation. The Protocol does not caution or correct if access goes against the first two objectives of the the CBD, namely conservation and sustainable use. There such access should be liable for rejection.
- **Reliance on Domestic Regulations :** The Nagoya Protocol essentially relies on the strength of a country's domestic regulation for taking forward any of its requirements, keeping in mind the CBD's emphasis on a country's sovereign rights over natural resources. It is for this purpose that the Protocol seeks the establishment of a national focal points and competent authorities for ABS. In fact the Protocol goes beyond the CBD and expressly requires provider countries to have national laws for their biodiversity regime. As illustrated in the previous section and elaborated in the next point, India's biodiversity regime is weak. Thus in its present form it is unable to take forward the few progressive clauses of the Protocol. The experience of implementation has too not instilled much hope of benefits being realised and that too in such cases of access which are directed towards conservation and livelihood enhancing use.
- **FPIC based on domestic legislation:** The Nagoya Protocol in an attempt to acknowledge the rights of local and indigenous communities to take decisions on their resources lays down *full prior informed consent* (FPIC) as a must before any access takes place. But it relies almost entirely on national laws and a CBD-country's own mechanisms to effect FPIC. But the implementation of this is once again dependent on the how the signatory country takes it forward in its domestic legislation. In India the BD Act pays mere lip service to FPIC. The letter of the law requires only a mere consultation with local level committees, which are yet to be formed in most parts of the country.[24] As mentioned in the previous section, none of the approvals given till date have even followed the mandatory consultation requirement.
- **Overlooking *sui generis* Knowledge Protection:** Prior to the issuance of any ABS related guidelines, the 2010 Nagoya Protocol or any of its earlier formats have not ensured that access not interfere with the *sui generis* measures for protection of knowledge of local people relating to biological diversity. Going by the original principles of CBD, this needs to be a precursor to the ABS process which appears to have been put on the back-burner ever since the process of the Ad hoc Working Group was put into place. However, the Nagoya Protocol prescribes minimum requirements including setting up of model contract clauses for benefit sharing arising out of traditional knowledge utilisation. Access in this regard is not differentiated, be it private or community, commercial or non-commercial etc.
- **Non-commercial Research:** The Protocol defines utilisation of genetic resource to include broadly, "research and development on the genetic and/or biochemical composition of genetic material, including through the application of biotechnology". In subsequent sections also differentiate between research being carried out purely for commercial purposes from the kind which is directed at conservation and supporting people's livelihoods. But the Protocol stops short of figuring out a mechanism to resolve the fast merging and thin line dividing the two. There is a substantial increase in public-private partnerships or collaborations in sectors where biodiversity based resources are a critical component which includes agriculture, pharma, wildlife and energy. The Protocol so far does not provide checks or monitoring mechanisms to address this.

[24] Section 41(2) of the BD Act

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- **Narrow Non-monetary Benefits:** The Protocol in its Annex does list a number of monetary and non-monetary benefits, but ironically can't help being boxed within the parameters of mainstream science and economic considerations. The non-monetary benefits that the Protocol provides centre around joint ownership of IPRs, collaboration, cooperation and contribution in "scientific research" and development, particularly biotechnology, technology transfer and capacity to receive the same or access to scientific information including databases. In two broad points such benefits include food and livelihood security benefits as well as social recognition. It may be added there that food and livelihood security benefits can be arrived at clearly from allowing from continued access to the genetic material or living propagation of knowledge, which the Protocol significantly misses elaborating upon.

Some additional concerns around the Protocol are:

- The struggle of some Indigenous Peoples (IPs) was to get the rights within the UN Declaration on the Rights of Indigenous Peoples (UNDRIPS), effected as hard treaty law by inclusion in this proposed ABS Protocol. This is only mentioned in passing in the Preambular paragraph 25, which is non-enforceable!
- The issue of derivatives, what they mean, etc. too has not yet been resolved. The irony is that the Protocol defines them and also expressly states in another Article that the Protocol will apply to genetic resources and the *utilisation of genetic resources*.[25] Yet, developed and developing countries are taking varying interpretations by which the latter insist that derivatives are covered for access, benefit sharing and compliance. A set of user countries would like to believe that biochemical compounds can be obtained from utilising a genetic resource without having to access it formally. Since no FPIC requirement will ensue sans an ABS procedure, no benefit sharing obligation would then arise from the user side.
- The time from when the Protocol will be applicable is still ambiguous. With the date of the applicability of the Protocol yet to be agreed upon at an operational level it is unenforceable. The question is whether it applies to access only post-CBD, or even pre-Protocol.
- More critically, the IR is not a step towards challenging the IPR system but about learning to live with it. In fact the Protocol expressly states that it shall not affect the rights and obligations of any Party under any international agreement. This language includes international IP treaties and bilateral trade and investment agreements, which impose TRIP-plus IPR standards on developing countries.
- Shared genetic resources and TK shared by one or more countries, as in Ayurveda known both in India and Sri Lanka, will have to wait for a global multilateral benefit sharing mechanism to be set up under the Protocol.
- It is presumed that the IR will be able to reign in non-Parties to the CBD, particularly countries such as the United States of America (USA), a country with a large stake in the bio-industry.

As stated by the Namibian representative in the course of negotiations, so far biodiversity's contribution to poverty reduction has remained a dream. In essence the IR nails the idea that bio-trade has been going on, and that it will and must continue but in a somewhat different manner.

[25] Articles 2 & 3 of the Nagoya Protocol

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# Cutting the chase

There is no time to sit back and sigh either in relief or regret. Much work still needs to be done on the front of both communities and conservation.

First, only if other countries sign the Nagoya Protocol early so that it can enter into force, will the first Meeting of Parties of the Protocol take place in India in October 2012, when we host CBD COP 11.[26]

Perhaps this in itself is the main obstacle – the fact that many diverse interests, varying expectations and hugely different world-views on living resources and people's knowledge, are at stake. And what is put on the table – biological resources and traditional knowledge, ought not to have been under the purview of global trade in the very first place.

Some thoughts on way forward include:

1. Redefining 'benefits' is perhaps one of the most critical aspects to making headway. It is only mega-diverse countries such as India that will have an interest to push such a discussion.
2. Attempting both a people's reading of the IR and asking for an official interpretation of the Protocol from the relevant Indian authorities, such that it is favourable to the country's particular socio-political realities. There is also the practical need to assess what provisions of the BD Act, Rules or the regulatory process may need to undergo change to be able to genuinely take forward the Protocol.
3. Getting more people's voices from diverse sectors into this exercise of designing ABS frameworks. This task is too important to be left merely to government departments and trade negotiators.
4. Being watchful for any future carve-outs, which make the Protocol irrelevant. It must be noted that the international agricultural research centres and the seed industry are happy with the Protocol. They are looking at other access instruments.
5. Most importantly the opportunity that a post-Protocol scenario provides to re-evaluate domestic FPIC processes should not be lost. The success of the Protocol and its compliance will be determined by the capacity of ABS regimes to internalise the real experiences from the ground.

Meanwhile, access to and trade in genetic resources is still centre-stage in the discussions, as against community concerns and conservation imperatives. The pre-occupation with IPR laws, memorandum of understanding (MoUs) in Public Private Partnership (PPP) mode and contractual arrangements between the state and the private sector clearly shows the pro-industry bent. Till the above and other concerns are addressed, for both – governments of biologically rich regions and more so resource-dependent peoples, pinning their hopes on 'benefits' from such regimes may just turn out to be chasing another mirage.

[26] www.cbd.int/abs/becoming-party/

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## References

Re-situating the benefits from biodiversity
http://www.grain.org/seedling/?id=327

## Further Reading

Access and Benefit Sharing laws from across the world on GRAIN's Resource BRL – Biodiversity Rights Legislation, which incorporates both emerging and existing texts
http://www.grain.org/brl/?typeid=20

## Relevant web links

The Nagoya Protocol on Access and Benefit Sharing
www.cbd.int/abs/

National Biodiversity Authority
www.nbaindia.org

Biological Diversity Act, 2002
www.nbaindia.org/act/act.htm

Biological Diversity Rules, 2004
www.nbaindia.org/rules.htm

Application Forms and Fees for Access, etc.
www.nbaindia.org/applications/application.htm

# ANNEXURE I

DRAFT GUIDELINES ON ACCESS AND BENEFIT SHARING

(as downloaded from the National Biodiversity Authority web site in March 2010 and reproduced as is)

## I. Preliminary

### 1. Objectives

1.1 These Guidelines on Access and Benefit Sharing Regarding the Utilization of Biological Resources and knowledge associated thereto (hereinafter "the Guidelines") provides an objective and non-discriminatory framework for granting approvals for access to Biological Resources and Knowledge associated thereto and the fair and equitable sharing of the benefits arising from their utilization, in conformity with the Biological Diversity Act 2002 (hereinafter "the Act") and the Biological Diversity Rules 2004 (hereinafter "the Rules").

1.2 The Guidelines lay out the conditions under which access to Biological Resources and Knowledge associated thereto shall be granted and under which the sharing of benefits arising out of the utilization of Biological Resources and Knowledge associated thereto shall be qualified as fair and equitable.

1.3 The CBD recognized the sovereign rights of States over the genetic resources within their jurisdiction and accordingly the Act requires that all Users of Biological Resources shall, unless otherwise provided in the Act, seek the consent of the State prior to access to Biological Resources.

### 2. Definitions

2.1 In these Guidelines, unless the context otherwise requires:

a) Access means any access to the Biological Resources and/or knowledge associated thereto made under the Act

b) Net Profit means profit after expenses have been deducted from gross revenue.

c) Provider means any natural or legal person(s) which has the legal right of disposal over the Biological Resources and/or knowledge associated thereto being made available to the Users

d) User means any natural or legal person(s) which has requested for Access to Biological Resources and/or knowledge associated thereto under the Act.

2.2 words and expressions used but not defined in these Guidelines and defined in the Act and/or Rules shall have the meaning respectively assigned to them in the Act and/or Rules.

## II. User Obligations

### 3. User Obligations Prior to Access

3.1 The Users shall request for Access by using the appropriate Forms provided for in the Rules and shall, in addition to the details therein, disclose the following:

A. Biological Resources which are Plants, their parts or Genetic Material

i. Whether cultivated or collected from natural areas

ii. Whether BR procured from Private Land or Public Land

iii. If Public Land, is it a protected Area, Forest, National Park, etc.

iv. If the access is made directly from the source or there are Agents

v. Whether the BR is endemic

vi. Whether the BR is endangered species

B. Biological Resources which are Animals, their parts or Genetic Material

i. Whether domesticated or wild

ii. Whether BR procured from Private owners or from Public Land

iii. If Public Land, is it a protected Area, Forest, National Park etc

iv. If the access is made directly from the source or there are Agents

v. Whether the BR is endemic

vi. Whether the BR is endangered species

C. Biological Resources which are Micro organisms, their parts or Genetic Material

i. Whether developed/maintained in controlled conditions or collected from natural areas

ii. Whether BR procured from Private areas or Public areas

iii. If Public Area, is it a protected Area, Forest, National Park etc

iv. If the access is made directly from the source or there are Agents

v. Whether the BR is endemic

vi. Whether the BR is endangered species

D. Knowledge associated with Biological Resources

i. Whether the knowledge is owned by individual, family, group, organisation or a community

ii. What BR is associated with the knowledge?

iii. What Benefit Sharing is proposed by the owners?

3.2 The Users shall submit a report on the possible impact to environment that may be caused by their relevant activities prior to Access. The User shall continue to report changes to this report as an when the User identifies any such changes at any stage during or after the Access.

Provided that in the event, the User reports a possibility of any adverse impact on environment, the report shall also mention the ameliorative measures in place and precautions taken to cause no damage to the environment or Biological Diversity. Any Access falling within this proviso will require the approval of the NBA prior to access and in the event the report is made during or after the Access, the User shall ensure that it shall stop any and all activities of Access.

3.3 The users are encouraged to make an audio video recording of the negotiations with the Providers and in the event such a recording is made, a copy of the same shall be deposited with the concerned SBB or the NBA.

### 4. User Obligations During and After Access

4.1 The Users shall after collecting the Biological Resources and Knowledge associated thereto, describe and record all relevant data and share the same with the nodal agency identified by NBA for the Purpose. Users shall respect customs, traditions and values of the Provider, if any during and after Access.

Provided that in the event of Knowledge associated with Biological Resources are accessed, the same shall be handled by the User in the manner requested by the Provider.

4.2 Users shall utilize Biological Resources and Knowledge associated thereto strictly for the purposes for which the Access was made obtained. Any change in the purpose shall be notified to NBA and NBA shall at its sole discretion allow such use or direct fresh application to be made under the Act.

4.3 Users shall conduct scientific study on the Accessed Biological Resources to ensure the conservation and sustainable use of the Biological Resources. The Users shall ensure that this knowledge shall be transferred free of cost to the Providers.

## III. Provider Obligations

### 5. Provider Obligations

5. Once the Access is approved by the NBA, the Providers shall ensure that the Access is facilitated within the prescribed time.

5.2 If the Provider feels the need of professionals in assisting them with the negotiations with the Users, the Providers shall make a request for the same to the BMC, SBB or NBA and it shall be the responsibility of the BMC, SBB or the NBA as the case may be to provide the requested professionals to the Providers to assist them with the negotiations

5.3 The Providers shall record the advantages and disadvantages as informed to them by the Users while negotiating the terms for the Access to Biological Resources and Knowledge associated thereto. In the event the Providers are not in a position to record the same, the User shall notify the concerned BMC, SBB or the NBA and the BMC, SBB or the NBA as the case may be shall ensure the presence of a suitably qualified person who shall record the negotiations under this Clause.

5.4 Providers shall ensure the conservation and sustainable use of the Biological Resources and if need be request the Users to conduct further studies under clause 4.3 after reporting their findings to the Users to ensure the conservation and sustainable use of the Biological Resources.

## IV. NBA Approvals and Benefit Sharing principles

6.1 Where the Access to Biological Resources is obtained for Commercial utilization from Providers who are owners of the same, the User shall ensure that the Access ensures Sustainable Livelihoods[27] to the Providers. The User shall further share with the Providers its knowledge of best practices to ensure conservation and sustainable use of the Biological Resources.

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[27] Sustainable Livelihoods For eg. Would mean direct procurement of the BR from the farmers through contract farming with a pre determined price for the produce and supply of the best seeds/insuring the produce etc. If the procurement is with the involvement of Agents, then a undertaking from the Agents about having paid the producers/farmers minimum wages for their labour etc.

6.2 Where the Access to Biological Resources is obtained for commercial utilization from local communities who collect the same from Public Land, the Users shall make fair payments[28] to the Providers and shall ensure __% of the total price of the purchase towards welfare measures[29]/NBF for the community. The User shall further share with the Providers its knowledge of best practices to ensure conservation and sustainable use of the Biological Resources.

6.3 Where the Access is made for Research Purposes, the User shall ensure effective participation of Providers, wherever possible or collaborate with any research institution (collaborative Research) identified by the NBA.

A. In case of non commercial research

i. The research shall ensure the participation of at least one researcher from a research institute designated by NBA and all results of research shall be shared freely with the government research institutions and any know how for production shall be passed to non commercial producers free of any costs.

ii. Any IP rights sought shall have the name of a government research institute designated for this purpose as one of the inventors or co owners of the IP.

B. In case of Collaborative Commercial Research

i. Where the research is a Collaborative Research, any IP rights sought shall name the research institution involved as one of the inventors or co owners of the IP. Any know-how required for the production shall be transferred free of any costs if requested by the NBA for any use by government entities or if the products are required by the Government for Public good.

ii. % of the Net Profit shall be paid to the National Biodiversity Fund and in the event of involvement of any community as Providers of the Biological Resources, the NBA may also direct the User to provide any of the non monetary benefit sharing measures provided for in Annexure I

C. In case of non Collaborative Commercial research

i. Where results are shared

In cases where the results of a non collaborative commercial research is shared with any designated Government Research Facilities, the User shall pay to the NBF __% of the Net Profit and the NBA shall also direct the User to provide any of the non monetary benefit sharing measures provided for in Annexure I

ii. Where Results are not shared

In cases where the results of a non collaborative commercial research is not shared, the User shall pay to the NBF __% of the Net Profit and the NBA shall also direct the User to provide any of the non monetary benefit sharing measures provided for in Annexure I

6.4 Where the NBA approval is sought for seeking any Intellectual Property Rights under sec 6 of the Act, the following benefit sharing shall be qualified as fair:

i. Where the IP is for non commercial use

The User shall file an affidavit with the NBA stating that the IP is for non commercial use and the same shall be made available to the Government use free of cost. In the event the IP is later sought to be commercialized then sub clause (ii) of clause 6.4 shall be applicable.

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[28] Fair payment means the payment fixed by the Government for such products (JFM's) or a minimum wage per day prescribed by the government

[29] Welfare measures may be building community centers/infrastructure/scholarships etc. for the community

ii. Where IP is for commercial use

The User shall pay to the NBF __% of the Net Profit and the NBA shall also direct the User to provide any of the non monetary benefit sharing measures provided for in Annexure I

6.5 Where the Access is made for knowledge associated with Biological resources The Benefit Sharing shall be in accordance with the terms and conditions negotiated between the Users and Providers and the NBA shall interfere only in the event of a gross inadequacies to the disadvantage of the Providers is found in the negotiated terms. The Benefit sharing may have a monetary part and any non monetary benefits that may be listed in Annexure I of these

Guidelines or any legislation/mechanism made on TK.

6.6 The NBA while determining the mode for the sharing of benefits shall consider the short, medium and long term interests of all stakeholders involved. NBA acknowledges that some modes of benefit sharing may become effective immediately, whereas others become effective only in the distant future due to the period of time needed for the benefits to arise.

## 7. Certification of Compliance

The NBA shall develop a system of certification and a certification mark will be provided for by the NBA that shall certify the compliance with the Act and highlight the fair and equitable benefit sharing.

Annexure I – Non Monetary Benefit Sharing[30]

a) Sharing of research and development results;

b) Collaboration, cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities

c) Participation in product development;

d) Collaboration, cooperation and contribution in education and training;

e) Admittance to ex situ facilities of genetic resources and to databases;

f) Transfer to the provider of the genetic resources of knowledge and technology under fair and most favourable terms, including on concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity;

g) Strengthening capacities for technology transfer to facilitate abilities of indigenous and local communities to conserve and sustainably use their genetic resources;

h) Institutional capacity-building;

i) Human and material resources to strengthen the capacities for the administration and enforcement of access regulations;

j) Training related to genetic resources with the full participation of providing Parties

k) Access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxonomic studies;

l) Contributions to the local economy;

[30] This list contains the non monetary benefits identified and set out in Bonn Guidelines

m) Research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in India

n) Institutional and professional relationships that can arise from an access and benefit-sharing agreement and subsequent collaborative activities;

o) Food and livelihood security benefits;

p) Social recognition;

q) Joint ownership of relevant intellectual property rights.

r) Collaboration in education and training;

s) Collaboration in scientific research and development programs;

t) Participation in product development;

u) Joint ventures;

v) Co-authorship of publications.

w) Admittance to ex situ facilities of genetic resources and to databases;

x) Admittance to taxonomic, biochemical, ecological, horticultural and other information and data;

y) Transfer of knowledge and technology, in particular knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity.

# The Legal Meaning of Biodiversity

KANCHI KOHLI, SHALINI BHUTANI

By suggesting that even coal extraction falls within provisions of the Biological Diversity Act, 2002 and its specific provision of access and benefit-sharing, the Madhya Pradesh State Biodiversity Board has raised important questions relating to the interpretation of the law. While the principle of profit sharing from commercial use of biological sources is justifiable, the authors argue that the principle of the conservation ethic should not be lost.

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It is in the nature of law to be interpreted. Once a legal statute is in place, administrators face the challenge of relying on their discernment in both understanding and prioritising the law's provisions. At the same time, there are principles that courts often use along the way to give meaning to a legal text. Such is also the case with India's Biological Diversity (BD) Act, 2002, where not all of its current interpretations seem to coherently fit into a common understanding of the law. While the executive is challenged with implementing the law, there are instances of judicial interpretations of the law that raise important questions.

One such instance has come to light in Madhya Pradesh (MP) in the context of the BD Act. The MP State Biodiversity Board (MPSBB) has chosen to take a substantially expanded meaning of the words "biological resources" and "commercial utilisation" used in the BD Act.

The BD Act was legislated to give effect to the Convention on Biological Diversity (CBD). Therefore, the explicit objectives of the law are supposed to be in line with the convention. These are not just conservation of biological diversity and sustainable use of biological resources, but also fair and equitable sharing of benefits arising from genetic resources. The latter requires putting into place a mechanism through which benefit-sharing arrangements can be arrived at when the question of access for research or commercial utilisation arises. This is both for Indian entities (who need to intimate the relevant SBB of the state in which these resources are accessed) and for foreign entities, who need to take prior permission from the Chennai-based National Biodiversity Authority (NBA).

More than the conservation and sustainable use aspects of the BD Act, the legal provisions seeking to establish the prerequisites of access and benefit-sharing (ABS) have received national and international attention. Essentially what this means is that when bio-resources or people's knowledge are accessed, the user/accessor must compensate the provider community either in financial terms or acknowledge the source. While the biodiversity law broadly prescribes the six ways in which benefit-sharing is to be effected, neither its text nor the BD rules specify situations that attract the legal provisions for such "sharing". Moreover, the procedural clarities have yet to emerge through actual experiences of implementing the rules.

## Law and Context

Yet, context also determines the meaning that a certain law is given. The



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MPSBB's initiative to push a certain interpretation amidst the uncertainty brings to the fore the objectives in the real-time practice of the BD Act in India. A letter by the Member Secretary of the MPSBB to the NBA dated 3 April 2013, states emphatically that

> in the absence of any guideline by the NBA for access and benefit sharing to the State Biodiversity Board, we are not able to implement third and most important objective of the Biological Diversity Act, 2002 and, i e, access and benefit sharing.

For the MPSBB this clarity is critical. Its aim is to harness as many "benefits" from those who access biological resources. This clear aim pushes the board to stretch the meaning of biological resources so as to maximise the number of cases that will be subject to the legal requirements of the benefit-sharing provisions. Since December 2012 and until March 2013, the MPSBB has issued notices to several private companies, including pharmaceutical, coal mining, food processing, liquor, sugar, oil and industrial processes which, according to MPSBB's interpretation, are (commercially) utilising biological resources. It has also written to the state forest department, the Forest Development Corporation, the Minor Forest Produce Federation and the fisheries department.

In its letters, the MPSBB has invoked Section 2(c) of the BD Act, which defines biological resources as "plants, animals and microorganisms or parts thereof, their genetic material and by-products (excluding value added products) with actual or potential use or value, but does not include human genetic material". In its letters to all these industries, the MPSBB has highlighted that each of the industries, as per the BD Act, needs to intimate the MPSBB through the prescribed Form 1 and pay Rs 1,000 as they are carrying out "commercial utilisation" of biological resources, which attracts the definition of the BD Act. Each of the industries to whom notices have been issued are now being asked to deposit 2% of their gross sales or gross revenue on financial year basis towards benefit-sharing in the Biodiversity Fund of the state.

According to the MPSBB, since there are no prescribed guidelines for ABS, nor any directions from the NBA, it is using the same formula that the NBA has adopted in one of the agreements signed by it in 2009. In part, the NBA practice has also spurred such an interpretation by an SBB because in several cases, the NBA has granted access for not just the transfer or trade of a gene or small quantities, but approved access to several tonnes of biological materials (excluding only normally traded commodities that are traded in bulk from coverage under the BD Act) and insisted on benefit-sharing thereafter.

It comes as no surprise that this step of the MPSBB has triggered strong reactions. Several of the industries that received notices have dragged it to the National Green Tribunal (NGT). The Central Zone Bench of the NGT at Bhopal has admitted cases filed by several private companies such as Agro Solvent and Lilason Breweries that are presently being heard.

On 28 May 2013, the NGT bench stayed the MPSSB's notice of legal action against Lilason Breweries in case no response was received. The MPSBB had sent such a show cause to various companies who had not responded to their earlier notice. Following the same logic, the Eklehra Panchayat in Chhindwara district has filed a public interest litigation (PIL) against Coal India to share profits from coal extraction with the panchayat. The panchayat argues that while coal is being extracted from coal mines that fall under the panchayat, the company is not sharing its benefit with them.

The argument against the MPSBB's position on this issue can be that aspects of ABS in the BD Act are applicable only to genetic material and not biological resources in general. While the BD Act uses the term "biological resources", internationally, the CBD defines "biological resources" (Article 2) to include genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity. And in the specific Protocol on ABS, the Nagoya Protocol, the legal obligation of benefit-sharing is talked of in situations of access to genetic resources and/or "traditional knowledge" associated with such resources.

The logic of the MPSBB as stated in its letter to the NBA in April 2013 is that "coal is a plant fossil and it has a genetic material of a plant", and therefore it needs to be treated as a biological resource under the BD Act. Similarly, "limestone is a genetic material of marine organisms and is made after calcification of marine organisms". Further, it argues, that it is not just coal mining but also thermal and other industrial operations, which use coal, that need to come into the purview of ABS.

The MPSBB has sought a response from the NBA, which it is yet to receive. In both its letters of April 2013 to the NBA, the member secretary of the board has stressed how

> it is very very necessary that it should be clarified that what are the bio-resources and broader classification of industries are covered under the purview of industries using biological resources for commercial utilisation.

## Debate on Biodiversity

This action by the MPSBB has sparked off a debate on the interpretation of the BD Act in India, 11 years after it was gazetted. The matter is now before the NGT. If the tribunal's interpretation is in line with that of the MPSBB and if the NBA too acknowledges that the steps taken by the MPSBB are in order, it would mean that private companies using biological resources created through all kinds of "genetic material" would need to pay from their profits. These "double taxes", as the companies call it, will go into the coffers of the MPSBB. It is likely then that other SBBs, who are perhaps awaiting the decision on this, would follow suit.

This brings us back to the larger question of implementation of the BD Act. Should it preoccupy itself with collecting cash by insisting on ABS? Or should those mandated with ensuring that the objectives of the BD Act are met, bring extractive and potentially biodiversity-destructive businesses under conservation rules or sustainable use principles? These questions are sought to be settled by charging fees from those who continue in the business of extraction and possibly unsustainable use. The strategy



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does link itself to the "polluter pays" principle by asking those making profits out of biological material to contribute financially. However, this alone will not reduce the extent of coal mining or stop distilleries from continuing business as usual even though the BD Rules, 2004 give administrators the power to restrict or prohibit access to biological resources on account of overriding public interest or for protection of environment and conservation of biological diversity.

These interpretations of the law tend to suggest that implementing agencies are seeking to derive financial benefits from the extraction and commercial use of biological resources. Some panchayats and Biodiversity Management Committees (BMCs) being set up under the BD Act might also follow suit to increase their cash coffers. But this move by the MPSBB, even if it were to be accepted, should not replace the first objective of the BD Act, that of conservation of biodiversity. The real purpose of ABS even in its broadest definition and not the minimalistic view of cash compensation, will fail if it separates itself from a conservation ethic. That is what needs to be constantly reinterpreted no matter what the case.

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# Sovereign Rights on Biodiversity: Access and Benefit Sharing

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## Prelude

Agriculture provides a medium for production of food and other commodities by appropriate management of biological and natural resources. Primarily, it is a means of subsistence for the majority of the population, particularly that living in the tribal, backward and hilly areas, a resource of food and nutritional security for countries and regions, and a business enterprise for the developed farming households and industry. There is clear-cut relationship in the agricultural resource input and the output in terms of its production. Such input resources may be tangible and/or intangible, which vary in terms of value and relevance for different categories of agriculturists.

Ownership, possession of and rights over these resources, their access for use, and understanding or settlement of the claims made, if any, for sharing of benefits, are some of the basic issues, which have been well recognised but seen in varying perspective since the dawn of agriculture. Some other relevant issues in this context are sustainable food security, equity, transparency, dealing with third parties, and protection of intellectual property rights.

One of the primary inputs for farming is 'seed'. Two aspects may be considered important in terms of seed as resource, namely, (i) it should be promising in terms of its genetic productivity, and (ii) it should be of good quality. The latter refers to the sum total of physical quality and the physiological manifest, i.e., viability, germination capacity and vigour. On the other hand, the genetic productivity of seed is linked to its varietal background, which may be a landrace, a farmers' cultivar, an improved variety or a hybrid. The role of genetic resource in development of seed, in the relevant context, along with that of the associated traditional knowledge of the farmers is of paramount significance.

Further, there may be two distinct categories of end users of the seed, namely, (i) a next-door farmer who procures it as a complement or by bartering or by a non-commercial purchase, and (ii) any farmer who buys it from the developer, the producer, the trader or the open market. The former category is likely to be less concerned for rights and royalties for the seed in question than the other but, nevertheless, is contributing more actively for the maintenance on farm of the biological diversity in the form of variable, heritage seed. The second category of farmers, on the other hand, make direct payments for the improved varietal seed in the market but are likely to be little concerned whether there is/are some claimant(s) of share of benefits accrued from these sales. Such claimants may arise due to

the fact that one or the other of the parents of the improved seed accessed and used by the breeder was their traditional cultivar that they had maintained and nurtured over the generations. Nonetheless, if the seed being sold in the market happens to be that of an improved, protected variety then a fixed part of the royalty will ultimately go to the protection certificate holder, directly or through the licensee(s).

This paper deals with the concept/provisions of rights over biological resources as applicable across the geo-political boundaries or to the nationals and communities within countries, access to these resources in legal or prior agreed terms, and benefit sharing from the profits accrued due to their commercial or other use. The national legislative and regulatory developments along with future perspective are summarily presented.

**Sovereign Rights over Natural and Biological Resources**

The United Nations recognised in 1952 sovereignty of nations (Peoples and States) over their natural wealth and resources. In 1958, a Commission on Permanent Sovereignty over Natural Resources was established and, further, the UN General Assembly Resolution 1803 of 1962 set forth the principles for strictly and conscientiously respecting this sovereignty in accordance with the UN Charter and observing in good faith *inter alia* the foreign investment agreements freely entered into by sovereign States with international organizations or between them [United Nations, 1962: G.A. res. 1803 (XVII), 17 U.N. GAOR Supp. (No.17) at 15, U.N. Doc. A/5217 (1962); Source: University of Minnesota: Human Resource Library. URL <http://www1.umn.edu/humanrts/instree/c2psnr.htm>].

Within countries, the State invariably holds the rights to natural resources. In a broad reference, any land lord who may discover a mine in his/her estate would be still entitled to the ownership of the piece of land but not the natural resource beneath it and may be asked to evacuate the estate after suitable compensation at government rates. A limited use of such resource by the landlord may be permissible in certain cases, by payment of fees, lease amount or other charges or subject to approvals by the State Authorities but the property underneath i.e., the natural resource shall belong only to the State.

In respect of the biological resources, the corresponding status was ascertained four decades later in 1991/1992. First, the FAO International Undertaking on Plant Genetic Resources (IUPGR), a non-legally binding mechanism that had adhered, since inception in 1983, to the universally accepted principle that plant genetic resources are 'heritage of mankind' and should be made available without restriction, affirmed in 1991 that this concept (of plant genetic resources being the heritage of mankind) was subject to the sovereign rights of nations over their genetic resources [FAO, 1993. Resolution 3/91. Source: URL <http://web.cppgr.fao.org/>]. Subsequently, the Convention on Biological Diversity (CBD), signed in June 1992 (and having come into force in December 1993) as the first legal mechanism dealing with biological resources, reaffirmed in its preamble that countries (States) have sovereign rights over their own biological resources [CBD, 1992. Convention on Biological Diversity. Source: URL <http://www.biodiv.org/>].

## Access and Benefit Sharing

The objectives of the CBD, to be pursued in accordance with its relevant provisions, included, (i) the conservation of biological diversity, (ii) the sustainable use of its components, and (iii) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The latter may include appropriate (a) access to rightfully owned/possessed genetic resources, (b) transfer of relevant rightfully held technologies, and (c) funding. Unlike Article 15 that directly deals with access to genetic resources, there is no specific CBD Article covering elaborate provisions for benefit sharing (Box-1). The latter is, nevertheless, in-built in the same Article as Section 15.7, and requires each Contracting Party to take appropriate legislative, administrative or policy measures in accordance with other relevant Articles, namely, 16 (Access to and Transfer of Technology), 19 (Handling of Biotechnology and Distribution of its Benefits) and, 20 and 21 (Financial Resources and Mechanism), where necessary. Such measures at the national level should primarily aim at sharing the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources on mutually agreed terms and in a fair and equitable way.

Box-1

**Access and Benefit Sharing**

ACCESS implies an opportunity, consent/ right and/or means to approach, reach and/or use some tangible thing. It may be either taken for granted when the resource is freely available in nature or it has to be specifically sought for if the particular resource is a common property, a proprietary commodity or an intellectual property. Access to genetic or other natural resources means collecting, obtaining, exchanging or otherwise acquiring these resources.

BENEFIT SHARING means compensating or getting compensated for the utilisation of genetic resources whether in monetary or non-monetary terms. In particular, it is accepted to include in benefit sharing the opportunity granted/availed for participation in research and development on genetic resources, and making available the findings of such research and development and/or the transfer of technology(ies).

**Measures for regulating fair and equitable sharing of benefits**

1. *ex-ante* measures : mainly preparatory/ precautionary measures
   - i) reaching a broad agreement/accord
   - ii) signing of Memoranda of Understanding (MoU)
   - iii) obtaining a prior informed consent (PIC)
   - iv) defining the mutually agreed terms (MAT)
   - v) signing the Material Transfer Agreement (MTA)
   - vi) the Benefit Sharing Agreement

2. *post facto* measures : steps taken only after the use and the benefit are established
   - i) establishing that the particular genetic material was used
   - ii) establishing the owner/trustee of the genetic material used
   - iii) establishing that a benefit was accrued from the commercial or other use of the product/derivative using the particular genetic resource
   - iv) establishing that consent for sharing the benefit on equitable terms was sought
   - v) legal recourse to seek justice for specific reasons whatsoever

Similarly, Article 16 on Access to and Transfer of Technology requires countries to provide and/or facilitate to other Contracting Parties access for and transfer of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment. The countries are required to take legislative, administrative or policy measures that ascertain access to and transfer of such technology(ies) as would make use of those resources to Contracting Parties which provide genetic resources and also take those measures that ensure the facilitation of access by the private sector for joint development and transfer of technology to the benefit of both governmental institutions and the private sector of developing countries.

Decision III/15 of the Conference of Parties (CoP) to the CBD included supplementary recommendations to the governments to implement human and institutional capacity-building programmes that may help promote successful development and implementation of legislative, administrative and policy measures and guidelines on access, including scientific, technical, business, legal and management skills and capacities. They should consider analysing the national experiences of legislative, administrative or policy measures, or guidelines on access, and also the regional efforts and initiatives, if any, and further developing, refining and implementing measures and guidelines on access.

Another important provision in the CBD concerning access is made in the Article 8(j), which is in-built under '*in situ* conservation'. It requires to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and to promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices. However, the application of these provisions should also be subjected to national legislation. Article 10(c), covered under 'Sustainable Use of Components of Biological Diversity', although does not get as much attention as the Article 8(j), yet also seeks in corollary to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.

The scope of the Article 8(j) is greater than that of Article 15 as the latter focuses only on genetic resources. Also, the former is expressly required to be implemented as per the national law. Therefore, it is often felt that either a separate comprehensive legislation should be made that would guarantee these rights or express provisions be made in the national Biological Diversity Acts in the pipeline so that the same may become the starting point for regulation of access and benefit-sharing for the knowledge, innovations and practices of communities associated with genetic resources.

It may be observed that whereas national governments or the designated Authorities may determine access to biological resources and technology, the right of indigenous and local communities has been held high so far as the access to associated knowledge, innovations and practices is concerned. The national law may, however, authorise and provide for notification of some concerned institution(s) to facilitate such deals by local

communities with foreigners to help lay down the terms of prior informed consent and mutual agreement for benefit sharing subsequently and make mandatory all such deals through these institutions. Again, taking into consideration the interpretation of the Article 10 (c), which is a natural corollary to the Article 8(j), emphasis is required to be given on the customary use of biological resources wherein Parties should protect and encourage traditional cultural practices involving these resources. It may also be interpreted that the future policies and legislation on access to genetic resources should consider, and not impede, customary use and exchange of genetic resources among the measures taken to control access to genetic resources to ensure benefit-sharing.

**National scenario : Legislative and regulatory mechanisms**

As per the Constitutional Provisions in India, the states (provinces) and the individual citizens have the ownership rights over their agricultural land as well as forest plant resources. Their protection is provided for in the Directive Principles of State Policy (Article 48A) and Fundamental Duties (Article 51A(g)), respectively. The Forest Act, 1927 along with Forest (Conservation) Act, 1980 make a trivial mention of access to certain forest produce and, further, The Environment (Protection) Act, 1986 provides an umbrella Act to cover various environment related issues. Nevertheless, in all above mentioned Constitutional or Legislative enactments, there are no clear-cut provisions stating the sovereign rights on biological diversity, access to its components and benefit sharing for their use. Accordingly, need was felt to enact matching legislation(s) that would cover the provisions of the CBD or those required for benefit sharing upon registration of improved varieties embodying landraces or farmers' cultivars in their pedigree.

The Constitution of India while making provisions for the distribution of legislative powers between the Central Government and the States, including the extent of laws to be made by the Parliament and the State Legislatures (Article 245 (2)) has upheld that the power of the Parliament to make law for the entire country. Also, the Article 253, on legislation for giving effect to international agreements empowers the to make any law for the whole or any part of the country for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or body.

The key developments at the national level concerning legislative and regulatory provisions include the enactment of two legislations, one on the protection of plant varieties and farmers' rights and the other one on Biological Diversity (management and access). Both these legislations are in the enactment stage as Bills, 123 of 1999 and 93 of 2000 respectively. The former already has the clearance of a Joint Parliamentary Committee of the Two Houses (JPC) constituted for the purpose and the latter is undergoing the process of consideration by another JPC. The issues of harmonisation of the provisions of the two bills have also been considered by the two JPCs. A sketch of the possible, broad outline of the procedure for seeking access to biological resources under the new Biological Diversity Act has been presented in Box-2 given below:

*Box-2*

**Legal access to biological resources in India: A suggested model**

| | | | | |
|---|---|---|---|---|
| STEP-1 | Submit Application to Biological Diversity Authority (BDA) | | | |
| | *Categories for use of BD from such access as stated in the application:* | | | |
| | A) Bioprospecting | B) Academic research | C) Industrial application research | |
| | D) Industrial use | E) Commercial use | F) Other (specify) | |
| | *Pre-requisites (to be fulfilled along with application):* | | | |
| | a) A preliminary Prior Informed Consent (PIC) on prescribed form (optional) *or* source of material + copy of letter of willingness to allow access<br>*and* Poof of legal ownership of the biological resource | | | |
| | b) Public Notice: wide circulation in Media and Press, in local languages and locally circulated newspapers | | | |
| | c) Security Clearance/Sensitivity Clearance for all Foreign Applications - from Ministries of External Affairs/Home | | | |
| STEP-2 | Processing of Application | | | |
| | • Expert Opinion/ Comments of notified Department/Institute | | | |
| | YES | | NO | |
| | => Technical Committee of BDA | | Revise the Application by incorporating the suggestions, if any | |
| | • Scrutiny by the Technical Committee | | | |
| | *Check-List* : (Criteria) | | | |
| | Biological | Native | Introduced and Naturalized | Recently Introduced |
| | Endemicity | Strategic | Abundance | Occurrence |
| | Ecological | Sustainability | | Adaptability! |
| | Social | Known Utility <=> Intended Use | | |
| | Ethical | Known ethno-botanical, medicinal or religious/spiritual/ritual values vis-à-vis intended use | | |
| | Possible Industrial/Commercial Application And Expected Gains | | | |
| | Whether intent of Benefit Sharing made clear by the Applicant? | | | |
| STEP-3 | • Inventorization and Repository Function | | | |
| | • Producing PIC Certificate on Judicial Paper | | | |
| STEP-4 | 1. Benefit Sharing Contract<br>• Tripartite : Applicant – Biodiversity Authority - Owner/Custodian<br>• Material Transfer Agreement (MTA)/ Knowledge Transfer Agreement (KTA)/ Know How Transfer Agreement(KHTA) | | | |
| | 2. Re-Negotiation On MTA/KTA/KHTA | | | |

*Box-2*

**Legal access to biological resources in India: A suggested model**

| | | |
|---|---|---|
| STEP-5 | Decision of Biodiversity Authority on Access | |
| | YES | NO |
| | Implementation | Review and Appeal |
| STEP-6 | • Repository/Inventory/Phytosanitary Clearance | |
| | • Transfer of Access-Granted Material through Notified Repository/Department/Institute | |
| STEP-7 | • Commencement of activities as per the stated Purpose of Access: Bioprospecting/Research/Technology/Industrial or Commercial Application | |
| | • Monitoring by the Biodiversity Authority or Notified Deptt./Institute | |
| STEP-8 | 1. Reporting the results of use to Biodiversity Authority as per the Tripartite Agreement | |
| | 2. Copy of Report to the Repository/Inventory | |
| | 3. Depositing the Sample of Derived Material(s) (from the original accessed materials) to Genebank for conservation and reference | |
| STEP-9 | Benefit Sharing Process, as Applicable, through the Biodiversity Authority | |

Further, access to genetic resources in India is provided under a regulatory mechanism being operated under the auspices of the Indian Council of Agricultural Research (ICAR) and the Department of Agricultural Research and Education (DARE). The executive function is performed by the National Bureau of Plant Genetic Resources (NBPGR), New Delhi, which operates a single window exchange and quarantine of plant germplasm in the country.

The quarantine of materials under import and exchange is regulated as per the Plants, Fruits and Seeds Order 1989 (PFS Order, 1989) under the Destructive Insects and Pests (DIP) Act 1914. The regulation for the seed production, certification and import/export is done under the Import and Export Control Act, 1947, the New Seed Development Policy, 1988 and the Seeds Act, 1996. The legislative responsibilities to regulate quarantine of imported plant materials have been given to the Directorate of Plant Protection, Ministry of Agriculture vide Govt. of India Notification No. 8-4/87-P.P.1 Dated 27.3.1990 (PFS Order 1989). In case of products of biotechnology, the Department of Biotechnology (DBT), Ministry of Science and Technology is the Competent Authority to regulate the imports.

Nevertheless, for the research purpose imports in both these cases, the National Bureau of Plant Genetic Resources (NBPGR) is designated as nodal agency for exchange and quarantine of the material. Accordingly, the Director, NBPGR, New Delhi, is notified as the competent authority, as per the of clause (2) (a) of the PFS Order, 1989, to regulate import seeds/plants for research purposes into the entire country. Similarly, for importing the transgenic material this authorization has been vested upon the Director, NBPGR, New

Delhi to issue import permit on the recommendations of the Department of Biotechnology, Ministry of Science and Technology vide Govt. of India Notification No. GSR 1067 (E) dt. 5.12.1989. However, as per the FPS Order the following crop base institutes (Box-3) may be consulted by the NBPGR or the application may be routed through them for smooth exchange of germplasm of particular crops.

*Box-3*

**Crop based Institutions through which applications may be routed for single window exchange germplasm**

| Crop | Institute |
|---|---|
| Coconut seeds and plants (all *Cocos* species) | Director, Central Plantation Crops Research Institute, Kasaragod -671 124 |
| Coffee, Plants, Seeds (all species of *Coffea*) | Director, Coffee Research Station, Chikmagalur (Karnataka) |
| Cotton seeds (only seeds can be imported) (all species of *Gossypium*) | Director, Central Institute of Cotton Research, Nagpur-440 001 |
| Forest seeds (all species of *Pinus, Ulnus* and *Castanea*) | Director, Biological Research Institute, Forest Research Institute, New Forest Post, Dehradun or any organization under Central or respective State Government. |
| Potato | Director, Central Potato Research Institute, Shimla-171 001 |
| Sugarcane (all species of *Saccharum*) | Director, Sugarcane Breeding Institute, Coimbatore-641 007 |
| Tobacco (all species of *Nicotiana*) | Director, Central Tobacco Research Institute, Rajahmundry-533 105 |

Further, the NBPGR has made elaborate guidelines for depositing the germplasm samples to the national gene bank (NBPGR, 1997. National Gene Bank, NBPGR, New Delhi. 24p.). It is to be one of the notified repositories to deposit reference samples of seed/plant materials accessed under the approval of National Authority on Biological Diversity. The Bureau also undertakes collaborative exploration trips for collection of agrobiodiversity/ genetic resources from different parts of the country involving its regional stations, ICAR institutes and state agricultural university centres. Further, case-to-case basis clearance is required to be obtained by the Bureau from the Competent Authority in the Department of Agricultural research and Education, Govt. of India to provide access to germplasm through collection or from its *ex situ* holdings, in view of the new regulatory frameworks being foreseen in the near future. Nevertheless, it would be appropriate to maintain the single widow exchange and quarantine mechanism for accessing samples for research under the new regime.

As per the proposed Biological Diversity Legislation, certain "Repositories" have to be established/recognised for depositing voucher specimens of each of the bioresource accessed under the law for commercial use. In addition, these Repositories will also pursue the general measures being taken at the national level for conservation and sustainable use of bioresources. The Ministry of Environment and Forests (MoEF), while proposing such repositories for different categories of bioresources has clearly recognised the well

organised Bureaus of ICAR on Plant, Animal and Fish Genetic Resources and also the recently established Bureau on Agriculturally Important Microbes.

The role of all the stakeholders in this area with little legal experience is of equal importance. There is always a need to follow self-guided, voluntary code of conduct on issues of national importance. The sovereignty of country's bioresources should be held high by cooperating with the system as well as by mobilising others to extend similar cooperation. Some Do's and Don'ts have been widely circulated by the NBPGR in areas of PGR management, particularly the single window germplasm exchange [Gautam *et al. (P.L.Gautam, S. Kochhar, S.K.Pareek and Ram Nath)*, 1998. Plant genetic resources conservation and exchange in the Indian national agricultural research system. National Consultation on Access to Biological Diversity and Benefit Sharing, Innovations, Incentives and Institutions. IIM, Ahmedabad, 10-12 April, 1998. 16p.]. These guidelines clearly help in harmonising system's approach in the national context.

Access to agricultural commodities, in general, is provided under the Export-Import Policy (Exim Policy) by the Department of Agriculture & Cooperation (DAC), Govt. of India and quarantine of commercial seed/planting material id done by the Directorate of Plant Protection. A new national quarantine policy is being formulated in order to *inter alia* harmonise with the global provisions.

**Epilogue**

It may be analysed that although the CBD appears to offer a multilateral platform for meeting its main objectives but has not instituted mechanism(s) that match and offer to put these ideas into practice. Bilateral deals, such as, commercial contracts and other agreements for access to biodiversity are promoted under its provisions and there is a general failure to provide a strong plan of action based on broad, multi-country collaboration, particularly among the developing economies, for access to, and development of, biological diversity. The bilateral agreements are encouraged by making repeated reference to 'mutually agreed terms' for access to biological resources (Articles 15.4, 15.7, 16.3, 19.2) and 'prior informed consent' of the concerned sovereign State (Article 15.5). The eventual endorsement of contractual (bilateral) agreements would be confusing, particularly in cases where indigenous communities and countries may be pitted against each another.

It was for this anticipated gap that the Nairobi Final Act 1992 that finalised the Text to be accepted by the CBD also mentioned access to genetic resources held under *ex situ* conditions, prior to the CBD, as one of the two outstanding issues, which it recommended to be re-negotiated under the auspices of the FAO within the multilateral framework of the IUPGR. Supplementary recommendations as per the Decision III/15 of the Conference of Parties (CoP) to the CBD to the governments also required to bring to a rapid conclusion the negotiation for the adaptation of the International Undertaking on Plant Genetic Resources for Food and Agriculture.

Another weak point in the CBD is its ambiguous treatment for the equity. It may be seen that whereas patenting of products of biotechnology is clearly recognised on one hand

(Articles 16.2, 16.3, 16.5), there are no effective guidelines and conditions defined on the other hand to recognise and reward the contributions of indigenous communities and other informal innovators who have been responsible for nurturing, using and developing biodiversity worldwide [Rafi, 1994. Bioprospecting/Biopiracy and Indigenous Peoples. RAFI Communique Nov/Dec. URL <http://www.rafi.org/papers>].

The issue of facilitating access to biodiversity/genetic resources is important and sensitive too. It has to be provided/facilitated as per the commitment but should not be done at the cost of equitable benefits denied. Therefore, strong institutions of National Authorities should be established for both PPV&FR and Biological Diversity Acts and there should be harmony and non-overlap between the provisions of the two Acts. It would also be worth considering at the pre-enactment stage of the two Bills to make any mid-course correction, as appropriate, so as to avoid the burden of frequent changes in the national laws through Amendments under the terms set out in some inter-governmental decisions already in sight. For example, the multilateral system of exchange and benefit sharing under the Revised International Undertaking, particularly when it is likely to be endorsed as a Legal Mechanism, requires consideration for making matching provisions in the Bills 123 of 1999 and 93 of 2000 that are already placed before the Parliament for enactment.

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# Ten Years of the Biological Diversity Act

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As India plays host to the Convention on Biological Diversity's 11th Conference of the Parties in Hyderabad in October 2012, this article takes a closer look at the country's legislation on the subject – the Biological Diversity Act (2002).

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India's Biological Diversity (BD) Act was enacted in 2002. There is now a decade of its existence to reflect on. The genesis of the law can be traced to the Convention on Biological Diversity (CBD), which was signed at the Rio Summit in 1992. While assessing the 10 years of the Act, one has to be mindful of how India itself has undergone change in these years. By the time the Act came into force, trade imperatives had begun to influence environmental law and policy-making both at the national and global level. The final shape of the Act and the manner of its implementation through the BD rules issued by the Ministry of Environment and Forests (MOEF) in 2004 reflect that bent.

The "economic reforms" introduced in 1991 meant greater reliance on market forces, encouragement of the private sector and restructuring the role of the government. In 1995, the country had also become a member of the World Trade Organisation (WTO). This, among other things, meant changes in the country's intellectual property (IP) regime. Economic liberalisation has created many new challenges for local communities. Situating the 10 years of the BD Act in this post-"reforms", post-WTO context, helps to better understand the direction it has taken.

## Building Institutions

The BD Act prescribed an institutional framework in order to implement the three CBD objectives of conservation, sustainable use, and equitable sharing of benefits arising out of the use of biological resources and related knowledge. So from the start, the central government was preoccupied with establishing the institutional structure, particularly at the national level. In 2003, the National Biodiversity Authority (NBA) was set up by the MOEF at Chennai.[1] It has seen seven chairpersons up to date. The 15-member authority has largely consisted of bureaucrats or senior scientists, mostly ex officio appointments. Apart from that, the NBA has had the prescribed five non-official "specialists" and "expert" members. The NBA is required to function as the biodiversity board for the union territories but there is little to show on that front.

Meanwhile, almost all states have state biodiversity boards (SBBs). The count on date is 26 out of 28,[2] with Kerala, Karnataka and Madhya Pradesh being amongst the first to set up their SBBs. Most boards have forest and wildlife officials doubling up as chairpersons and member secretaries. Clearly, each of the SBBs is at different stages of implementation of the BD Act, yet their role has remained limited to that of receiving intimation from Indian institutions, corporate bodies or individuals who wish to use biological resources and related knowledge. Most SBBs have busied themselves with steering processes for biodiversity management committees (BMCs) to be set up at village, municipality or block levels and the documentation of local resources to be undertaken by them. Till December 2011, only 14 states had notified their BD rules.

The Act mandates that seven-member BMCs be set up by every local body. There are 33,077 BMCs across 23 states of India as of September 2012, of which 27,712 are in Madhya Pradesh.[3] Only very few states such as Nagaland are willing to integrate existing customary institutions such as village councils and Tribal Hohos with BMCs.[4] By and large, the emphasis by the NBA and SBBs has been to have as many BMCs ready on paper. In many places that the authors visited,

for instance, north Karnataka and central India, not all the local individuals listed as BMC members were even aware of their position on these committees. Both civic bodies in the urban centres and panchayat samitis in the rural areas have been reluctant to set up BMCs since it creates additional work with no guarantee of visible benefits to show their immediate constituencies. In urban areas there are very few BMCs set up with the exception of some districts in Madhya Pradesh and Maharashtra. So the BMC experience largely remains a rural exercise. National guidelines for BMCs are being finalised by the NBA.

Meanwhile, the NBA has been setting up several short-term (two-three years) expert committees on specific issues on need basis. The ones currently functional are on agro biodiversity, medicinal plants, training modules and access and benefit sharing (ABS).[5] An Indian Institute of Biodiversity and likewise an Institute of Marine Biodiversity have also been approved since 2005. Earlier this year, a Centre for Biodiversity Policy and Law (CEBPOL) was created in April[6] and Regional Biodiversity and Bio-resources Centres (RBBC) too are envisaged. There is a suggestion to have a regional office of NBA at Shillong for the north-eastern states.[7] So 10 years on, there is still unfinished work in building institutions.

### Access Rules

The other objectives of conservation, sustainable use and benefit sharing have not received as much attention as access to biological resources and associated knowledge of the people of India by foreign persons, which requires the prior approval of the NBA. This is in line with the CBD requirement for the accessor to have the prior informed consent (PIC) of the country providing genetic resources.[8] The CBD also requires that in exchange, domestic laws provide for fair and equitable benefit sharing on mutually agreed terms (MAT) when access is granted[9] and the benefits are to be routed back to local peoples who are the real keepers of biodiversity.

The legal provisions dealing with grant of access were brought into effect only in 2004 after the NBA was fully in place.[10] At its second meeting in 2004, the NBA processed the first eight access applications for biological resources received by it. By its third meeting in July 2005, the ABS agreements for access, material transfer and intellectual property rights were prepared using the expertise of different lawyers from various government departments. There was still concern that SBBs had not been formed in all states, which also meant that there were no functioning BMCs in some states at that time. Yet the work of processing access applications continued unabated despite the fact that the Act makes it mandatory for NBA and SBBs to consult BMCs before taking any decision.[11] In 2005, at an NBA meeting members stressed the need to prioritise commercialisation with fair and just benefit sharing because out of all resources spent by NBA so far, not one penny has gone to the communities whose knowledge and resources we are supposed to care for.[12]

After 10 years of the Act, India has 100 ABS agreements to show.[13] These were publicly announced by the union environment secretary in July 2012 at a CBD meeting in Delhi. It is yet to be seen if





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monetary collections from these 100 agreements going into the National Biodiversity Fund translate into real "benefits" for at least 100 local communities in India. The challenge with respect to many of these agreements is to reach out to the legitimate local "benefit claimers" who are yet to be fully identified in most cases.

ABS implies that a user of genetic resources or related knowledge is now using them with permission; however, there is no mechanism to monitor post-access conduct of the accessor and compliance with the terms of conditions on which access was originally granted. At the global level, to make countries abide by each other's ABS procedures, in 2010 a global protocol was established under CBD at Nagoya, Japan.[14] Though India has signed it, the protocol is yet to come into force. In any case, there is a need to build more capacity to deal with ABS-related issues at different levels.

Another important aspect of access, as CBD insists, is that genetic resources be used sustainably and for environmentally-sound purposes. Yet many applications before the NBA also seek clearance for use or transfer of genetic material from India for developing products through modern biotechnology. In 2005, the private seed company Maharashtra Hybrid Seeds Corporation (MAHYCO) sought NBA approval for "transfer results of research" to ship out parental eggplant seeds from India to Bangladesh. This was required as the source population of eggplant RHR-51 used was from India into which MAHYCO had inserted its Cry 1AC gene to make genetically modified (GM) brinjal.[15] In the absence of an effective biosafety regime in the country, there are concerns that the access regime will only encourage India's genetic wealth being marketed for the manufacture of potentially hazardous GM seeds and breeds.

## Intellectual Property

A key expectation from the legislation was that it would check the grant of illegal and unjustified patents or other intellectual property rights (IPR) based on India's biological resources by other countries and foreign companies. The country had been at the receiving end of "biopiracy", with the basmati rice and neem fungicide patent cases making much news since the 1980s. Council of Scientific and Industrial Research (CSIR), on behalf of the central government, had successfully challenged one such patent on use of turmeric in the US patent office in 1996. Post-BD Act, CSIR was amongst the first public research institutes to seek approval for IPR applications from the NBA. And in the last 10 years there has been no instance of the NBA invoking the legal provision that gives it the function and power to oppose the grant of any IPR in any foreign country on any biological resource or knowledge from India.[16] The CBD itself does not provide for a global forum to take such cases.

Nonetheless, the BD Act does not take a clear position on IPR on living matter or people's know-how. Meanwhile, at the WTO India's position had long shifted from "no patents on life forms" to patents on biological resources on fulfilment of certain conditions. The BD Act does not outrightly disallow IPR for any invention based on research or information on a biological resource obtained from India; it simply requires approval of NBA and compliance with the benefit sharing and other conditions that NBA may impose. So the NBA has become an office to screen requests for approval being sought for IPR applications by both foreign and Indian entities.

Of the 100 ABS agreements approved and endorsed by the NBA till date, 54 are agreements allowing applicants to seek IPR[17] and 51 of these 54 are from Indian applicants, whether individuals or institutes. (The three granted during 2012-13 have not yet been made public.)

Ironically, India's patent law does not regard anything in the area of traditional knowledge (TK) as patentable;[18] however, only a few states like Kerala have articulated their own IPR policy with respect to TK in medicine. Moreover, Nagaland's draft BD rules define "community intellectual property" as belonging to the community as a whole rather than to individual inventors.[19] Under the Act, the central government has the statutory duty to "respect and protect the knowledge of local people relating to biological diversity."[20] On the basis of an non-governmental organisation (NGO) text, NBA did issue the draft "Protection, Conservation and Effective Management of Traditional Knowledge relating to Biological Diversity Rules, 2009" but this text has not been finalised. Not surprisingly, the Ministry of Commerce and its department of industrial policy and promotion (DIPP) that handles IP-related issues is now working on a draft TK Bill for India through a DIPP-approved FICCI task force on traditional knowledge.

## Documentation

The BD rules make documentation the main function of BMCs. Many local groups and people's campaigns have consistently questioned these rules and pointed out that they dilute the Act since knowledge holders at the local level are reduced to mere data providers rather than facilitating self-governance of India's many (bio) knowledge-based local communities. The BD rules require the authority to take steps to specify the form of People's Biodiversity Registers (PBRs), the particulars these registers will contain and the format for the electronic database. As a result, an NBA expert committee prepared the methodology for PBRs for which guidelines were issued in 2009. Ever since, the work of making and digitising PBRs has been going on in several states and a little over 1,100 had been made by the end of 2011. SBBs guide the BMCs in its documentation with the help of a technical support group (TSG). The "experts" in the TSG are drawn from various disciplines, government line departments, universities, research institutes, colleges and schools and NGOs. But the proposed digital Indian Biodiversity Information System (IBIS) is yet to be fully set up. Meanwhile, BMCs such as those in Heggarni village of Uttara Kannada or Purola tehsil in Uttarakhand are waking up to the fact that this official documentation process can be extractive.

## Conservation Objectives

The Act opens with the words that it is meant to "provide for the conservation of biological diversity." That is also the primary objective of the CBD and concern of local communities whose lives and livelihoods depend on it. Early meetings of NBA reiterated the point that it was not meant to be an institution to promote trade but was constituted to protect the biodiversity of the country.

Certain provisions of the BD Act lay down the duties and responsibilities of the central government (through MOEF) towards ensuring conservation.[21] These have hardly even been put to use. Even though in the last decade several large "development" projects including on mining, big dams, etc, have invited controversy for their likely impact on biodiversity, they have never been either questioned from the point of view of the BD Act or required to undertake a biodiversity impact assessment other than the environment and forest clearances. In this context, it is important to point out that the central government is not bound by the NBA's recommendations, which are only advisory in nature. On the contrary, NBA remains bound by the directions on questions of policy given by the central government.

The BD Act has also created a new category of conservation, Biodiversity Heritage Sites (BHS), and NBA issued its guidelines for the declaration of the same in 2009. So far four BHS have been declared in the country, all being in Karnataka.[22]

Regarding resources, the thinking vis-à-vis the biodiversity regime is that it will generate its own funds through selling genetic material, which can then be used for conservation. NBA charges a standard 5% of estimated benefits as its non-refundable administrative fee, apart from the costs of the prescribed forms and any other royalty imposed on an applicant seeking access. The benefit-sharing mechanism is meant to plough back (monetary) "benefits" to the local biodiversity funds. However, there are few instances to speak of. For example, the Hyderabad-based Bio India Biologicals Corporation had exported neem leaves accessed from Amarchinta BMC in Mahbubnagar district of Andhra Pradesh by paying a "royalty" of Rs 53,000 to NBA. Earlier this year the authority reportedly transferred Rs 20,000 to Amarchinta BMC and the money was utilised for planting saplings, fencing, etc.

The central government is also required by CBD and the BD Act to develop national strategies, plans and programmes for conservation and sustainable use of biological diversity. Between 2000 and 2003, MOEF, with United Nations Development Programme-Global Environment Facility support, commissioned the civil society group Kalpavriksh to prepare India's National Biodiversity Strategy and Action Plan (NBSAP). After a four-year process with over 100 organisations from across India being involved, the final report was not accepted by the MOEF. In August 2007, MOEF released its own draft National Biodiversity Action Plan (NBAP) made by technocrats, which was then approved by the union cabinet in 2008.

To ensure that business-as-usual should not be disrupted by the workings of the BD Act, a list of 190 "normally traded commodities" have been kept out of the purview of the Act;[23] only conservation concerns can keep certain threatened species out of the list. A MOEF notification to that effect was issued in early 2010. However, an NBA consultation on the subject confirms that on this issue there is a difference of opinion between technical institutions and those dealing with trade in species.[24]

### Biodiversity Governance

Though CBD laid down the principle of national sovereignty over biological resources, from the point of view of people it was to translate into community sovereignty. The real biodiversity-keepers, be it farmers, fisherfolk, pastoralists, etc, are required to be central to preserving biodiversity, not simply their knowledge, innovations and practices. Integrating women's concerns also remains an issue that needs attention. In the villages in Uttarakhand women were denied an all-female BMC because it deemed to be legally impermissible.

The BD Act so far only requires "consultation" with local communities, not their full or free PIC. BMCs have not breathed life into the idea of a grass-roots democracy. They are still to become the authorities on decision-making on local resources as prescribed by both the BD Act and CBD. Till the Act delivers, people require the immediate benefit of the living resources and intellectual heritage through which they get by. However, in the current development model, communities are being forced to move or migrate from their lands. With such shifting populations, who will constitute the BMC and who are "local" communities are fundamental questions that confront the administration.

Given the law and the reality in which it operates, the question is whether the BD Act will come anywhere near to effecting biodiversity justice in the next 10 years, or will our most biodiversity-rich areas and peoples from them continue to remain in poverty.

NOTES

1 National Biodiversity Authority (Salary, Allowances and Conditions of Service of Chairperson and Other Members) Rules, 2003; about NBA http://nbaindia.org/content/16/14//introduction.html
2 http://nbaindia.org/link/241/34//SBBs.html Barring Bihar and J&K, all other states in India have an SBB at least on paper.
3 http://nbaindia.org/content/20/35//bmc.html
4 Proposed Nagaland Biological Diversity Rules, 2011.
5 http://nbaindia.org/content/21/18//committees.html
6 Launch of CEBPOL, http://nbaindia.org/blog/466/47//LaunchofCenterfor.html
7 First meeting of SBBs in the NE Region, 4-5 May 2012, Shillong, Meghalaya, http://nbaindia.org/blog/469/47//TheFIRSTMeetingof.html
8 Article 15 of the Convention on Biological Diversity.
9 Article 15(7) of the Convention.
10 Sections 3, 4, 5, 6 and 7 of the Chapter on "Regulation of Access to Biological Diversity" in the BD Act came into effect only from 1 July 2004.
11 Section 41(2) of the BD Act.
12 Minutes of the fourth meeting of the NBA held on 6 October 2005 at Port Blair. http://nbaindia.org/uploaded/docs/fourth_meeting.pdf
13 Agreements signed by the applicant with NBA (MAT), http://nbaindia.org/text/19/Statusapprovalsagreementsigned.html
14 The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity is an international agreement under the CBD. http://www.cbd.int/abs/
15 Application reference no: F. No. 9-68/2005 discussed at the fifth meeting of the NBA on 20 January 2006.
16 Section 18(4) of the BD Act.
17 http://www.nbaindia.org/approvals/agreement_signed_total_form3.htm
18 Section 3 (p) of the Patent Act.
19 Proposed Section 2(6) of the Nagaland Biological Diversity Rules, 2011.
20 Section 36(5) of the BD Act.
21 Section 36 of the BD Act.
22 http://nbaindia.org/content/106/29//bhs.html
23 Section 40 of the BD Act.
24 Report of national consultation on normally traded commodities http://nbaindia.org/blog/504/1/Reportof.html

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# Biosafety and Beyond

## GM Crops in India

*India is on the verge of approving a genetically modified food crop, Bt brinjal, for large-scale trials in the country. The unbridled proliferation of illegal Bt cotton in the country is already proof of serious regulatory failure and, elsewhere too contamination of the supply chain due to crops in field trials is on the rise. It is pertinent to ask questions about the biosafety regime in the country and look at larger issues beyond, including whether GM technology is needed at all.*

KAVITHA KURUGANTI

On May 23, 2006, India received a notification from the US through the WTO Committee on Technical Barriers to Trade, which expressed American concerns, reservations and objections on India's move to label and certify GM foods. The main "principle" on which US has begun questioning not just our trade policy and import guidelines related to GM but internal regulation of genetic engineering and the Environment Protection Act's relevant rules is that of "substantial equivalence".

In the context of the US repeatedly using the WTO's binding rules to put pressure on national governments in its worldwide promotion of GM crops, the WTO's notification to India should make national regulators in various ministries of the government of India to define strongly and clearly a sovereign policy that looks at biosafety as well as issues beyond to be applied uniformly for imports, exports as well as domestic production.

Another important context requiring us to re-look at biosafety is the fact that India is on the verge of approving a GM food crop for large-scale trials in the country. This is the second time in Indian GM history, after Bayer's GM mustard was turned down in 2002, that a food crop, that too a vegetable crop, has come so close to commercial release. Nowhere else in the world has Bt brinjal reached such an advanced stage of experimentation. It is not out of place to remind readers that at

this stage of large-scale field trials, it is mostly agronomic evaluation that counts, since it is claimed that biosafety tests have been completed. It is also important to recall that it was at the field trial stage that the first discovery of the contamination of Indian cotton with illegal Bt cotton was made in Gujarat in 2001 and since then, the unbridled proliferation of illegal Bt cotton in the country has been proof of serious regulatory failure. Elsewhere outside India too, contamination scandals with crops in field trials contaminating the supply chain are on the rise now. Therefore, there is much concern that these large-scale trials could become synonymous with commercial cultivation permission too, with illegal contamination from Bt brinjal trials being a distinct possibility!

All the major farmers' organisations in the country including the All India Kisan Sabha, Bharatiya Kissan Union, Bharat Krishak Samaj (the ruling party's own farmers' wing), Shetkari Sanghatan, Andhra Pradesh Rythu Sangam, etc, have questioned the very need to introduce Bt brinjal or other GM food crops into the country. What is the crisis in brinjal production in the country that this technology has to be brought in, they want to know. They point out that it is in fact over-production of the crop and lack of market support that is a problem for farmers now. Similar is the response from various organised consumer groups including Consumer Coordination Council, a national federation of consumer groups. On the other hand, a US-led consortium is backing the entry of Bt brinjal into the country, claiming that it will benefit farmers. This includes USAID, which wants to influence agricultural production technologies and decision-making pertaining to them in India through a variety of channels including public sector research institutions.

While the presence of the Bt toxin in Bt brinjal, a crop that is consumed with little or no processing, is causing concern, there are other developments – the Bt cotton front gave us a good taste of what to expect from GM crops – that cause fresh concern about GM crops. Amongst these are recent reports on adverse impacts of Bt cotton on human health from Madhya Pradesh and on livestock from Andhra Pradesh.

Given this situation, it becomes pertinent to ask questions related to the biosafety regime in the country (what constitutes "biosafety" and the enforcement of regulations related to biosafety) and other larger issues beyond, including decisions on whether GM technology is needed at all, even if biosafety tests in their given framework show that the crops are "safe".

## Biosafety Regime in the Country

Biosafety is an important consideration with transgenic crops since they have known environmental and health hazards as scientific evidence from all over the world shows. What is worse, unlike in the case of other agricultural technologies, these transgenic seeds and plants, once released into the environment are irreversible and are "living". That is the reason why critics advocate a precautionary approach to this technology.

As various reports indicate, especially the human health study and the livestock mortality reports, there are serious shortcomings in the biosafety testing of the country. In terms of the enforcement of the regime as it exists, there are numerous reports which have repeatedly pointed to serious biosafety violations and the regulators have proven themselves incapable of fixing accountability in each such case.

Coming specifically to what constitutes biosafety in India, it falls woefully short of testing for the actual potential dangers that lie ahead with the introduction of GM crops in the country. Given that we

are a country with a majority of our population still dependent on agricultural livelihoods, the importance of assessing the need and safety of a technology in an "early warnings system" (for the precautionary principle to be invoked) need not be overstressed.

In India, a set of mandated tests to appease the regulatory system are required to be taken up by the promoting agency and data brought back to the regulators, mainly the Review Committee on Genetic Manipulation (RCGM) in the ministry of science and technology and the Genetic Engineering Approval Committee (GEAC) in the ministry of environment and forests, in the name of biosafety.

Such biosafety tests are done simultaneously even as permissions for farmer-level field trials are allowed! It has been brought out through many civil society investigations that this system has, in effect, led to serious biosafety violations, including the untested produce from the trial plots contaminating the regular supply chain, given the absence of monitoring of the company and its trials by the regulators. No liability has been fixed for such violations pointed out till date. There are no signs of any improvements in the monitoring mechanisms or capabilities to enforce even the limited scope of the current biosafety framework.

These biosafety tests very often are flawed in their protocol and scope for safety testing with regard to the environment, other unintended living organisms, human health, etc. These tests do not capture any medium- or long-term impacts.

To take a few examples, feeding tests have so far been done only on cotton seed in the case of Bt cotton and fruit in the case of Bt brinjal, forgetting that in reality, farmers graze their animals on foliar material in an open grazing situation. Further, such feeding tests are done on goats, which are known to be hardy animals and not sheep. This was one of the lessons learnt from the sheep mortality reports that emerged after grazing on Bt cotton.

In the case of pollen flow studies, such studies have been taken up for just one year and only in two locations in the case of Bt brinjal, knowing full well that there are a variety of factors that affect cross pollination and that brinjal is known to be cross-pollinated up to 48 per cent. It is to be noted here that India is the centre of origin for brinjal and any gene transfer/contamination from transgenic plants could prove to be disastrous for the crop itself. As the case of Bt cotton shows, decisions are not based on the worst case scenario, unlike the stringent standards applied for seed production in the country.

In the case of health-related tests, it was only due to civil society investigations that the cotton fibre of Bt cotton was known to be causing a lot of allergies. This was however not tested during the biosafety testing of Bt cotton. Similarly, no multi-generational effects are sought to be understood or any reproductive health effects. As we have discovered in the case of pesticides, the sub-lethal effects are equally or more damaging to human health than just the acute effects.

When it comes to impacts on soil health with Bt plants, if the company says that there has been no persistence of the toxin or presence of the toxin found in their studies, the regulators are willing to take their word for it, even though there are many other studies elsewhere, which show that the toxin leaves its impact on the soil! There are no studies mandated which, for instance, look at the effect of a Bt crop on the subsequent crop, over a three to five-year period.

This makes several civil society groups ask, "What is the great haste? What is the crisis in the production of Brinjal, for instance, that merits such unseemly haste?".

## Re-looking at Technology Policy and Decision-making

All of this brings to question the very model of agriculture research, education and extension in the country by which technologies are thrust down our throats. Where are farmers in the decision-making related to agricultural models and technologies to be adopted? Do democratic processes of paying heed to a large majority of stakeholders have any place at all in the current system? Have we learnt any lessons from the earlier green revolution about technology policies and decision-making processes as we stand on the threshold of what is being called the "second green revolution"? Do we have anything to incorporate about the shortcomings of a short term, narrow vision related to agriculture from the ecological disaster and technological fatigue witnessed all over the country today?

India has apparently adopted a case-by-case approach to evaluating GM crops. It is not clear where and how such a policy was decided, however. This case-by-case approach does not ask fundamental questions on whether some GM solutions are needed at all! This approach allows any promoting agency to do a mandated set of tests and trials for a mandated period to walk up to the regulators and get permissions based on the data that they present. It has to be noted that all such data is created by the promoting agency itself, either directly or through funded studies. There is no independent research worth its name, despite the presence of such a huge research establishment in the country and expertise in a variety of fields. Any agency can pick up any crop for incorporating any trait and just advance from one stage of research to the other and get permission for commercial application! The rest of the country is only allowed to be a mute spectator most of the time or allowed to give some feedback on some data put up selectively.

There is no coherent policy by which such technological decisions are taken through a widespread debate on the need for GM crops in this country, in which conditions, why and so on. For instance, in the case of Bt brinjal, there is ample evidence and experience within the ICAR establishment that shows that non-chemical IPM methods have yielded equal or better results than the ones being claimed by the Bt brinjal promoters! In all GM crop testing so far, comparisons are made with the worst possible scenario and not the most successful safer, affordable alternative already present. There are thousands of practising organic farmers in the country who know how to take up pest management in brinjal without causing environmental and health problems for themselves and others. However, the powers-that-be have always chosen to ignore such experiences. Even a cursory glance at this approach of increasing farmers' dependency on external resources for everything starting from pest management would show you its connection to increasing farmers' suicides and agrarian distress in the country. Even if no significant environmental and health impacts have been discovered through the limited scientific framework biosafety testing that is done, impact assessment of the technology should be more comprehensive.

There are other countries like Norway which ask pertinent questions that go beyond biosafety like, "is this socially and ethically justifiable?" as the regulators look at impact assessment of GM crops. For answering such questions, they also adopt widespread, broad-based democratic processes of eliciting views and expert opinions. It would be good if our regulators and powers-that-be realise that this question is more relevant and important here, in today's context of Indian agrarian distress, than in Norway. EPW

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# Decision on Bt-Brinjal: Legal Issues

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The recent decision of the government of India to impose a moratorium on the release of Bt-Brinjal has been hailed by civil society and scientists alike as a victory for transparency and has demonstrated that the government is responsive to societal demands. This decision is also important since it could set a precedent within environmental regulation with reference to technologies with significant environmental risks. However, the decision also reflects a clear departure from procedure and its legal basis is tenuous and therefore the risk of it being reversed remains. This establishes a clear case for ensuring legal certainty in environmental regulations especially in the case of technologies with significant risks attached to it.

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On 9 February 2010, the Ministry of Environment and Forests (MOEF) in its decision on the commercialisation of Bt-Brinjal[1] quoted the GEAC, which stated,

> as this decision of the Genetic Engineering Approval Committee (GEAC) has very important policy implication at the national level, the GEAC decided its recommendation for environmental release may be put to the Government for taking final view on the matter.[2]

The GEAC, therefore, in its own decision of granting approval to the release of Bt-Brinjal, had also recommended that the government of India (GOI) may review the matter, given the policy implications. It is important to note that the minister's report mentions this recommendation by the GEAC upfront, precisely because this recommendation provided the moral basis for the government to introduce a process of review of the GEAC decision leading up to the final decision on moratorium on the commercialisation of Bt-Brinjal. The decision of the MOEF is, in the nature of an executive order that has very tenuous legal basis and is, therefore open to judicial review.

The process of arriving at this decision itself had attracted its fair share of media attention, given that the MOEF held a series of public meetings in Kolkata, Bhubaneswar, Ahmedabad, Nagpur, Chandigarh, Hyderabad and Bangalore. These meetings were attended by a wide variety of stakeholders including farmers, farmers' organisations, scientists, state agriculture department officials, non-governmental organisations, consumer groups, allopathic and ayurvedic doctors, students and housewives, with the striking exception of agricultural biotechnology companies. This was unprecedented in two ways, first the decision of MOEF to launch a process of public consultation on an issue that has been essentially viewed as a "scientific" issue (Carter and Gruère 2006: 465-68); and second, the massive public response, witnessed by the participation of nearly 8,000 persons.[3] Thus, this almost referendum like process of public consultation would seem to establish certain important parameters for environmental regulation in the country. First, that decisions involving large-scale utilisation of technologies that bear an environmental and/or public health risk, should not only be based on scientific risk assessment but also should undergo a process of public engagement (stakeholder consultation) in order to gauge the social acceptance of that technology. Second, that the scientific assessment report of expert committees on such technologies should be made public and comments invited on the report prior to a decision being taken. The decision, therefore, seems to establish two critical parameters – social engagement and transparency in environmental regulation and has, therefore, been lauded as a "wise decision" by a number of experts in India.[4]

## Legal Basis and Role of MOEF

Despite this decision being cited as marking a watershed in environmental regulation, there are certain inherent legal problems with this decision. First, it is important to question the legal basis for this decision. As mentioned above, the minister's decision on the commercialisation of Bt-Brinjal is based on the recommendation by the GEAC that since its decision as an important policy implication nationally, the government may review it in order to take a final decision. The question which arises is whether the GOI has the legal authority to review/revise/overturn the decision of the GEAC? In other words, if the GEAC had not recommended its decision for review by the GOI, could the GOI suo motu authorise this process of review of GEAC decision? In order to answer this question it would be prudent to briefly outline the legal mandate and scope of functioning of the GEAC under the statute.

The GEAC was set up as a statutory body under the 1989 Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms, Genetically Engineered Organisms or Cells (1989 Rules), that was notified under the Environmental Protection Act 1986 (EPA). The 1989 Rules created a hierarchical structure of



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competent authorities to oversee the regulation and policymaking vis-à-vis hazardous microorganisms including genetically engineered organisms. The Recombinant DNA Advisory Committee (RDAC) and the Review Committee on Genetic Manipulation (RCGM) were set up within the department of biotechnology with the mandate to monitor safety aspects of ongoing research projects and activities involving such genetically engineered organisms and also to recommend appropriate safety regulations for India. At the institutional level, every facility involved in research or handling of such substances is liable to constitute an Institutional Biosafety Committee (IBSC) in order to prepare and implement an on-site emergency evacuation plan. Further, at the district level, district level committees (DLC) and at the state level, state biotechnology coordination committees (SBCC) would also be constituted wherever necessary to monitor the safety regulations in installations or handling of such substances and with powers to inspect, investigate and take punitive action in terms of non-compliance with statutory provisions.

The GEAC was constituted as a statutory body under the department of environment, forests and wildlife of the MOEF, for

> approval of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.[5]

The GEAC has also been made responsible for approval of proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials.[6] Further, the GEAC also has the power to take punitive action under the EPA. The 1989 Rules also provide approval, licensing and prohibition powers to the GEAC in terms of all activities that relate to import, export, transport, manufacture, process, use or sale of any such substances.[7] In the case of production, in which such substances are generated or used, cannot commence without the consent of the GEAC.[8] In the case of conditional approvals, the GEAC may also supervise the implementation of the terms and conditions through the SBCC and/or DLC. The decisions of the GEAC can be challenged within a period of 30 days through an appellate authority appointed by the MOEF. Since the appellate authority has to date not been set up by the MOEF, any such challenge can be filed in either the high court or the Supreme Court via a civil writ petition. This brief overview of the range of powers that the GEAC exercises over almost all activities relating to the handling of such substances, illustrates the extensive coverage of issue areas and the immense scope of its functioning. The 1989 Rules do not provide for any scope of review of the approvals granted by the GEAC other than via individual judicial appeals. Thus, it is necessary to underline that although judicial challenges can be mounted against approvals or any other regulatory decisions granted by the GEAC, there is no legal basis provided under the statute (in this case the 1989 Rules) to take suo motu action to review or revise its decisions by an executive order of the MOEF.

The other important aspect is the relationship between the MOEF and the GEAC. The GEAC was set up as a statutory body to oversee regulatory approvals of genetically engineered substances and products. However, unlike statutory bodies which by definition are structurally and functionally independent regulatory authorities – the GEAC functions under the department of environmental forests and wildlife of the MOEF. Such an institutional linkage is bound to influence and to an extent undermine the independent mandate of the GEAC. This is reflected within the statute by way of Rule 20 of the 1989 Rules that provides for a blanket exemption clause. It empowers the MOEF to grant an exemption to any occupier handling a particular microorganism or genetics engineered organisms from the obligations stated under Rule 7-11. Thus, although the 1989 Rules do not provide for any review/revision of the GEAC decisions on approvals/prohibitions by the executive, by empowering the MOEF to grant absolute waivers from regulatory approvals of the GEAC, it does create an impression that the GEAC is functioning under the authority of the MOEF. This power has also been used by the MOEF to provide for subject specific waivers[9] and has, thereafter, also been challenged in the court.[10] This underlines that although the GEAC has been given the statutory mandate to function as the regulatory authority when it comes to approvals for genetically engineered substances or products, this mandate has been severely curtailed by the executive power as provided under Rule 20 of the 1989 Rules. It could be argued that another implication of such an institutional linkage is also that the MOEF may become vicariously liable for any failings of the GEAC, given that it is the parent body under which the GEAC is functioning. The contention here is that it is





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imperative that the GEAC be reconstituted as a separate regulatory authority with an independent mandate and functioning purview (similar to Telecom Regulatory Authority of India) and there should be no institutional linkage between the MOEF and the GEAC. The present manner of functioning of the GEAC creates circumstances wherein its regulatory authority can be eroded or even nullified by an executive order of the MOEF and could also lead to the arbitrary use of that power by the MOEF. On the other hand, the functioning of the GEAC has been criticised by the MOEF in this moratorium decision and has been identified as one of the grounds to review the GEAC decision – since the present status of the latter is only that of a committee functioning under the department of environment, forests and wildlife, the MOEF should hold itself liable for any gaps in the functioning of the GEAC.[11] It is indeed intemperate that the MOEF would in the first place, by an executive order (with insufficient legal basis), revise the decision of the GEAC to grant approval. This is clearly not envisaged within the present statutory law. On the other hand, if one defends this decision of the MOEF on the basis of the institutional linkage between the MOEF and the GEAC (and, therefore, based on the recommendation made by the latter), then a case can be made for a closer supervision of the GEAC by the MOEF at an earlier stage so as to ensure that it functioned in an impartial and transparent manner. Thus the MOEF stands on a slippery slope ground vis-à-vis its rationale for adopting a moratorium on the commercialisation of Bt-Brinjal in India.

### Rationale for the Moratorium

A detailed analysis of the MOEF decision on the commercialisation of Bt-Brinjal is a prerequisite in identifying the underlying rationale and the future plan of action which is expected to be pursued. First, it has been stated that this decision relates to Bt-Brinjal alone and does not have any implication for the issues of genetic engineering and agricultural biotechnology in general.[12] Semantically speaking there is some truth in this, since the decision per se has resulted in the adoption of a moratorium to the commercialisation of Bt-Brinjal. However, the controversy preceding this decision along with the process of public consultations justifying this decision on the basis of the precautionary principle and other aspects of this decision do carry precedential value. Although the moratorium is only applicable to Bt-Brinjal but the process of arriving at this decision will have an implication for any public policy decision on the regulation of large-scale utilisation of technologies that bear an environmental and/or public health risk. Second, the decision was not only based on public consultations conducted in the cities which were selected on the basis of their importance in brinjal cultivation, but also the state governments were given an opportunity to submit their views on this issue. Specifically, the fact that agriculture is a state subject and, therefore, the views of the state would have to be considered in the case of regulation of technologies having an agricultural implication, has been accepted.

Third, the decision also refers to the question of public utility of the technology to be accepted for commercialisation.[13] This is an important aspect of the technology assessment exercise that is followed in Europe as a standard public policy procedure in the case of commercialisation of new technologies that may bear potential environment, health and social risks.[14] In this case, it makes a point that "Bt-biotechnology is not the only route for reducing pesticide use"[15]. It refers to non-pesticide management (NPM) that has been adopted by many districts in Andhra Pradesh as an example of a technology that completely eliminates chemical pesticide use and, therefore, is a viable alternative to Bt-Brinjal that only reduces the pesticide usage. The presence of a viable alternative is an important factor that has to be considered in decisions for commercialisation of technologies that have potential environmental and public health risks associated with it.

Fourth, reference is also made to the fact that legitimate doubts can be raised as to reliability of the tests relating to human safety of Bt-Brinjal since they were carried out by the applicants themselves and not by independent laboratory. It needs to be clarified that the current regulatory regime does not mandate independent tests and, in fact, it is upon the applicant to conduct tests in order to prove the safety of the product. It is the GEAC which is supposed to authenticate these tests. This system needs to be overhauled. Either in the case of tests conducted by the applicant independent third party supervision/oversight should be required to verify the tests or the tests should be conducted by independent laboratories in the first place. In both the cases the GEAC will be the final authority to validate the tests

and therefore needs to be equipped with the necessary resources to conduct this authorisation.

Fifth, interestingly the decision also raises issues of food sovereignty by acknowledging fears that Monsanto may control the food chain if Bt-Brinjal is granted approval[16]. It also stresses the importance of public investment in agricultural biotechnology so as to ensure there is a balance maintained when it comes to production in terms of the varieties of seeds to choose from and to prevent monopoly conditions. Food security is not the mandate of MOEF and least of GEAC. An objective risk appraisal and approval process should focus on the risks alone. The socio-economic dimensions are present in risks emanating from any technology but should not be of concern to an agency which has been established with the sole and clear function of approving activities involving use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle. There is no doubt that new technologies need a holistic approach before and during their release in the society. However, such a task should be undertaken by an agency which has both the mandate and capacity to take such cross-cutting decisions. An approval committee that is formed under the Environment Protection Act, is neither suited nor capable of looking into issues such as market, monopoly and food security. This is primarily a larger public policy question that needs to be addressed by bodies like the Planning Commission that allocates public research funding nationally. It needs to be reiterated that at present the regulatory mandate of GEAC is to ensure that public health and environmental safety aspects have been addressed satisfactorily while considering applications for commercialisation of genetically engineered food crops and products. Its mandate does not include an examination of the players in the market so as to adjudge whether its decision could potentially create monopoly conditions and, therefore, could have an implication for food sovereignty. The argument here is that, prevention of monopoly conditions cannot be a regulatory objective or a criterion for granting approvals of genetically engineered food crops and products. Assessment of public health and environmental safety issues should be the only criteria for granting regulatory approval in the case of environmental regulators like the GEAC. This would imply not only the diffusion of a clear focus on environmental and health risks but also impinging upon the domains of other agencies and departments. Moreover, there are other legislation that addresses aspects that will influence larger governance of biotechnology applications, such as the Seeds Bill 2004 (this will be replace the Seeds Act, 1966), Competition Act, 2002 and the Food Safety and Standards Act, 2006. That is another issue that none of these, so far, have emerged as functional instruments capable of serving the desired purpose. However, this may serve as an opportunity to integrate the concerns around genetic engineering technology in their substantive and procedural frameworks and establish synergies amongst the various existing and proposed bodies, rather than each trying to address the issues of another.

Sixth, the decision mentions that several doubts have been raised on the integrity of the GEAC process itself (in fact this has also been mentioned by the Supreme Court[17]), and that it has violated the Cartagena Protocol on Biosafety that India is a signatory to. These are very serious charges and need to be thoroughly investigated. It needs to be reiterated that the GEAC is structurally linked to the MOEF and it functions under the supervision of the department of environment, forests and wildlife. In this context it would be the responsibility of the MOEF to closely supervise the functioning of the GEAC and in such cases that is found to be lacking, to make the necessary correction. Currently, the GEAC is not an independent regulatory authority that has a separate legal personality (also the reason why it is the GOI that has been made the respondent in the public interest litigation filed in the Supreme Court questioning the functioning of the GEAC[18]). It is, therefore, incumbent on the MOEF to make the necessary amends and not distance itself by questioning the integrity of the GEAC, as if it were a separate entity. This only obfuscates the issue of responsibility. This is an issue of national interest and the MOEF should come clean and accept failure to its own responsibility – ensuring that the GEAC functions in an impartial, transparent and effective manner.

## Conclusions

A number of statements of good intention have been made within this decision – it includes the setting up of the National Biotechnology Regulatory Authority as a professional science-based, independent regulatory authority, reviewing the protocol of public health and environmental safety tests that need to be conducted, and application of a precautionary principle based approach within the regulatory approval process. The GEAC has been directed to take up follow-up action on the review of tests with appropriate protocols and to engage and interact with a number of eminent scientists on this issue. Most significantly a name change of the GEAC has been proposed in terms of replacing the word "approvals" with that of "appraisal". This semantic change is significant because it seems to underline a demotion of the role of GEAC and ensure that its decisions can only have the value of recommendations to the MOEF. The MOEF will, therefore, have an explicit right of review of GEAC decisions, which will most likely be merely appraisal reports having little or no approval authority or value. Two points need to be made here: first, that a simple semantic change in the minister's report will not be enough; as such a dilution of GEAC's role and enhancement of the MOEF's power can only be granted by amending the current legal framework. Second, such a suggestion seems to be prima facie contradictory to the statements of good intention mentioned earlier. The MOEF needs to clarify that the goal is to set up an independent





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regulatory authority within a specific timeline. The role of robust assessments is central to a regulatory approval process of any technological application but it cannot be a substitute for the approval itself. The regulatory process needs to ensure independent risk assessments but that does not require watering down of GEAC's role in approving a biotechnology application. Given that there are lacunae in the design and manner of GEAC's exercise of powers and discharge of functions, the MOEF should divert its attention to removing those lacunae, rather than reserving more powers for itself. In the interim, it may set up an independent expert panel to review the entire functioning, structure and substantive process of the GEAC and also to specify distinct steps in the regulatory process to implement the precautionary principle.[19]

The other critical question is whether this decision creates any precedent as far as regulatory approvals vis-à-vis technologies with potential public health and environmental safety risks are concerned. The response to this question would be in affirmative.[20] The decision has underlined a number of imperatives that would need to be internalised within the regulatory structure. These include, inter alia, the necessity of undertaking wide-ranging stakeholder consultations at the pre-approval stage, undertaking a public utility assessment of technology, and application of the precautionary principle. In reality, the effect of adopting such a decision has been that it has generated wide-ranging public debates on this issue and has opened up the regulatory process to questioning. It is, therefore, unfortunate that the legal basis for this decision is questionable. It is important at this stage not to create uncertainty by indulging in semantic juggling, given that agricultural biotechnology is an important area of long-term research investment and, therefore, it is important to create legal certainty[21] and transparency in regulatory policymaking on this issue in India.

NOTES

1 Decision regarding Bt Brinjal. Minister's Report, Ministry of Environment and Forests, GOI (9 February). Viewed on 20 February 2010 (http://moef.nic.in/downloads/public-information/minister_REPORT.pdf).

2 GEAC 97th Meeting, 14 October 2009.

3 See Centre for Environment Education (2010), Complete Report of the National Consultation on Bt Brinjal.

4 See Press Trust of India (2010), "Moratorium on Bt Brinjal Wise Decision: Experts", 9 February 2010, Viewed on 20 February 2010 (http://www.hindustantimes.com/newdelhi/Moratorium-on-Bt-brinjal-wise-decision-experts/507896/H1-Article1-507080.aspx).

5 Section 4(4) of the Rules for the Manufacture, Use, import, Export and Storage of Hazardous Microorganisms, Genetically Engineered Organisms or Cells, 5 December 1989, under the Environment Protection Act of 1986.

6 Section 4(4), ibid.

7 Section 7, ibid.

8 Section 8, ibid.

9 See MOEF Notification GSR 616(E) of 20 September 2006 and SO1519(E) of 23 August 2007 (although this has been kept in abeyance until issue of further notification by the Ministry of Health and Family Welfare regarding regulation of GM processed foods by the Food Safety and Standards Authority – via, SO 411(E). MOEF Notification of 25 February 2008).

10 Civil Writ Petition No 608/2007 filed in the Supreme Court of India to stop the deregulation of import restrictions on GM food via MOEF notification SO 1519(E). of 23 August 2007.

11 In the case of Bt Cotton – the MOEF Report of the Subcommittee on Bt Cotton and Related Issues (June 2006), referred to the need to investigate the reported irregularities in the field trials of Bt Cotton and had given recommendations to streamline the current regulatory framework. There was no follow-up and therefore the MOEF should take the responsibility of repeated failings of the GEAC, as has been highlighted in the case of Bt Brinjal. Viewed on 20 February 2010 (http://www.envfor.nic.in/divisions/csurv/geac/mayee_report.pdf).

12 See Supra Note 1, point 7, p 3.

13 Another aspect of public utility would be to address economic impact aspects, See Bennett et al (2004: 96-100).

14 European Parliament, Annual Report 2008, Science and Technology Options Assessment, Director General for Internal Policies, Brussels, March 2009. Viewed on 17 February 2010 (http://www.europarl.europa.eu/stoa/publications/annual_report/2008_en.pdf).

15 See Supra Note 1, point 9, p 5.

16 See Supra Note 1, point 11, p 6.

17 Orders given in the Civil Writ Petition No 115/2004 filed in the Supreme Court of India, *Gene Campaign & Another vs Union of India & Others.*

18 See Supra Note, 11.

19 See for a detailed discussion, Chowdhury and Sabhapandit (2007: 281-300).

20 It should be mentioned that the application of the precautionary principle and the value of public consultation have been accepted as acceptable practices within environmental regulation both by the courts and by the executive in India.

21 Legal certainty refers to predictability, applicability and coherence of the regulatory system.

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# The *Godavarman* Case: The Indian Supreme Court's Breach of Constitutional Boundaries in Managing India's Forests

by Armin Rosencranz, Edward Boenig, and Brinda Dutta

*Editors' Summary: With its ruling in the 1995* Godavarman *case, the Supreme Court of India commandeered for itself the roles of policymaker, administrator, and interpreter of the law. The Court's actions pursuant to this ruling have had serious effects on India's forest policy. In this Article, Armin Rosencranz, Edward Boenig, and Brinda Dutta explore the ramifications of the Supreme Court's actions. The authors begin with an overview of changes in forest policy following the 1995 ruling and describe the deleterious effects that these changes have had on Indian forests. They then analyze the constitutionality of the Court's actions and evaluate whether these actions have had the effect that the Court desired. Finally, the authors conclude with some suggestions for resolving the problems created by the Court's overstepping of its judicial role.*

## I. Introduction

In 1995, T.N. Godavarman Thirumulpad filed a writ petition with the Supreme Court of India to protect the Nilgiris forest land from deforestation by illegal timber operations.[1] The Supreme Court expanded the *Godavarman* case from a matter of ceasing illegal operations in one forest into a reformation of the entire country's forest policy. In its first order on the *Godavarman* case, the Court suspended tree felling across the entire country, paralyzing wood-based industries. Despite a series of subsequent orders with far-reaching implications, the case is still pending in the Supreme Court. In the process of hearing over 800 interlocutory applications since 1996, the Court has assumed the roles of policymaker, administrator of policy, and interpreter of law.[2]

The Supreme Court's vast assumption of powers concerning environmental issues has no precedence from past cases, neither in India nor in other developing countries. The *Godavarman* case opened a Pandora's box that continues to affect industries and forest dwellers across the country.

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1. Writ Petition No. 202 of 1995, T.N. Godavarman Thirumulpad v. Union of India, Supreme Court of India; Down to Earth, *Interview Between T.N. Godavarman Thirumulpad and Surendranath C.*, Aug. 31, 2002.

2. Down to Earth, *Deep in the Woods*, Jan. 15, 2003, at 1.

## II. History

In its first order in 1996, the Supreme Court interpreted the meaning of the word "forest" in applying the Forest Conservation Act (FCA) of 1980. Prior to this clarification, the word forest had not been explicitly defined, and some state governments chose to apply the vaguely defined term only to "reserve forests," i.e., those that receive the highest level of legal and environmental protection.[3] States used this narrow interpretation to effectively "de-reserve" other protected forests and allocate them for commercial and/or industrial use.[4]

In 1996, the Supreme Court interpreted the word forest by its dictionary meaning. According to this new broader definition, any forest thus defined, regardless of ownership, would be subject to §2 of the FCA.[5] Section 2 of the Act specifies that no state government or other authority may allow the use of any forest land for any non-forestry purpose without prior approval from the central government.[6] Under the new interpretation of forest land under §2 of the FCA, states could no longer de-reserve protected forests for commercial or industrial (non-forestry) use without permission.

But the Supreme Court did not stop at interpreting the word forest under the FCA. The Supreme Court assumed the responsibility of executing and enforcing its new interpretation of the FCA in an effort to improve the country's

3. SHYAM DIVAN & ARMIN ROSENCRANZ, ENVIRONMENTAL LAW AND POLICY IN INDIA 304 (2001).

4. *Id.*

5. T.N. Godavarman Thirumulpad v. Union of India, (1996) 9 S.C.R. 982.

6. Forest Conservation Act, 1980, No. 69, Acts of Parliament, 1980, at 2(ii).

forests. The Court ordered all non-forestry activities, such as saw mills and mining operations, which had not received explicit approval from the central government to cease operating immediately.[7] It temporarily suspended all tree felling in all forests with the exception of state governments' working plans.[8]

The order effectively froze the country's timber industry.[9] The Supreme Court completely banned, with minor exceptions, tree felling in three whole states and parts of four other states in the forest-rich North East; it ordered saw mills to close down where a complete ban was directed; and it banned any transportation of timber out of the North East states.[10] The order required state governments to constitute expert committees to map forest land, conduct a detailed survey of the timber industry, and measure the sustainability of forests with respect to the number of saw mills.[11] In 1998, the Supreme Court suspended all licenses to all wood-based industries in the seven North East states and ordered the relocation of those industries to state-specified industrial zones where they could be more closely monitored.[12]

The Supreme Court's role as executor and administrator of the law became more evident in its later directions concerning the management of already felled timber. The Court maintained its ban on the seven North East states and required the state governments of those states to gather, process, and sell already felled timber in the manner it specified.[13] When the state of Arunachal Pradesh reported the presence of illegally felled timber, the Supreme Court ordered that it be inventoried and auctioned in Delhi, specifying that one-half of the proceeds would be directed toward assisting the tribal, forest-dwelling population and the other half to the state.[14] To maintain its control of the case, the Court excluded the jurisdiction of all lower courts in matters concerning seized illegal timber, choosing to micromanage such proceedings itself.[15]

After instituting the bans on tree felling, the Supreme Court ordered investigations into various complaints of illegal mining operations.[16] The Court observed that the reported mining operations were blatantly contrary to its orders and demanded a response from the state governments.[17] It assumed the policing role of state authorities and constituted its own committee to investigate and report on illegal mining so that proper action could be taken.[18]

7. *See supra* note 5, at I.1.
8. *Id.* at I.3.
9. DIVAN & ROSENCRANZ, *supra* note 3, at 294.
10. Forest Conservation Act, *supra* note 6, at I.4.
11. *Id.* at I.5-7.
12. T.N. Godavarman Thirumulpad v. Union of India, Supreme Court of India, A.I.R. 1998 S.C. 769, 12.
13. T.N. Godavarman Thirumulpad v. Union of India, Supreme Court of India, (1997) 7 S.C.C. 440, B(a), (b).
14. T.N. Godavarman Thirumulpad v. Union of India, Supreme Court of India, (1998) 9 S.C.C. 632, 4 (1997).
15. T.N. Godavarman Thirumulpad v. Union of India, (2001) 10 S.C.C. 645.
16. T.N. Godavarman Thirumulpad v. Union of India (IA Nos. 71, 79, 104, 105, 107, 113, 121, 166, 260, 261, 262 in Writ Petition (C) No. 202 of 1995) with Environment Awareness Forum v. State of Jammu and Kashmir (IA No. 13 in Writ Petition (C) No. 171 of 1996), A.I.R. 1999 S.C. 97 (1998).
17. *Id.*
18. *Id.*

With the *Godavarman* case, the Court made itself a director and an overseer of forest issues, involving itself in national and local forest protection, timber pricing, timber transport, licensing of timber industries, management of forest revenue, and enforcement of its own orders concerning forest law, all independent of the central and state governments. The Supreme Court's far-reaching measures to control deforestation resulted in confusion among state and national organizations, mismanagement of forestry issues, and attempts at forest protection at the expense of human rights. The problem became increasingly unmanageable with the eventual involvement of state governments, the Ministry of Environment and Forests (MoEF), and the Central Empowered Committee (CEC), which the Supreme Court created in 2002.

As the problem of managing the complexity of its own orders grew, the Supreme Court increasingly micromanaged problems that would normally have been dealt with by government agencies. On November 24, 2001, the Supreme Court asked the MoEF to put together guidelines for compensatory afforestation so states could grant diversions of forest land while simultaneously ensuring a stable percentage of forest cover in the country.[19] The Court asked that these guidelines be provided by February 18, 2002. On that date, no such guidelines had been submitted. Without these guidelines, the MoEF could not adequately implement any policy allowing diversions of forests for commercial use while increasing forest land in other areas.

To compensate for the MoEF's failure to cooperate, the Supreme Court, in October 2002, began making its own guidelines for management of afforestation.[20] It required that states pay the net present value (NPV) of forest land that they divert for public sector projects, mining companies, and private companies.[21] This NPV could be between Rs 5.8 lakh[22] (approx. $12,800) and Rs 9.2 lakh (approx. $20,200), depending on the density and quality of the forest land diverted.[23]

The Supreme Court also curbed the diversion of funds to non-afforestation activities by ordering the creation of a central fund for all money collected by NPV payments. States, particularly in the North East, were not spending all the funds collected for afforestation, sometimes diverting over one-half of the funds for other purposes.[24] In accordance with the Supreme Court order, the MoEF constituted the Compensatory Afforestation Management and Planning Agency (CAMPA) to manage the collected funds. CAMPA can redistribute funds directly to organizations engaging in afforestation, effectively bypassing the state governments.[25] The member secretary of the CEC, which recommended a central fund to the Supreme Court, suggested that

19. Down to Earth, *Operation Hoodwink*, May 31, 2002.
20. In India, "afforestation" refers to: (1) the planting of trees where there were none before; and (2) the planting of trees on previously forested land.
21. Ministry of Environment and Forests, Circular F. No. 2-1/2003-FC, at 10 (Oct. 20, 2003).
22. One "Lakh" equals 100,000 rupees, or approximately $2,200.
23. Down to Earth, *Doubts Sown: Will New Deforestation Fund Management System Work?*, June 30, 2004.
24. Prabhjot Singh, *SC Orders Body on Afforestation Fund*, THE TRIBUNE (Chandigarh, India), Nov. 24, 2002.
25. *Id.*

the CAMPA could be handling up to Rs 2000 crore (approx. $440 million) per year.[26]

In 2005, the Supreme Court issued another order concerning NPV, detailing the legal motivation and justification for NPV, the specific means by which the value of forests should be calculated, and how the collected funds should be managed.[27] The legislature has responsibility for implementing the equivalent of a tax on forest land use and for managing that policy, but through the *Godavarman* case, the Supreme Court has assumed a legislative role, and has not only created fees for wood-based industries using NPV, but has also specifically defined the details of monetary management. In addition to interpreting the law, the Supreme Court has effectively designed it and has required other government organizations, which have had no role in developing the law, to implement it.

## III. Effects of the Case

### *A. Devastation of the Timber Industry in the North East States and Judicial Lack of Foresight*

The North East states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura contain one-fourth of India's forests and account for one-half of the domestic timber trade.[28] A total of 31,700 hectares of forest, on which many of the states' poor forest dwellers depended, were being cut down every year by these states' timber industries.[29] When the Supreme Court instituted its ban on tree felling, it dealt a powerful economic blow to the North East states. More than 90% of production units closed, and the country's import of timber rose from 10% to as high as 90%.[30] In Arunachal Pradesh, the state's revenue dropped almost 84% from Rs 49 crore (approx. $11 million) in 1995 to 1996 to Rs 7.9 crore (approx. $1.7 million) in 2000 to 2001 as a result of the tree felling ban.[31] In Manipur, the revenue from forest products dropped from Rs 2.9 crore (approx. $638,000) in 1996 to 1997 to Rs 0.6 crore ($132,000) in 1999 to 2000.[32]

The Supreme Court did not make any consideration of the potential economic losses in its initial order suspending tree felling in 1996.[33] In fact, the Supreme Court did not even provide any expectation as to how the orders might help increase the nation's forest cover. The Supreme Court's lack of consideration of the potential economic effects led to implementation of policies that proved economically harmful to the North East states. The Court did offer the North East states the opportunity to designate zones in which wood-based industries could be relocated.[34] But the notification for relocation, when passed by the state government of Nagaland, for example, was held invalid by the Supreme Court without provision for an alternative and in complete disregard of the economic consequences.[35] In response to the economic loss caused by these orders, a writ was filed to question their correctness.[36] Since the orders passed by the Supreme Court cannot be questioned on their merit, this petition was held as not maintainable, even though it raised important issues.

### *B. Failure of Working Plans and the Black Market for Timber*

The 1996 Court order allowed tree felling to recommence on the condition that states develop a working plan to be approved by the central government, presumably by the MoEF.[37] States have been extremely slow in developing and implementing these working plans. Between 1997 and 2002, only 14% of working plans were completed, and in 2001 the states of Manipur and Mizoram had still not submitted any working plans at all.[38] Instead of surveying all of its forests (even those in private hands as the 1996 order instructed) and developing working plans, the government of Meghalaya asked the MoEF to recognize its forests as "plantation forests" so as to exclude them from the working plan requirements.[39] Rather than using the system to benefit its constituency, the government of Meghalaya complained about the system and sought exception from a policy intended for its ultimate benefit. The Supreme Court's provision for restarting timber operations through working plans was obviously ineffective, but instead of changing its orders to adapt to the political and economic climate that deters development and execution of working plans, the Court fined the MoEF Rs 5,000 for not devising the required comprehensive plans.[40]

The inability and incompetence of state governments to obey the Supreme Court, which did not solicit states' recommendations or opinions, reveals a gross failure of cooperation. Without direct representation in the Supreme Court's decisionmaking process, state governments have little motivation to change local policies to function under guidelines that do not reflect their local political situations. The disincentive is especially potent when enforcement of the Court's orders would be detrimental to officials' political careers in future elections. The Supreme Court failed to account for the states' interests and the competing interests at local levels.

The result of the Supreme Court's lack of consideration has been an increase of corruption in forest management within state governments. This corruption has undermined the Supreme Court's efforts to improve the nation's forest cover. In Assam, 60% of timber in the city is illegal.[41] There are reports of large illegal timber transport operations

26. *Id.* One "crore" equals 10 million rupees, or approximately $220,000.
27. T.N. Godavarman Thirumalkpad v. Union of India, JT, (2005) 8 S.C. 588.
28. Down to Earth, *Logjam*, Mar. 15, 2002, online edition, at 2, 3.
29. *Id.* at 1.
30. *Id.* at 2.
31. *See supra* note 2.
32. *Id.*
33. *See supra* note 3.
34. T.N. Godavarman Thirumulpad v. Union of India, (1998) 2 S.C.C. 59.
35. T.N. Godavarman Thirumulpad Kitply Indus. v. Union of India, Supreme Court of India, IA No. 295 in Writ Petition (C) No. 202 of 1995 with IA Nos. 397, 408, 409, Contempt Petition No. 336 in IA No. 397 in Writ Petition (C) No. 202 of 1995, (1999) 9 S.C.C. 151.
36. Sabia Khan v. State of U.P., Writ Petition (C) No. D 2117 of 1998, A.I.R. 1999 S.C. 228 (1998).
37. *See supra* note 6, at I.3.
38. *See supra* note 28, at 3.
39. *Id.*
40. *Id.*
41. Northeast Vigil, *40,000 Hectares Added to State Forest Cover*, Issue No. 5.22, June 16, 2004.

among the city's districts, and forest officials and police personnel are suspected of being involved in these operations.[42] Officials turn a blind eye to illegal timber operations or even grant approval without authorization to gain public favor in upcoming elections. Government officials or wealthy landowners who operate or are involved in logging operations attempt to earn a quick profit illegally rather than attempting to preserve a limited resource for long-term gains. The economic incentives for preserving forests disappeared with the imposed ban on felling, and while states could have partially counteracted the decline in revenue by instituting working plans, their failure to do so left many to pursue forms of illegal forest activities and cultivation that further degrade forest areas. In some places, forests did improve because illegal felling was reduced, but in other places degradation continues because incentives for preservation are still absent. Because people no longer have control of the forests that they were logging, they have less or no incentive to protect those forests with sustainable practices. State and local agencies also lack the funding, the personnel, and the expertise necessary to enforce the Supreme Court's orders and develop viable working plans compatible with environmental concerns. By not having the representation of state and local bodies and by not addressing and incorporating state-level needs and inefficiencies in its orders, the Supreme Court created policies that have been extremely difficult, if not impossible, to implement successfully.

### *C. Interference in the Responsibilities of the Ministry of Environment and Forests*

The Supreme Court's creation of national and local forest management policies has interfered with the work of the MoEF, which is normally responsible for managing India's forests and wildlife. Because the Supreme Court assumed the responsibilities of the MoEF in creating forest policy and because the Court has expected the MoEF to enforce its regulations, the MoEF's actions during the *Godavarman* case have been closely tied to the Supreme Court's decisions. By imposing policies on the MoEF that it did not create, the Supreme Court demanded action from an organization whose structure did not evolve from the policies it was expected to execute.

In recent years, the MoEF has become less scientific and more bureaucratic due to changes in personnel and increasing bureaucracy. Insufficient funding has made it difficult for the MoEF to manage India's forests effectively, especially given the country's size (3,287,590 $km^2$) and the fact that managing the environment also requires managing the environment's relationship with over one billion people, many of whom, for example, depend on forest land for their daily sustenance. The Supreme Court's orders have forced the MoEF to enforce policies without the proper resources and have provoked it to act in ways that attempt to protect forests in name only and at the expense of India's rural populations. The issue of encroachments on forest lands by people whose livelihoods depend on the forests is an example of the perverse results of the Supreme Court's decisions.

In 1999, three nongovernmental organizations (NGOs) filed an interlocutory application (No. 502) in the *Godavarman* case on behalf of the Onge tribe, an indigenous people living on the Little Andaman Islands in the Bay of Bengal.[43] Encroachments on forest land were destroying the environment on which the Onge tribe depended. The application was filed in the Calcutta High Court, and in an interim order in October 2001, the court prohibited the felling of naturally grown trees on the islands.[44]

On November 23, 2001, Harish Salve submitted an amicus intervention petition to the Supreme Court in the Andaman's application.[45] Salve cited forest encroachments as one of the biggest threats to deforestation. He pointed out various cases of forest degradation as a result of encroachments and accused states of allowing encroachments despite the Supreme Court's December 12, 1996, order.[46] Salve suggested that the Court require all states to remove encroachers who had not regularized their encroachments before the 1980 deadline for doing so.[47] On February 18, 2002, the Supreme Court asked the states to respond to Salve's assessment. The states responded and on April 1, 2002, the Supreme Court replied that it would review the states' reports and issue a response in six weeks.[48]

Motivated by the Supreme Court's attention to the matter—and before the six weeks had passed—the MoEF issued a directive on May 3, 2002, to all states requiring that they summarily evict all illegal encroachers on forest land and regularize only eligible encroachments before 1980.[49] This meant that if a group had legitimately used certain forest lands before 1980, then they could still be allowed to use those lands now. If any group did not meet this criterion, the states should evict the group from the area where forest encroachment was occurring. The states had to complete the evictions and/or regularizations by September 30, 2002.[50]

The MoEF's directive had detrimental effects on many of the country's tribal communities. Like the Supreme Court, the MoEF failed to account for inefficiencies and inadequacies in the state forest departments. In the week after the MoEF circular, the state of Assam used elephants to destroy huts and homes in a designated forest area.[51] While the inhabitants of those dwellings may have been encroaching illegally on forest land, they were not even provided the time necessary to dispute the eviction notice. In Maharashtra, the government issued eviction notices to families with standing crops.[52] The government destroyed homes and left hundreds homeless.[53]

Many tribal groups are illiterate and/or do not have documentation of their legal encroachment of forest land. As a result, many groups were evicted or threatened with eviction even though they had been living on their land since before the 1980 deadline. Their inability to prove their residency before 1980 often resulted from state governments

42. Indian Jungles, *Timber Smuggling Assam/W. Bengal*, June 11, 2004.

43. *See supra* note 2, at 1.

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.* at 2.

48. *Id.*

49. *See supra* note 2; *see also* SAMUDRA, TRADITIONAL FISHERIES: JAMMED IN JAMBUDWIP (2003), *available at* http://www.icsf.net/jsp/publication/samudra/pdf/english/issue_34/art10.pdf.

50. *See supra* note 2.

51. *Id.* at 1.

52. *Id.*

53. *Id.*

losing records. A number of groups raised complaints that they were being evicted from land that was not a forest and in some cases never was a forest. Inaccurate and intentionally altered surveys led the state forest departments to submit eviction notices to people who were not encroaching on forest land at all.

The Supreme Court had already addressed the problem of inaccurate forest surveys. In its December 12, 1996, order, the Supreme Court required the states to form a committee to survey forest lands and determine which areas are and are not forests.[54] This committee would also calculate the sustainability of the different forests in order to measure how much use the forests could withstand without degrading.[55] Once this information would become available, the MoEF and the state forest departments could properly regulate forest resources. State governments have not followed this order and have wrongly issued eviction notices.

With respect to inaccurate or absent records on encroachments, the MoEF 2002 circular did not give adequate attention to a set of circulars it previously issued in 1990, which circulars provided guidelines for disputes that might arise in the eviction process. The 2002 directive reiterated the first 1990 circular, FP (1), which requires the eviction of illegal encroachers, emphasizing the 1980 deadline.[56] The 2002 directive ignored the second 1990 circular, FP (2), entitled "Review of Disputed Claims Over Forestland, Arising Out of Forest Settlement."[57]

FP (2) outlines the procedure for state governments' handling of disputed claims over forest land. States are first instructed to identify three categories of claims since different types of claims require different research and attention. After categorizing claims, the states should submit them to a committee composed of the Divisional Forest Officer, a Subdivisional Officer from the Revenue Department, and a representative from the Tribal Welfare Department. The committee is empowered to decide on the tribals' claim and to respond to other issues accordingly. The MoEF's neglect of FP (2) seems to have caused widespread oppression and injustice against tribal people who were threatened with evictions when they were rightfully occupying forest land.

The eviction drives have also had a detrimental effect on the Supreme Court's attempt to protect forests. The National Forest Policy of 1988 states:

> Having regard to the symbiotic relationship between the tribal people and forests, a primary task of all agencies responsible for forest management, including the forest development corporations should be to associate the tribal people closely in the protection, regeneration and development of forests as well as to provide gainful employment to people living in and around the forest.[58]

In addition to promoting a cooperative existence between people and forests, the government is responsible for using the tribal people to protect the forests that they use and for ensuring that tribal people find employment. In many successful government programs, tribal people partner with the forest department to patrol local forests for illegal non-forestry operations. In return, the tribal people receive permission to use the forest for subsistence. They are instructed on sustainable forest use, are provided with jobs, and are used to protect the forests. By ensuring that tribal people engage in sustainable use of the forest's resources, the government preserves current forests. By providing jobs, the government reduces the number of jobless people who resort to illegal tree felling for profit. By empowering local communities, the government can cooperate with them to protect forests. The *Godavarman* case went so far as to oppose the tribal groups that could be used to protect the forests according to the Supreme Court's original intent.

In the judgment of *Samatha v. State of AP*,[59] a five-judge bench of the Supreme Court recognized that for tribals, forests are their traditional source of sustenance. They have a historical right to minor forest produce and to communal residence on forest land. These rights of tribals have been neglected in the *Godavarman* orders. The restrictions placed on forest use and access have had an especially debilitating effect on the tribal communities in the North East. The continuing immigration from Bangladesh has caused a demographic and social shift in the region. The displacement caused by this judgment has exerted further pressure on scarce jobs and resources.[60] Because tribals have no training or skills other than in forest industries, it seems unfair and inequitable to expect tribals to raise money from sources other than the forest. Some state governments did challenge the unfair treatment of the tribals, but the Supreme Court did not pay heed.[61] The region has lapsed into a state of constant violence which resulted in over 50 civilian deaths in October 2004.[62] The causal link between terrorism and the tribal people can be traced to the steady deterioration of their way of life, which was compounded by the effect of orders in the *Godavarman* case.

After receiving complaints that tribals were being unjustly evicted, the MoEF issued a circular on February 5, 2004, modifying its instructions on dealing with encroachments and showing the first reasonable steps toward recovery from the Supreme Court's 1996 decision.[63]

The circular explains the need for states to utilize FP (2) and (3) of the six circulars it had previously issued in 1990; FP (2) and (3) provide guidelines for settling disputed claims.[64] The 2004 circular distinguishes between disputed claims and proposals for the regularization of encroachments. Hearings on the regularization of encroachments had only considered the 1980 deadline and were decided summarily, whether the encroachment was an eviction or not. Disputed claims and the other provision under FP (2) and (3) allow tribals to retain access to the forest land they use.

The 2004 circular requires that "[t]he State Government/UT Administration should recognize the traditional

54. *See supra* note 6.

55. *Id.*

56. Ministry of Environment and Forests, Circular No. 13-1/90-FP, at FP (1) (Sept. 18, 1990).

57. *See supra* note 2.

58. National Forest Policy, 1988, at 4.6.

59. (1997) 8 S.C.C. 191.

60. Malabika Das Gupta, *Land Alienation Among Tripura Tribals*, XXVI ECON. & POL. WKLY. 2112 (1991).

61. T.N. Godavarman Thirumulpad v. Union of India, Supreme Court of India,, Writ Petitions (C) No. 202 of 1995 (under Article 32 of the Constitution of India) with Nos. 171 and 897 of 1996, decided on Mar. 4, 1997, A.I.R. 1997 S.C. 1233.

62. Arijit Mazumdar, *Back to the Roots of Violence*, *retrieved from* http://www.northeastvigil.com/.

63. Ministry of Environment and Forests, Circular No.2-1/2003-FC (Pt) (Feb. 5, 2004).

64. *Id.*

rights of the tribal population on forest lands, and these rights should be incorporated into the relevant acts, rules and regulations prevalent in the concerned States/UTs by following the prescribed procedure."[65] This recognition, if more than words on paper, will improve the way tribals are treated and compensate for the lack of attention to tribal needs in the Supreme Court's articulation of forest policy.

The second and third provisions of the circular recognize the legal rights of forest dwellers to use forest lands as long as they have been in continuous occupation of the land since December 31, 1993.[66] Tribal groups that have been occupying land since 1993, rather than the previous deadline of 1980, can acquire legal rights to the land rather than being evicted. The legal rights would only be granted on the condition that the forest department initiate an integrated forest rehabilitation scheme, presumably to show tribals how to rehabilitate the forests they use. These two provisions provide a positive change to the MoEF's previous policy. Obtaining these rights, however, is subject to the state taking the initiative to file proposals, but at least tribals have the opportunity for better protection which they lacked under the Supreme Court's decisions alone.

The governments of the North East states have tried to create schemes of participatory resource management involving the tribal populations, since those populations have led a symbiotic existence with forests that revolved around common property. A number of these states passed Joint Forest Management Resolutions in the late 1990s.[67] These schemes aimed to regenerate degraded and unclassified forests. The resources to do so are supplied by the government, and the local people and the poor are the beneficiaries. But these schemes for compensatory afforestation have been neglected by the Supreme Court's continuing directives.

Recent developments have favored the rights of tribals and have nullified to an extent the effect of the May 2002 notification. In May 2005, the Union Environment and Forests Minister informed the parliament that the MoEF had issued directions to all state and union territory governments not to resort to eviction of tribal people from forest land in the absence of verification and determination of their rights. The other main development has been the floating of a bill, the Scheduled Tribes (Recognition of Forest Rights) Bill of 2005, that was introduced in the parliament for discussion. The proposed bill aims to recognize and vest forest rights and occupation of forest land to forest-dwelling Scheduled Tribes, whose rights were not recorded before the 1980 deadline.[68] The bill is extreme in that it intends to give complete inhabitation rights to the tribals, which would have an adverse impact on the protection of the environment if compensatory afforestation programs are not mandated. The introduction of this bill is seen as fallout from the reaction sparked by the eviction order of May 2002, and is an example of how the MoEF's rushed and Supreme Court-motivated initiatives have been counterproductive in the long run.

The MoEF's premature and hasty attempt to enforce the Supreme Court's developing policies shows the conflict that arises when the Supreme Court assumes other agencies' powers and responsibilities. The Supreme Court issued policy decisions independently of the MoEF, making it awkward for the MoEF to develop and enforce its own policies. The MoEF reacted to the Supreme Court's attention to the problem of encroachments as if it were in competition with the Supreme Court to do something about the problem. Rather than assisting the MoEF and providing guidance to it, the Supreme Court assumed its responsibilities without consulting it. The MoEF has deferred to the Supreme Court rather than developing its own forest policies. As a result, its actions are often premature and not guided by an organized and well-planned agenda.

### *D. Creation of New Government Entities and of New Managers of Forest Policy*

In its order issued May 9, 2002, less than a week after the MoEF's order to summarily evict all forest encroachers, the Supreme Court constituted the CEC so that "[a]ny individual having any grievance against any steps taken by the Government or any other authority in purported compliance with the orders passed by this Hon'ble Court will be at liberty to move the Committee for seeking suitable relief."[69] Because the MoEF did not adhere to its own 1980 circular FP (2) with respect to forest encroachments, and because it acted prematurely with detrimental consequences, the Supreme Court created the CEC to fill the gap of the MoEF's failure to provide a means for addressing grievances as outlined in FP (2). The Supreme Court instigated the MoEF's premature and insufficiently planned actions and then created a government entity to compensate for it, even further complicating the management of India's forests.

Actions taken by the state or central governments can be challenged before the CEC.[70] Complaints can be brought for grievances based on deforestation, encroachments, and any of the environmental laws implemented by the state and central governments. Because the CEC is not an "Authority," it is only empowered to issue orders that conform to orders passed by the Supreme Court. When asked to make orders outside of the Supreme Court's previous rulings, the CEC only has the power to make recommendations.

After its constitution, the CEC issued a report on forest encroachments. It estimated that the amount of forest area under encroachment was at least 725,861 hectares, but probably more due to faulty surveying.[71] Calculating the monetary cost of environmental damage to these areas over 50 years, the CEC arrived at the figure of Rs 459,978 crores (approx. $102 billion) in potential environmental damages. As to why encroachers had not been evicted as per the MoEF orders, the CEC compiled a list based on data provided by state officials. The overarching reason for non-eviction was the absence of political will. Local governments not only

65. *Id.* at 1.

66. *Id.* at 2(i).

67. Government of Nagaland, Joint Forest Management Resolution of March (1997); Government of Tripura, Joint Forest Management Resolution of December (1991); Government of Mizoram, Joint Forest Management Resolution of September (1998); Government of Arunachal Pradesh, Joint Forest Management Resolution of October (1997).

68. Meena Menon, *Campaign for Forest Rights to Tribals*, THE HINDU, Aug. 24, 2005.

69. Central Empowered Committee, notification No. 1-1/CEC/2002, June 20, 2002.

70. *Id.*

71. 2002 Recommendations of the Central Empowered Committee in Interlocutory Application No. 703 of 2001 in Interlocutory Application No. 502 of 2000 in Writ Petition No. 202 of 1995.

tolerated encroachments but actually encouraged them, either to gain support before elections or to generate profit by allowing illegal commercial use of forest land.

The CEC was useful in gathering and providing this information, but like the Supreme Court, it assumed the responsibilities of the MoEF and failed to address the issues at hand. For a solution to the problem, the CEC recommended that "[t]he First Offence Report issued under the relevant Forest Act shall be the basis by which to decide whether the encroachment has taken place before 25.10.80."[72] The First Offence Report records the government's first official recognition of an encroachment on forest land. To deter corruption, the CEC imposed a fine on states of Rs 1000 (approx. $22) per hectare per month for land still under illegal encroachment. Like the MoEF, the CEC ignored circular FP (2) of 1990. The CEC suggested using a First Offence Report to determine eligibility to regularize an encroachment, but provided no guidelines to settle disputes, such as those provided in FP (2). In many cases, First Offence Reports were not filed because officials did not consider certain groups as encroachers; in other cases, the reports were missing. The First Offence Report is not an accurate or reliable indication of a group's right to use forest land, and in cases where the Reports were not issued or were lost, the CEC's recommendation neglects to provide any alternative means by which states can settle claims.

While the CEC is strictly empowered to act in accordance with Supreme Court orders, its recommendation conflicts with the Supreme Court's statement in an earlier case: "[I]n all cases where the claim (for regularization of forest land) is not supported by documents, the committee should conduct an inquiry, receive evidence and then come to accept the claim."[73] The 1986 Supreme Court order accepted an interim report that explained the necessity of a thorough investigation, including a study of current forest practices, testimonies of inhabitants, and related documents filed by the local government.[74] By not providing guidelines for investigation of disputes and settlements, the CEC did not allow tribal groups the opportunity to legally remain on their homeland. The Supreme Court passed off responsibility for grievances and for all the problems that arise from its orders to the CEC, and once again failed to respect the responsibilities of the MoEF. It created a committee to perform functions that would normally be performed by the MoEF. The MoEF has not adequately dealt with the problem. By attempting to deal with the problem on its own, and by creating new organizations to effectively replace the MoEF's functions, the Supreme Court has complicated the system of managing India's forests while failing to effectively address local people's relationships to the forests.

## IV. Analysis

### *A. Constitutionality, the Separation of Powers, and the Expansion of Judicial Activism*

The *Godavarman* case marks hitherto unseen assumption of powers by the Supreme Court in disregard of constitutional limitations, which has profound implications for the further rise of judicial activism in India. This case marks a culmination of a process by which the Court has gradually usurped the role of every arm of the government.[75]

In the *Godavarman* case, the Court impinged upon the power of the legislature by banning the transport and felling of timber and by creating the CEC. It assumed the role of the executive in administering its own interpretation of the law in addition to its specific orders. Rather than directing, guiding, and motivating the existing national and state bureaucracies to realign their infrastructures and goals toward more stringent and effective forest management, the Supreme Court bypassed their authority and attempted to selectively micromanage the entire country's forests. The Court, rather than the legislature, became responsible for creating environmental regulations, and the Court, rather than the executive branch of the government, assumed responsibility for enforcing its own interpretations and regulations. Consequently, when national, state, or local organizations do act, it is often in competition with the Court's orders, as seen in the MoEF's premature order against encroachments. By assuming the powers of other government actors through judicial activism, the Supreme Court has restricted the growth of a responsible and independent bureaucracy.[76]

The Court has also extended its assumption of powers beyond a reasonable time frame. Under the Constitution, the writ of mandamus is restricted to compelling action with reference to previously existing and clearly defined duties.[77] Mandamus is not a creative writ under the cloak of which the court can usurp the role of lawmaking and policy formulation. In the *Godavarman* case, the Court micromanaged the implementation of its orders by keeping the case open. This practice of "continuing mandamus" is not envisaged by the Constitution. It was introduced through the judgment of *Vineet Narain v. UOI*,[78] which was a sensitive case involving political corruption. In its last order in this case, a constitutional bench of the Supreme Court clarified that the application of mandamus was an extraordinary one.[79] The Court stated that it had respected the constitutional scope of mandamus because it kept the case open only to receive reports that executive action was not being tampered with by politicians. It did not interfere with the manner of investigation of the executive at any stage during the issuance of continuing mandamus. In contrast, in the *Godavarman* case, which is the only other case of continuing mandamus, the Court has strayed from the limits of such orders by continuing to act as an administrator of law and of its own regulations.

The writ of mandamus was applied in this case in a manner that breaches constitutional limits. In recent judgments, the Court has sought to restrain itself from transgressing upon the authority reserved for government functionaries.[80]

72. *Id.*

73. Videh Upadhyay, *Understanding "Encroachment,"* INDIA TOGETHER, June 2003 (citing Writ Petition No. 1778/1986, Supreme Court of India).

74. *Id.*

75. *See* Supreme Court Advocates-on-Record Ass'n v. Union of India, (1993) 4 S.C.C. 441, 688; The Constitutional Obligation of the Judiciary Hon'ble Shri J.S. Verma, *Chief Justice of India*, (1997) 7 S.C.C. (Jour) 1.

76. Divan, as cited in Armin Rosencranz & Michael Jackson, *The Delhi Pollution Case: The Supreme Court of India and the Limits of Judicial Power*, 28 COLUM. J. ENVTL. L. 121 (2003).

77. Mansukhlal Vithaldas Chauhan v. State of Gujarat, (1997) 7 S.C.C. 622.

78. (1996) 2 S.C.C. 199.

79. Vineet Narain v. UOI, (1998) 1 S.C.C. 226.

80. Tirupati Balaji Developers Pvt. Ltd. v. State of Bihar SLP (C) No. of 2004 (CC No. 8071-8072 of 2002), Apr. 21, 2004.

With regard to the issue of mandamus, the Supreme Court has stated that a functionary conferred with a public duty should be given full range of discretion to perform that duty.[81] In *Godavarman*, the court failed to respect the doctrine of separation of powers and set a dangerous precedent for unilateral and exclusive judicial management of executive and legislative functions.

The doctrine of separation of powers does not find explicit enunciation within the Indian Constitution. (Only Article 154 states that the judiciary would be free from interference or control by the executive.) An amendment along the lines of Articles I, II, and III of the U.S. Constitution was proposed in the constituent assembly. But this amendment was opposed in favor of a harmonious governmental structure without a complete separation of powers. An analysis of the views of the constitution makers and subsequent cases of the Supreme Court clearly show that in Indian constitutional jurisprudence, there is no strict separation of powers. However, the Indian constitutional framework embodies this doctrine by necessary implication through the allocation of powers among the three arms of the state. Within one year of the coming into force of the Constitution, the Supreme Court discovered the essence of separation of powers as the core of the Constitution in the *Delhi Laws* case[82] and 25 years later in 1975 in *Indira Nehru Gandhi v. Raj Narain*.[83] The Court elevated this feature of separation of powers to the basic inviolable structure of the Constitution in the landmark en banc judgment of the Supreme Court in *Kesavananda Bharti v. Union of India*.[84] The separation of powers is accepted so as to preserve the freedom and independence of the organs of the state, whose independence is necessary for their proper functioning.

The Indian Constitution endows the judiciary with certain extraordinary discretionary powers, including the power under Article 142 to make any order in the interest of justice in any cause or matter before it. Further, Article 144 requires all authorities in the country to act in aid of the orders of the Supreme Court. The encroachment of the Supreme Court on legislative discretion was initially restricted through judgments like *A.K. Gopalan v. State of Madras*[85] and *State of Madras v. V.G. Row*[86] which held that the concept of substantive due process could have no role in the interpretation of Article 21 (the right to life) because it essentially involved substituting a judge's notion of reasonableness with that of the legislature's. However, from *Maneka Gandhi v. Union of India*[87] onward, the Supreme Court introduced into Article 21 the concept of substantive due process, or in other words, a standard that requires executive and legislative action to be reasonable or fair. With the power of substantive due process behind them, the courts have created further rights by treating them as flowing from Article 21 of the Constitution.

The courts of India do not have the resources or the capacity either to investigate completely the claims of litigants or to ensure the implementation of its orders. The weapon of contempt to ensure enforcement can only have limited application and may become stunted and ineffective with overuse. The reliance on affidavits tendered or even placing reliance on a report of a court-appointed commissioner can hardly supplant a judgment made by a competent executive officer. These practical difficulties have cropped up in the implementation of the orders in the *Bandhua Mukti Morcha*[88] case, where the Court-ordered benefits have still not reached their intended recipients and the lack of executive direction and management has hampered relief efforts.[89]

The problem of the Supreme Court's encroachment upon the responsibilities of the other branches of government becomes especially prominent in light of the fact that the constitutional role assigned to the judiciary is to be the sentinel on the *qui vive* that prevents the subversion of the Constitution. In extending the interpretation of this power, the Supreme Court is itself breaching the limits of the Constitution. The irony lies in the fact that the legal, constitutional, and practical fallacies of the Supreme Court's usurpation of executive and legislative power arise from the Court's own views on the subject. For instance, in the case of *P. Ramachandra Rao v. State of Karnataka*,[90] while examining the courts' rules setting new limitation periods for instituting criminal trials and enabling the issuance of orders on the administrative processes to be followed by the criminal courts, the Supreme Court observed:

> Courts also have no means for effectively supervising and implementing the aftermath of their orders, schemes and mandates, since courts mandate for isolated cases, their decrees make no allowance for the differing and varying situations which administrators will encounter in applying the mandates to other cases. Courts have also no method to reverse their orders if they are found unworkable or requiring modification. The Supreme Court could have well left the decision-making to the other branches of government after directing their attention to the problems rather than itself entering the remedial field.[91]

The Supreme Court seems to recognize the limitations of its powers and of its duty to restrain itself concerning decisions that interfere with the responsibilities and functions of other government bodies. In the *Godavarman* case, however, the Court continues to breach its own doctrine. Instead of directing its attention to the controversy at hand and seeking a limited adjudication of it, the Court has attempted to address the supposed defects of an entire policy arena without the information, resources, and organizational capacity necessary to manage India's forests and its forest-dwelling people, not to mention the collateral impacts on the forest industry, wildlife habitats, and state and local governments.

### *B. Inadequate Alternatives*

Part of the problem of the Supreme Court's intervention in forest policy management is the fact that the judicial system is currently unable to handle even ordinary litigation; it

81. Union of India v. S.B.Vohra, Supreme Court of India Civil Appeal No. 2887 of 2001, decided on Jan. 5, 2004.

82. A.I.R. 1951 S.C. 332.

83. (1975) Supp. S.C.C. 1.

84. A.I.R. 1973 S.C. 1461.

85. (1950) 1 S.C.R. 88.

86. (1952) 1 S.C.R. 597.

87. (1978) 1 S.C.C. 248.

88. ARUN SHOURIE, COURTS AND THEIR JUDGMENTS: PREMISES, PREREQUISITES, AND CONSEQUENCES (2001).

89. Bandhua Mukti Morcha v. Union of India, (1984) 3 S.C.C. 161.

90. A.I.R. 2002 S.C. 1856.

91. *Id.*

faces a huge backlog of undecided cases and now has to contend with a large array of public interest litigation (PIL). The writ jurisdiction of the higher judiciary has been used to entertain PIL. The principle of *locus standi* is abandoned in the name of social justice and lifting up the downtrodden sections of society. Ordinary writs, PIL, and appellate matters have ensured that the higher courts find it difficult to control the flood of litigation. The problem is compounded by the continuing vacancy in posts of judges, especially in the High Courts.[92] This increases the pressure on the Supreme Court to deliver justice expeditiously in multiple cases. Furthermore, spending on the judiciary by the government is abysmally low.[93] Judges do not have the human or financial resources to ensure compliance with their orders.

The MoEF could and should bear the responsibility for doing what the Supreme Court is doing, but it too does not have the monetary resources to monitor the country's forests, to research forest problems, or to develop new methods of dealing with forest issues that would protect the environment while providing local people with sustainable livelihoods. The MoEF also lacks sufficient professional and trained personnel necessary for dealing with local circumstances and creating policies that will have ecological and economic benefits. The legislature has proven itself inadequate in managing forest issues because it reacts primarily to crises or interest groups. Deforestation is difficult to recognize as a crisis, and interest groups are not powerful enough to effect new national forest policy. The MoEF and the legislature seem content to defer to the Supreme Court's forest management rather than building their own capacity, professionalism, and frameworks for dealing with forest issues. This deference absolves them of responsibility. Environmental and natural resource protection NGOs seem to prefer judicial direction of forest policy to management by corrupt and incompetent bureaucrats.

### *C. Has the Supreme Court Order Had the Desired Effect?*

Godavarman Thirumulpad filed his case against the Union of India for the purpose of preserving a forest in his home region. The Supreme Court took the case and used it as justification for implementing and administering national forest policy to a degree far beyond the original scope of the case. The Supreme Court made interpretations and issued orders that apply to all states and forests in India, not just the forests of Godavarman's home region.

The Supreme Court was attempting to address the very important problem of forest management, or mismanagement, in India. Forest cover in the country was decreasing, and unless India quickly adopted sustainable forest practices, the country's ecological stability and biodiversity would suffer immensely to the detriment of future generations. The Supreme Court recognized the importance of forest preservation and observed the increasing destruction and degradation of forest land. The Supreme Court noticed that those national and state organizations responsible for forest management were failing in their duties. In light of national and state governments' inaction, the Supreme Court's unusual assumption of powers seems justified, especially given India's alarming statistics on forest cover.

92. N.L. Rajah, *India's Courts: The Long Wait for Justice*, THE HINDU FRIDAY, Sept. 30, 2005.

93. 127th report of the Law Commission of India (1988).

The Forest Survey of India (FSI) last reported India's forest cover as 20.64% of the country's geographic area.[94] With the goal of increasing the national forest cover to 33% by 2012, India still seems underforested.[95] Moreover, the methodology behind this statistic suggests that the figure of 20.64% is meretricious. The measurement of forest area breaks down as follows:

| | |
|---|---|
| Very dense forest (more than 70% forest cover) | 1.56% of the geographic area. |
| Moderately dense forest (40-70% forest cover) | 10.32% of the geographic area. |
| Open forest (10-40% forest cover) | 8.76% of the geographic area. |
| Total forest cover: | 20.64% (includes mangroves, 0.14% of the geographic area).[96] |

FSI reports that 8.76% of India's forest cover is open forest, but what is "open forest?" With a minimum area of 1 hectare (or 2.471 acres) for measurement, land with a canopy density of only 10% hardly seems to qualify as "forest." Furthermore, FSI does not distinguish between private and public land, i.e., it does not distinguish between forests and fruit orchards or tea and coffee plantations. The survey counts all perennial woody vegetation with a canopy density above 10%, regardless of its ownership or makeup. Open forest could be too thinly covered to be considered forest in measurement of India's ecological health. Because FSI's idea of open forest includes sparsely vegetated land in its total count and because it fails to distinguish among different types of vegetation and ownership, the real forest cover of India could be as low as 12%, a far greater distance from the national goal of 33%. Given the problems with the current statistics and the alarmingly low percentage of real forest cover, the Supreme Court's intervention in forest policy was, at least in this respect, justified. National and timely action was necessary to curb deforestation.

In many ways, the Supreme Court's aggressive stance toward forest management has had some positive effects. India already had environmental laws to manage forests and encroachments, but sub-competence, insufficient staffing, and corruption prevented the executive branch and its underlying agencies like the MoEF from enforcing policies and adapting them to India's changing environmental needs. Hence, the Supreme Court's radical orders and its wide assumption of powers slowed and possibly reversed two ecologically dangerous trends: that of an ineffective govern-

94. State of Forest Report, 2003, Forest Survey of India, Ministry of Environment and Forests, Dehradun, June 2005. Until 2001, when the scale for mapping from satellite data was 1:50,000, the scale for satellite mapping was 1:250,000. So while recorded data since 1987 (when the forest cover was recorded 19.49%) suggests that forest cover has increased by 1% to the current 20.64%, the increasing accuracy of measuring forest cover suggests the possibility that no significant change has occurred. J.K. Rawat, et al., *Application of Satellite-Based Remote Sensing for Monitoring and Mapping of India's Forest and Tree Cover, available at* http://www.gisdevelopment.net/application/environment/ffm/ma04067pf.htm.

95. National Forest Policy of India (1988).

96. *See supra* note 94, at 20-21.

ment and that of decreasing forest cover. By so aggressively and controversially addressing forest issues, the Supreme Court has also raised awareness concerning India's forest cover. Although its hastiness caused many predictable and perhaps avoidable effects, these efforts have in many ways benefited India's environment and given advocacy groups a renewed opportunity to protect India's forests.

The Supreme Court's actions have also addressed negligent forest management. India recognizes that the constitutional right to life depends on the right to a clean and healthy environment. To enforce the right to life, the government has the legal responsibility to effectively conserve forests and biodiversity. The government's past inaction and inadequate response to environmental issues can be viewed not as exercises of executive discretion, but as violations of law that would warrant the Supreme Court's intervention. From this perspective, the Supreme Court's policies have attempted to uphold the right to life when it was being seriously neglected.

Although decisive action may have been necessary, the Supreme Court's orders made demands far beyond its control. The Supreme Court assumed too much power too quickly to effectively manage it. Its orders may have been logically sound, though incomplete, from a policy perspective, but from a practical perspective, they demanded too much from India's weak state and local governments. The Supreme Court did not exercise sufficient caution in extending its role to directly oversee forestry issues. Despite the Supreme Court's defense of the right to a clean and healthy environment as part of the right to life, the Court's aggressive policymaking violated people's right to life by severely disrupting the timber industry, i.e., people's right to a livelihood, and sparking violent action against tribal peoples and alleged forest encroachers. The Supreme Court could have limited its decisions to the scope of the original *Godavarman* case or even delegated responsibility for handling certain issues to government agencies. Slowing down its intervention in forest management or limiting its geographical scope might have prevented states from hastily and unjustly evicting tribals from their homelands in response to an order by the MoEF. So while the Supreme Court has in some ways improved India's approach to forest issues, its aggressive role in the process has disrupted the balance of powers among government organizations and caused severe economic and social turmoil. By assuming so much power, the Supreme Court has perpetuated an incompetent government bureaucracy that defers to the Supreme Court for policymaking.

The MoEF's recent efforts to correct its past mistakes concerning tribal encroachments suggest that the government is making the necessary adjustments to ease the economically and socially harmful effects of the Supreme Court's orders. But the process of building the bureaucratic infrastructure, which hung loosely behind the Supreme Court for so many years, will require more time. Even though the MoEF is improving its policy toward tribals, the *Godavarman* case has provided it with ample opportunity to expand its powers, and it has vigorously done so. Similarly, the CEC has immense influence with its authority to issue orders consistent with the Supreme Court. The CEC is comprised of the former Secretary of the MoEF as its chairman, the Additional Director General of Forests of the MoEF as its MoEF representative, and the Inspector General of Forests as its member secretary.[97] As the MoEF has representation in every national forest-related committee, it continues to grow in power as new committees are constituted to manage forest issues that states have been unable to handle.

The centralization of forest management bypasses much state inefficiency. It also increases the distance between the administrators of forest policy and the tribal people who are affected by it and who are inextricably involved with forest protection. The Supreme Court's "continuing mandamus" in the case also leaves open the possibility for further judicial activism that might interfere with the progress of other agencies toward fair and productive forest and human rights policies.

### *D. Possible Resolutions*

To protect India's forests, particularly in the North East, the state governments need to prevent illegal tree felling and deforestation. This can be achieved not through more rigorous attempts at control, but rather by addressing the simple fact that people need work to earn a living. The states need to develop, gain approval for, and execute working plans to provide jobs for those people who now resort to illegal tree felling. For those people who are not satisfied with the available working plans and who do not participate in them, the government must impose strict regulation on their activities to prevent deforestation. People cannot be completely blamed for illegally felling trees when they need to do so to feed themselves and their families. Before states can effectively reduce illegal tree felling, they need to ensure that sufficient working plans are in place so that most, if not all, the people who have lost their jobs can be provided with new ones.

At the same time, the MoEF, instead of the Supreme Court, needs to develop afforestation guidelines by which states can revive their timber industries at little or no expense to the forests. With the proper afforestation efforts, timber industries can improve the forests while using them as commercial resources. If states do not file working plans, then individual logging companies must be given permission from the central government for tree felling and afforestation. In the current system, states must develop a plan and get approval from the central government through the MoEF. The individual timber companies, in turn, must provide plans and get approval from the state government. But companies are limited by the states' inefficiencies. Instead of delegating responsibility to the states, the MoEF could set up the same approval program for companies on a national level and work directly with companies, completely bypassing the states. While this results in the centralization of powers, the facts of the situation indicate that direct central regulation of timber companies might be necessary and beneficial, at least temporarily. While micro-managing all the forests of all the states is too much responsibility for the central government, reviewing applications of companies seeking to bypass state inefficiencies through local MoEF branches would not be an impossible task.

In terms of dealing with the relationship between tribals and forests, the Center-Left parties in India now insist on a bill that would grant rights to certain scheduled tribes but not to all local communities in the forests. Because of such political self-interest and favoritism, it is clear that another

97. *See supra* note 69.

round of conflict will arise around the issue of encroachments. Instead of entertaining this partisan legislation, the Supreme Court could, under the mandate of Article 48A of the Directive Principles of State Policy of the Indian Constitution, invoke the duty of the state to prepare comprehensive legislation, which would:

- overhaul the Forest Conservation Act, incorporating the beneficial points of the *Godavarman* judgments;
- institutionalize the CEC and CAMPA and formulate layered redress mechanisms which would involve the Supreme Court only at the appellate stage;
- involve industry-based federations in the process of economic evaluation and control of commercial felling of timber;
- formulate concrete principles for the participation of the local communities in forest management through the panchayat system[98] (This is instead of adopting the path taken in cases of joint forest management, which tried to implement the principle of community participation in forestry management. This principle emanated from the older Forest Policy of 1988 and instead of being laid out clearly, was enforced through ad hoc orders.);
- clearly lay down the role of the executive branch of the government and distinguish the role of the MoEF from the role of state forest departments; and
- set up an ombudsman mechanism such that the Supreme Court can be relieved from its role of continual review.

Legislation along these lines would more evenly distribute responsibilities for managing India's forests among the various parts of the government. Instead of playing the role of the legislature and the MoEF, the Supreme Court would spend its time interpreting constitutional rights. It would motivate national organizations to clearly delegate responsibilities to organizations whose infrastructures and personnel exist to manage India's forests. With these changes, the Supreme Court would stay in the background to check that national and state organizations fulfill their duties. By not trying to replace government organizations, the Supreme Court would help build a stronger and more effective bureaucracy.

98. The panchayat is a council of elected officials taking decisions on issues key to a village's social, cultural, and economic life.

## V. Conclusion

When the Supreme Court received the *Godavarman* case in 1995, India's environmental policy was in dire need of reform. The Supreme Court's actions, although extreme, addressed an issue vital to the human and natural health of the country and gave heart to advocates of forest protection. However, in raising awareness of environmental issues and bringing them to the forefront of national and judicial concern, the Supreme Court began the disquieting practice of "continuing mandamus." In hearing over 800 interlocutory applications since 1996, the Supreme Court has extended its involvement in forest issues and thereby increased the country's dependence on the Supreme Court for forest management. This dependence on a judicial institution that has already exceeded the boundaries of its responsibilities has been further complicated by the lack of monitoring of the Supreme Court's orders and the vagueness of the legislative and executive roles regarding forest issues.

With its micro-management of forest issues and the increasing number of Supreme Court-instituted organizations, the potential for conflict is hardly over. How long will the Supreme Court maintain an active continuing mandamus and who will monitor the Court's hundreds of decisions, interpretations, and policy judgments to ensure it does not roam dangerously far beyond the boundaries of its constitutional role? As the centralization of power to government organizations like the MoEF increases, will the executive, legislature, and judiciary succeed in cooperatively managing India's forests, or will the Supreme Court's far-reaching assumption of powers clash with the central government's policies? And amidst the delegation, redistribution, and reorganization of responsibilities and powers, what will happen to India's forests and the tribal people who inhabit them?

The Supreme Court's aggressive forest management has incurred large economic and social costs. It remains to be seen whether the Court can successfully transfer control to the appropriate governmental organizations, whether it can effectively manage the organizations it has formed, and whether it will avoid further economic and social disruption while attempting to restore India's forest cover.

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# A 'Defining' Moment for Forests?

*The recent attempt by the ministry of environment and forests to arrive at a definition of "forests" has opened a Pandora's box with all stakeholders analysing the semantics threadbare. A deep appreciation of the complexities of the issues is required by all concerned to enable more locally specific, democratic and balanced structures of forest governance.*

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On February 7, 2006, the ministry of environment and forests (MoEF) of the government of India invited "expressions of interest" for a study to establish the definition of "forests". This move immediately attracted controversy. Conservation-activists such as Bittu Sehgal decried this move to define forests as being a thinly veiled attempt to undermine the Supreme Court's far-reaching interpretations of the Forest Conservation Act 1980 [Anonymous 2006]. The MoEF, however, justified this move on the grounds that "a clear definition that will stand cultural, legal and international scrutiny" is required in light of the fact that the Indian Forest Act 1927 (IFA) does not define a forest and various court orders have defined it differently. After the consultancy contract was finally awarded[1] and the consultant in turn began widespread consultations from February 2007, a hot debate on semantics and their implications has sparked off. Ecologists weigh the unscientific use of the term against their wish to ensure forest conservation by whatever means possible. Social activists warn that sweeping definitions will antagonise local communities. Foresters seem to be interested in ensuring that their domain does not shrink. Other ministries probably want definitions that will enable easy setting up of development projects like dams and roads. The corporate sector would like definitions that will make the leasing-in of state land for commercial forestry free of legal hassles. In this situation, it may be worth asking whether the issue itself has really been tackled from the right perspective, or is it a case of missing the woods for the trees!

## Genesis of the Problem

The genesis of this need to define a forest is a ruling by the Supreme Court in T N Godavarman Thirumulpad vs Union of India (Writ Petition 202 of 1995 – commonly known as the Godavarman case). The question being debated was the scope of the Forest Conservation Act 1980 (FCA). This Act, which itself is a watershed in forest governance in the country, requires that any conversion of forest land to non-forest uses (which are defined in the Act) must be approved by the central government (i e, MoEF). Conventionally, in the application of this act, "forest land" was assumed to be only that land which has been legally notified as forest as per the Indian Forest Act or state forest acts, i e, typically Reserve or Protected Forest (RF or PF).[2] Even this narrow interpretation of the Act had slowed down and often halted certain kinds of forest land conversions that state governments seemed to have mindlessly engaged in during the 1960s and 1970s.[3] But the Godavarman case highlighted the fact that significant tracts of lands that were physically forested had, due to some quirk of history or anomaly of administration, not been notified as RFs or PFs and hence were denied the "protection" of the FCA. The Supreme Court, in its landmark order of December 12, 1996, sought to rectify this anomaly by stating that the FCA applied to "all areas that are forests in the dictionary meaning of the term irrespective of the nature of ownership and classification thereof".

On the face of it, by going beyond administrative quirks and anomalies, this order furthers the spirit of the FCA. There certainly are significant areas of (currently or till recently) forested lands whose legal status for some reason was not that of RF, PF or village forests (VF). For instance, our studies in the Western Ghats districts of Karnataka have revealed that in as much as 11,000-odd sq km (~33 per cent) of the public land in these districts may fall under legal categories other than those defined in the Karnataka Forest Act [Srinidhi and Lélé 2001]. The physical status of these lands varies from close-canopy forest to open tree savannas to grasslands to barren lands. There are many cases where dense forest patches have been classified (surely mis-classified) as grazing land ('gomaal' in the Karnataka Land Revenue Act). It is also a fact that such lands were often seen as a vote bank by state politicians, and so encroachments were virtually encouraged and land grants eventually made (or regularised) to various categories of households in the decades preceding the FCA.[4] The post-FCA period therefore saw foresters in many states going all out to notify as many of these tracts as PF or RF, ostensibly to protect them from these arbitrary land grant policies. It is also a fact that the land records in most states are in a mess, resulting in many cases in the mis-reporting of the legal status of parcels of public lands.[5] The December 1996 order solves all these problems in one fell swoop, bypassing the need to re-notify any lands or even to refer

to their legal status by using a "dictionary meaning" approach.

Of course, pathbreaking judgments often need further clarification when they are operationalised. What land-use forms, other than the perhaps obvious ones, fall under the dictionary meaning of forest? Do, for instance, monocultural plantations of exotics such as Eucalyptus, Silver Oak or Acacia *auriculiformis* constitute forest?[6] If so, would private lands on which individual farmers took up eucalyptus planting during the heyday of farm forestry fall under the ambit of the FCA (and thereby require MoEF clearance over and above all other local clearances if the farmer wants to, say, sell it to a developer)? And when should a piece of land have been physically forested in order to come under the FCA? In 1980, in 1996, or some other year? And what happens to land that was (say) grazing land earlier but has been recently planted with trees (often monocultural plantations)? Does it now come under the FCA? What about the pure natural grasslands that surround the stunted evergreen shola forests in the Nilgiri hilltops – do they qualify as forests? It is these loose ends that, on the face of it, MoEF seems to be trying to tie up by trying to systematically define a forest.

## Inadequacies

Focusing on the definition question assumes that moving away from a "legal forest" to a "physical forest" is the right approach. A detailed analysis, however, suggests this approach is inadequate in law and in concept. First of all, the Godavarman order is legally unsound because it seeks to replace due process by a single universal definition.[7] That the absence of a definition of a forest (or forest ecosystem types) leaves too much discretion to the state to notify any kinds of land has been a longstanding and valid criticism of the IFA [Singh 2000: 4]. But clarifying which kinds of lands can be notified as forests is not the same as declaring in one stroke that lands which are not currently notified but physically forested (in some manner) have to be treated on par with those that are notified. If the process of reservation carried out under the IFA has been arbitrary or inconsistent, this arbitrariness can be questioned and rectified by asking the states to re-examine their forest settlement[8] and bring about more consistency. Although tedious, this procedure would ensure that the specificities of each parcel are gone into before its legal status under FCA undergoes a change. Ultimately, governance based on zoning is much more practicable than governance based on physical conditions that may easily change over time. And zoning carried out with due process within some broad guidelines is much better than zoning based on single definitions.

Indeed, a re-settlement or re-drawing of forest boundaries is necessary from both directions. The Godavarman order is inadequate also because, while trying to fix one kind of anomaly in the demarcation of forest boundaries in India, it fails to recognise the existence of anomalies of the opposite kind of greater magnitude. There are large tracts of land, particularly the tribal areas of central India, that have been legally notified as forest land (typically RF

or PF), but have in fact been under either settled agriculture or shifting cultivation for decades, even centuries – not just post-1980.[9] These also include the several thousand "forest villages" of central India wherein settlements of forest labourers (typically tribals whose shifting cultivation had been suppressed) were created by the British forest department on forest land and then never given permanent rights. While trying to adopt a commonsensical position vis-à-vis physically forested lands, the court failed to adopt an equally commonsensical position on the issue of historically cultivated tribal lands. It is precisely because this anomaly was not addressed by the courts, and because certain orders of the Supreme Court in the Godavarman and other cases were in fact interpreted by the MoEF as licence to evict all encroachments, that the campaign for tribal forest rights was launched in 2002 and culminated in the recent enactment of the fairly radical Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 – an Act which explicitly keeps itself out of the purview of the FCA.

## Paradigmatic Problems

A more fundamental problem with this approach is that it subscribes to the overly simplistic and centralised paradigm of forest governance perpetuated by the FCA. Two assumptions are central to this paradigm. First, that land-use falls into two simple categories – forest and non-forest – wherein lands used as forest generate systematically much greater environmental benefits than non-forest land-uses. Second, that the environmental benefits flowing from forest land uses are national-level or global public goods, and hence the central government (as a custodian of the welfare of the nation at large) has a legitimate veto power over state-level decisions about changes in land-use, whereas the environmental benefits from non-forest land-uses, if any, are local in nature and the state governments can therefore determine their fate. The debate over the definition of what is forest then becomes a debate over where to draw the line between state control and central control, and between the apparently environmental service role of forests and the apparently non-environmental role of non-forest land-uses.

Unfortunately, this simplified paradigm does not match with either the ecological or the social complexities of Indian forests. First, forests generate a range of benefits, some direct and tangible such as timber or firewood; some indirect but tangible such as hydrological regulation, soil conservation or carbon sequestration; and some intangible such as biodiversity conservation or aesthetic values. But certain so-called non-forest uses of land also generate many of these benefits to significant degrees. Coffee plantations, for instance, may harbour significant amounts of biodiversity [Badrinarayanan et al 2001; Elouard et al 2000; Shahabuddin 1997], sequester significant amounts of carbon and protect soils from erosion as well as many forests. On the other hand, monocultural timber plantations, although classified as forests under the FCA, provide much lower biodiversity and soil conservation or hydrological benefits [Kusumandari and Mitchell 1997; Sikka et al 2003] than coffee or cardamom plantations [Moench 1990] or even pure grasslands. But the annual rate of carbon sequestration (and hence climate change mitigation value) of timber plantations tends to be higher than that of climax natural forests. Thus, the dividing line between forests and non-forests in terms of the environmental benefits they generate is not just blurred but also contingent upon the type of benefit one is considering.

Second, from a governance perspective, it is not at all clear that the benefits generated by forest land uses are only public goods at the state or national scale and that these national beneficiaries must have veto power over the state government. On the one hand, while the direct tangible benefits from forest products flow to groups of households in individual hamlets or villages, the economic rent on many of the valuable tangible products (such as timber and certain non-timber forest products (NTFPs)) has been historically captured by the state government [Vasundhara and Vikalpa 1998]. On the other hand, soil and water conservation benefits extend to residents in the river basin downstream, not to the whole nation. Carbon sequestration and biodiversity benefits are global, not just national. Needless to say, the particularities of this relationship between forests and people vary dramatically across the country's landscape.

## Imperfect Approach

In this situation, making the central government the representative of all non-local beneficiaries is highly imperfect at best. And giving it veto power over local users, or to be precise, over state governments in a supposedly federal system, while ignoring the question of lower-level rights and responsibilities, and further compounds the problem. This approach assumes that the tussle is only between national-level beneficiaries of the environmental services and state-level decision-makers who would prefer to use the forest for other purposes. This helps the state-level politicians use the FCA as a convenient whipping boy, generating an anti-environmentalist rhetoric in state-level politics. Whereas in fact the tussle is at multiple levels, including in many situations between local communities who want to use forests provided they can derive significant and reliable livelihood benefits from them, and the state apparatus that is on the one hand extracting surplus in the form of timber and NTFP royalties while on the other hand leaving the rest of the forest in an open-access condition, ensuring further degradation, or wanting to give it for mining or other short-term economic activities.[10]

In other words, what is required is not a sharpening of binary forest/non-forest thinking, but rather a deconstruction of a forest into its varied forms that perform complex environmental and economic roles and are the product of varied socio-ecological contexts. This should lead to the creation of more nuanced and locally-specific categories that allocate rights and responsibilities across the local, state and central levels in ways that better reflect the stakes and the abilities of these actors [see e g, Lélé 2004]. This will require not just

re-drawing the boundaries as mentioned above, but in fact replacing the existing major categories of reserve and protected forest – categories that were invented by the British to suit the purposes of colonial forestry and to which the British themselves created many exceptions that are not mentioned in the Indian Forest Act (IFA) but very much present on the ground. In the Karnataka Western Ghats region alone, there are some 30-odd legally recognised tenure regimes pertaining to public uncultivated lands [Srinidhi and Lélé 2001] – the result of inheriting forest and revenue land categories from five different administrations of the colonial period. Similar complexities exist in most other parts of the country [see, e g, Upadhyay and Jain 2004]. While the need for some form of rationalisation is clear, collapsing them into just two or three categories (RF/PF/non-forest) would be well nigh impossible. Some changes in rights and responsibilities and re-drawing of boundaries are envisaged under the above mentioned Forest Rights Act. It is essential to widen this process.

Such deconstruction will also require revisiting other components of the Godavarman orders, viz, the assumption that it is necessary and desirable to have a centrally approved "working plan" – a device instituted by the British to manage forests largely for commercial purposes – to ensure that a forest is being managed sustainably. Different categories of lands would have to be managed sustainably for different purposes or different mixtures of environmental benefits, and this will require more sophisticated levels and combinations of scientific and traditional knowledge on the one hand and local and non-local monitoring mechanisms on the other.

The Supreme Court has made a signal contribution to the cause of environmental conservation in India by using a simple postcard from a T N Godavarman Thirumulpad in Tamil Nadu to open up the whole question of inconsistencies in forest notification, management and conversion. The debate on the definition of forests is useful to the extent that it highlights the ecological and social complexities surrounding the condition and use of uncultivated lands in this country and the often arbitrary manner in which these lands got categorised and governed in the colonial and even post-colonial period. One hopes that the court and the policymakers will see the importance of embracing these complexities and pushing for more locally-specific, democratic and balanced structures of forest governance in the country. EPW

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## Notes

1 The contract was awarded to the Ashoka Trust for Research in Ecology and the Environment (ATREE). The Terms of Reference (rather clumsily worded) are "(a) to evolve the definition(s) of forest in Indian context keeping international commitments and different orders of the apex court of the country into consideration, and (b) to develop ecologically sound and socially desirable definition of forest."

2 Note that the other two categories mentioned in the IFA, viz, village forest and private forest, cover very small land areas. Even the van panchayats of Uttarakhand, although very similar in their governing structure to village forests, have actually been notified under a different law.

3 That it also slowed down the process of recognition of legitimate historical non-forestry activities or legitimate small-scale demands for land conversion for local development, while not really halting the conversion in the case of big state-sponsored development projects, is the other side of the story of the FCA that we shall come to below.

4 Thus, Karnataka saw the repeated transfer of such "revenue" lands to and from the forest





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category during the Bangarappa and Moily governments. In village-level studies in the Karnataka Western Ghats, we found that large fractions of assessed waste lands and gomaal lands that had been originally forested, had been encroached for cultivation, which was later on regularised (see XXX).

5 For e g, serious anomalies have been shown to exist between the area of forest land as reported by the Forest Department and the Revenue Department. While the records of the latter show only 32 per cent of the land area of (erstwhile) Dakshina Kannada legally classified as forest land, the latter's records indicate this area to be 44 per cent [ISEC and NST 1998].

6 A recent order seems to suggest that such plantations, if raised on non-public lands, do not come under the FCA, which seems to negate the December 1996 order by bringing in the legal status again.

7 In fact, it compounds the problem by making both criteria applicable: either legally notified or physically forested.

8 In the archaic terminology inherited from the British, "settlement" refers to a procedure of finalising the rights over a particular piece of land.

9 This happened because of the same "fell swoop" approach: In Orissa, for e g, princely states notified large areas as state forests without going through the settlement process laid down in the law, and in the post-independence period the government simply "deemed" these forests as reserve forests, again without checking the situation on the ground. Such areas could be as large as several tens of thousands of sq km (Kundan Kumar personal communication).

10 Note that the kind of "conservation" achieved by the application of the FCA, even post-Godavarman, has been a limited and somewhat lop-sided one – major development projects such as the Lower Subansiri hydro-electric project in Assam are still being approved, and the conditions imposed in their approval are tilted towards "biodiversity conservation" while the concerns of downstream communities are not necessarily being addressed [Vagholikar 2007].This points to the inherent limitations of the FCA, which introduces more procedural requirements but not clear criteria under which forest conversion may be permitted.

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# Reverting to the Original Vision of Reservations


*The solution to the reservations imbroglio lies in reverting to the original conception of reservations for the scheduled castes and scheduled tribes as a countervailing force against the disability of Indian society to treat its constituents with equity.*



ANAND TELTUMBDE


The recent agitation of gujjars in Rajasthan for getting themselves the status of scheduled tribe (ST) has once more brought the reservations imbroglio to the fore. Gujjars, a caste in the northern, north-western and western parts of India were designated as STs in Jammu and Kashmir and Himachal Pradesh, but in all the other states in this region they are classified as the Other Backward Classes (OBCs). In Rajasthan they had made a claim to ST status in 1981 but a committee constituted by the then Congress government rejected it on the basis of criteria laid down for being an ST. This time they came out on the streets in a militant manner to press for the implementation of their demand for ST status. The agitation, apparently against the state, inevitably provoked the meenas, a prominent ST community in Rajasthan, and tended to become an inter-community clash. Fortunately, the state has succeeded in cooling off the agitation by referring the issue to a three-member committee, with a mandate to advise the government on a course of action for meeting the demand of the gujjars within a period of three months.

Gujjars, as an OBC, do enjoy reservations in Rajasthan. Why should they then want to be designated as ST? There are three reasons. Firstly, in the ST category, the proportion of reservations are more in line with their proportion in the population as against the 27 per cent quota for OBCs that is much less than the claimed 52 per cent in the population, and more importantly, the well-off gujjars stand a better chance of bagging the reserved seats in employment and educational institutions as STs than as OBCs. Second, gujjars are already recognised as STs elsewhere.

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# Hills, dams and forests. Some field observations from the Western Ghats

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**Abstract.** Man's attempts to intensify the use of natural resources can often result in the exhaustion of the resource or deterioration of other interacting resources. The single-minded pursuit of the development of the water resources of the rivers of the Western Ghats shows many examples of this view, particularly in the unnecessary destruction of the dwindling forest resources. This destruction may be caused by (i) problems of rehabilitation, e.g. the Ramanagar settlement of the Kalinadi project (ii) the impact of labourers, e.g. the destruction of evergreen sholas on the Upper Nilgiri plateau (iii) the access to encroachers and poachers, e.g. Panshet and Kalinadi (iv) faulty planning, e.g. Linganamakki and Kalinadi. This destruction of forest cover has had a number of deleterious consequences in (i) worsening the shortages of forest resources, (ii) hastening the siltation of the reservoirs, (iii) ecological imbalances as in the rapid spread of *Eupatorium* in the Kalinadi project area and (iv) the decimation of biological diversity, as in the great reduction of evergreen forests in the Western Ghats, threatening the survival of lion-tailed macaque and the extinction of grass species, *Hubbardia heptaneuron*. It is stressed that the only sustainable and therefore true development is environmentally sound development. The interests of the weaker sections of the society often provide a good index of the soundness of the development from an environmental point of view. The planning of the development process with this perspective is a great scientific and technological challenge that must be taken up.

**Keywords.** Environmental impact; rehabilitation; deforestation; dams; hydroelectric projects; irrigation projects.

## 1. Introduction

A more intensive utilisation of the natural resources of the earth has underlain all economic development. Thus domestication of animals has concentrated the more dispersed populations of wild animals used by the hunter-gatherers, and irrigation has enhanced the supply of water to cultivated crops in previously rain-fed tracts. The natural resources of the earth are however finite and often interdependent. An intensification of the utilisation of one such resource can therefore lead to its exhaustion, even if it is a renewable resource, or to the deterioration of another interacting resource. It is now well known that historically an intensification of resource use has often resulted in its exhaustion and in many undesirable side effects with a consequent deterioration of the quality of human life (Thomas 1956). Although modern-day technology has enhanced by several orders of magnitude man's ability to use the earth's natural resources, it has not overcome the traditional problems of over-exploitation and of the deleterious impact on other natural resources. As a matter of fact, the magnitude of these problems has often become proportionately greater.

Farvar & Milton (1973) document a number of such consequences of what they term 'careless technology,' ranging from the outbreak of schistosomiasis following the construction of the Aswan dam in Egypt to the salinisation of large tracts of farmland following intensive irrigation in the Indus basin in Pakistan.

The ancient land of India abounds in many such examples, beginning perhaps with the man-induced desertification of Rajasthan (Bryson & Barreis 1967). This vital problem has however received scant attention in our country, and the major global reviews of Thomas (1956) and Farvar & Milton (1973) contain no significant material on India. Symptomatic of the near-total lack of our understanding of this problem is the fact that the exhaustive treatment by Rao (1975) of the water wealth of India and its utilisation makes only a passing reference to the environmental problems attendant on such utilisation.

The present paper is therefore a preliminary attempt at documenting a few specific aspects of the environmental consequences of the intensification of the utilisation of India's natural resources. In this paper, attention is focussed on the use of river waters through the construction of reservoirs on the Western Ghats in Peninsular India. The orography of the Western Ghats interacting with the winds of the south-west monsoon leads to the highest levels of precipitation for Peninsular India on the crestline of the Western Ghats. This heavy precipitation, coupled with the steep westward slopes of the Ghats renders this an ideal location for the generation of hydroelectric power, and many such projects, e.g. Koyna, Linganamakki, Upper Bhavani and Idikki, have been completed on this hill chain. The major eastward flowing rivers of Peninsular India—Godavari, Krishna and Kaveri all originate on the Western Ghats and the region where the hills of the Ghats merge with the Deccan Plateau furnishes ideal conditions for the construction of irrigation projects, and many such, e.g. Panshet, Kabini and Bhawanisagar, have been completed in recent years.

As has been the world-wide experience, these projects have tended to focus entirely on the construction of dams, canals, tunnels, pipelines and power-generating stations, with little attention to the other wide-ranging consequences of the projects (Farvar & Milton 1973; Dasmann *et al* 1973). The Western Ghats today harbour almost the entire forest wealth of the states of Gujarat, Maharashtra, Goa, Karnataka, Tamilnadu and Kerala, and these forest resources are already seriously in short supply (Gadgil & Prasad 1978). Moreover, the irrigation and hydroelectric projects have led to serious deforestation not just in the submersion areas, but in the vital catchment areas as well. This in turn has enhanced the soil erosion in the catchment and siltation of the reservoirs. It has sharply reduced the diversity of plant and animal life of this region, and has led to ecological disturbances. All of this has serious long-range economic consequences for the society as a whole, but its more immediate victims are the tribals and peasants of the Western Ghats (Darwin 1976; Anon 1977a).

These developments have received little systematic attention, apart from some references in the report of the Task Force (Anon 1977a) and two studies on the Kuttanad and Silent Valley projects (Kannan 1979; Prasad *et al* 1979). An attempt is made in this paper to document these developments with particular reference to loss of forest resources on the basis of the author's observations during the course of field work in various regions of the Western Ghats beginning in early 1972 (Gadgil and Vartak 1976; Prasad & Gadgil 1977; Sastri *et al* 1977). The material

presented here was incidental to the primary objectives of these studies, though it interested the author greatly from the very beginning. It could not however be collected as systematically and with as careful a quantification as one would have wished, for my understanding of the problem has unfolded only gradually. At this juncture, therefore, the material presented is only a preliminary statement which aims to define the problem, illustrate some of its aspects and suggest lines along which more careful and quantitative studies ought to be carried out.

Let us begin by presenting a case study, that of the Panshet reservoir in Pune district in somewhat greater detail to illustrate the various forces at play. The various factors directly or indirectly associated with dams which lead to a destruction of vegetation cover are then considered. This will be followed by an examination of the adverse consequences of this destruction, for the society in general, and for its weaker sections in particular.

## 2. Impact of the Panshet Dam

The Panshet reservoir is situated about 25 km to the west of Pune and has been created by the construction of dams on the rivers Mula and Mose (figure 1). The reservoir lies just to the east of the crestline of the Western Ghats at an altitude of about 600 m. The terrain is very much broken with narrow valleys of less than half

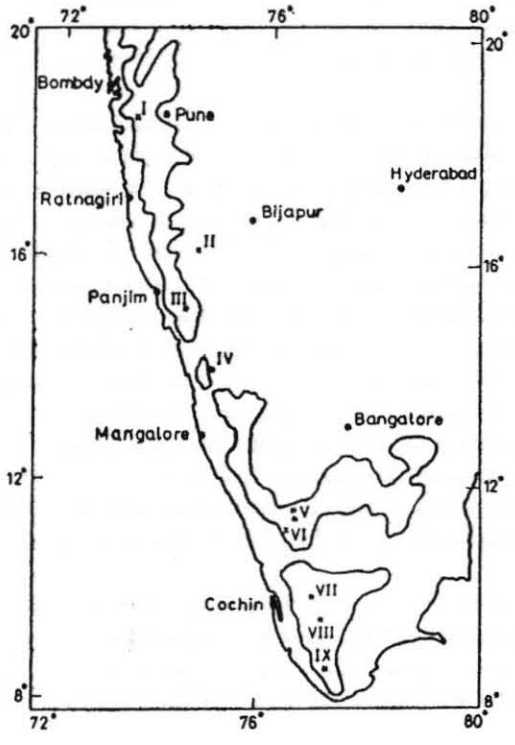


**Figure 1.** A map of Peninsular India showing locations of various sites referred to in the text.
I. Panshet, II. Hidkal, III. Kalinadi, IV. Linganamakki, V. Upper Nilgiri Plateau, VI. Silent valley, VII. Idikki, VIII. Periyar, IX. Mundanthurai-Kalakad

a kilometre in extent separated by steep hills rising to altitudes of around 1200 m. Before the construction of the reservoir, the peasants of this region grew paddy in the valleys and practiced shifting cultivation for millets on the lower hill slopes. These hill slopes had a good tree cover of mango (*Mangifera indica*) and harada (*Terminalia chebula*), for these cash-yielding trees used to be spared by the peasants while clearing for millet cultivation. The nuts of harada used extensively for tanning supported a flourishing industry at Bhor, some 50 km away. The upper hill slopes were clothed by a rich natural forest of the semi-evergreen type, constituted into state-owned forest reserves. These forests were hardly exploited due to the lack of transport facilities (Gadgil & Vartak 1976).

The work on the Panshet reservoir commenced around 1955 with the construction of a good road linking this region to the city of Pune. The submersion region consisting of the valleys with the paddy fields and the lowermost hill slopes with mango and harada trees had to be deforested. There was a great demand from the city of Pune for the excellent charcoal that can be prepared from the harada trees. Consequently, not only the submersion area but the entire lower hill slopes constituting over half of the catchment area was denuded of tree cover by 1960 (figure 2, plate 1). Apparently this occurred because the timber merchants who came in to deforest the submersion area bought the trees on the large tracts of private lands on the hill slopes at throw-away prices by convincing the peasants that they were soon going to be resettled far away in the command area of the dam, and that it would be in their best interest to sell off the trees. Be that as it may, the process of resettlement began only in the 1970s, a decade after this large-scale deforestation, and even today in 1979, only a minority of the peasants have moved to the new area, the rest continuing to live on the hill slopes.

With the deforestation of the hill slopes, the top soil has eroded rapidly in the face of the heavy annual precipitation of over 4000 mm, leading to large landslides by the early 1970s. This has depressed the productivity of the shifting cultivation, and consequently, the peasants have made large-scale encroachments in the reserved forest lands on the upper hill slopes for cultivation. The rich wild life including sambar, barking deer and wild pig that these hill slopes once harboured has all but disappeared with the destruction of the tree cover and the greater accessibility of the region to the well-equipped urban poacher. The peasants report that where they used to get a wild pig or deer once a week, they now hardly get a blacknaped hare once a month. With the disappearance of harada trees the regular cash income of the peasants has vanished and the harada-based industry at Bhor has been closed down. The very low amount realised by peasants through the sale of trees has been exhausted long ago. Although no data on siltation rates for Panshet are available, one has to merely see the eroded slopes and landslides to be convinced that they must be very high indeed.

It is evident that this devastation of the catchment, which in turn has led to the pauperisation of the inhabitants, the collapse of a forest-based industry, and siltation of the dam could have been forestalled if adequate measures to conserve the vegetation cover of the catchment were an integral part of the irrigation project.

## 3. Causes of deforestation

The execution of an irrigation or a hydroelectric project need involve the loss of forest resources only in the submersion areas. Apart from this, the creation of a large water body could positively help the other existing forest and wild life. The nearly century-old reservoir on the Periyar river in the heart of the Thekkady wild life sanctuary provides an example of this possibility (figure 1). In the case of this reservoir, not even the submersion area was deforested and the ancient tree stumps stick out of the water to this date, providing excellent perches for the rich bird life of the area. The wild life too has benefitted from the provision of a large perennial water body. The forest cover in the vicinity has also been fairly well preserved. Unfortunately, it is not possible to cite such examples from more recent times, where almost all projects seem to have had a devastating effect on the surrounding forest resources in a number of ways. These may be classified as problems of (i) rehabilitation (ii) labourers (iii) access to encroachers and poachers and (iv) faulty planning.

### 3.1. *Rehabilitation*

A striking example of the problems of rehabilitation is provided by the settlement of Ramanagar for the refugees of the Kali hydroelectric project (figure 1). The township of Supa, along with a number of minor villages will be submerged by this project and these several thousand families have to be provided alternative land in lieu of their paddy fields, coconut and arecanut gardens and other rich agricultural and horticultural land. Since practically all of such land is already under cultivation, they have been provided a hectare of non-irrigated hilly land for every hectare of submerged land, which is mostly irrigated lowland. Incidentally, it is to be noted that no attempt is being made to provide the refugees with alternative non-agricultural occupation based on the large amount of electrical power that will be generated by this giant hydel project.

This settlement is expected to be established at a place called Ramanagar near Londha on the border of Belgaum and North Kanara districts of Karnataka. This tract of land was earlier under reserved forest, and was taken over for resettlement around 1975. At the time of handing over, the entire tree crop was removed, and the land was allowed to lie fallow without the institution of any soil conservation measures at least till 1979. This land has attracted not a single peasant settler from amongst the refugees who are staying on their lands while the construction of the Supa dam goes on in 1979. In the meanwhile the topsoil on these unprotected hill slopes in this catchment area of one of the Kali project reservoirs has eroded over the last four monsoons making it by 1979 a desert unfit for cultivation for all times. The landscape stands desolate with a few empty school and temple buildings the only sign of the planned township. The Kali hydel project refugees are in the meanwhile agitating to refuse to go to Ramanagar and demanding another rich forested site called Barchi for their resettlement.

The clearance of the forest on the land earmarked for resettlement was clearly a grave error. The original forest was rich in tree species of the genus *Terminalia* which could have served as a base for a flourishing tasar silk industry. This could have been supplemented by bee-keeping and production of minor forest produce such as harada (*Terminalia chebula*) nuts. The remaining less valuable trees could have

been selectively cleared and cultivation of intervening patches of terraced and bunded land properly organised. This would have resulted in an economically more viable and ecologically sounder land use. Instead, the summary deforestation without the institution of any soil conservation measures has irreversibly ruined this large tract of land.

A second example of rehabilitation problems is provided by the Hidkal irrigation project on the Ghataprabha river in north Karnataka (figure .1). This reservoir nearing completion in 1979 is expected to eventually irrigate 2·63 lakh hectares in its command area, while it has submerged agricultural lands of only about 4000 hectares in extent. Nevertheless, the displaced population is not being rehabilitated in the irrigated command area, but rather in the catchment area, including places right on the fringes of the reservoir. The contribution of such settlements to increased siltation of the river is not documented, but appears to be significant.

### 3.2 *Labourers*

The execution of irrigation and hydroelectric projects involves the camping of several thousand labourers at the project sites. The labourers require timber for their huts and fuel for their day-to-day living, and so far they have always depended on the forest to meet these requirements. A notable example of the serious disturbance caused thereby to the forest is provided by the construction of Avalanche and other reservoirs on the Upper Nilgiri plateau (figure 1). These reservoirs are situated on a plateau at an altitude of around 2500 m, and are a cold, wet and windswept region for ten months of the year. Some 20,000 labourers were camped on this plateau for about 7 years for the construction of the reservoirs. There were no special provisions for housing them, and they had to live in ramshackle huts. This they could do only by keeping the huts continually heated by burning logs of wood. All this wood came from the famous evergreen shola forests of Nilgiris. These forests, rich in a number of endemic species are restricted to the higher hill tops of the Western Ghats and have largely disappeared due to plantation and other activities (Blasco 1971). Vast tracts of these virgin forests on the upper Nilgiri plateau have thus disappeared due to the activity of the labourers who had no recourse but to cut them down in order to survive (John Joseph 1978). This could have been alleviated, if not altogether avoided, if the labourers could have been provided with some tin or asbestos sheds and regulated fuel supply. This fuel supply could at least in part have been based on the wood cleared from the submersion area.

### 3.3 *Access to encroachers and poachers*

Hydroelectric and irrigation projects often open up previously inaccessible regions rich in timber and wild life to new agricultural settlers and poachers of both timber and wild life. It is feared that the colonisation of areas rendered accessible by the Silent Valley project is already underway, and will lead to irreversible damage (Nair 1979; Prasad *et al* 1979) (see figure 1). These settlers are likely to follow the pattern of settlers in the Idikki area who have largely colonised steep slopes unfit for cultivation on a sustained basis without very heavy investment in soil conservation measures.

Wealthier and better organised poachers take advantage of the improved access

facilities for smuggling out more valuable timber and poaching wild animals. These activities are naturally much more difficult to document. There is however considerable circumstantial evidence of this. For example, the once famous Dandeli wild life sanctuary was in 1977 on the verge of being dedeclared as a sanctuary because of the severe depletion of wild life consequent on the opening up of the area with the Kali hydroelectric project.

### 3.4 *Faulty planning*

Faulty planning of matters more directly concerned with the execution of the project as such has also led in a number of cases to an unnecessary loss of forest resources. Three examples, all from the state of Karnataka can be cited. The first example concerns the hydroelectric project on the Sharavathy river (figure 1). The large reservoir of Linganamakki feeding this project has filled to capacity only thrice since its commissioning some 20 years ago. This is because the estimated inflow into the reservoir from its catchment has not materialised. If the dam height had been restricted to a lower level such that the reservoir would be filled more regularly, not only would the cost of the project have been substantially reduced, but several thousand hectares of forest would also have been saved (Sharma 1978). As it is, the river Chakra is now being dammed, submerging further forest areas in Hosanagar Forest Range merely to feed further water to the Sharavathy hydel project. Moreover, the deforested upper submersion area of Linganamakki reservoir that rarely goes under water is under active cultivation most of the time, and must considerably add to the siltation of the reservoir.

The two other examples are from the Kali hydel project. A most elementary mistake has been committed at the Tattihalla dam site where some clearance area was incorrectly demarcated. As a consequence, considerable forest land (e.g. block 20, compartment 6 of the Sambrani Range) was unnecessarily deforested. Attempts are being made to put this back under teak plantation, but the *Eupatorium* weed, to which we will refer in § 4.3 below, makes such attempts difficult.

The last example is from Ambikanagar, the township created in place of the villages Amba-Jumba for the Kali hydel project. This area in the heart of the Dandeli wild life sanctuary was a forest famous for its herds of gaur. It was totally deforested at the time of its being handed over for the township. In the humid heat of the West coast, it is now a desolate and dusty place. It would have been a lovely hill resort, with its picturesque Syke's point if only such trees as were essential for roads and buildings were removed. As it is, all that Ambikanagar now has are a few small saplings planted by the roadside.

## 4. Consequences

The author believes that he has given enough indications, *albeit* qualitative, of the considerable magnitude of the loss of forest vegetation accompanying the irrigation and hydroelectric projects. This loss has a variety of consequences, all of which ought to be accounted for in the cost calculations of the project. These consequences may be considered under the following heads: (i) scarcity of forest produce, (ii) siltation of the reservoirs, (iii) ecological imbalances and (iv) decimation of biological diversity.

### 4.1 *Scarcity of forest produce*

The mounting scarcity of forest products in India has been well-documented as, for example, in the perspective plan for forests of Karnataka (Anon 1977b). The loss of forest land associated with projects has been a major factor aggravating this situation. Here, just one example may be cited from our own studies on the bamboo resources of Karnataka (Gadgil & Prasad 1978). Bamboo is the poor man's timber as well as the major raw material for the manufacture of paper in India. The yearly consumption of bamboo in Karnataka is around 160,000 tonnes while the yearly increment to the crop is only around 135,000 tonnes. This overexploitation has led to the wiping out of bamboo from many areas earlier rich in bamboo crop. As bamboo grows well along water courses, submersion under reservoirs hits bamboo particularly hard. Various projects in Kartnataka have therefore been a major factor contributing to the bamboo famine.

### 4.2 *Siltation of reservoirs*

The maintenance of a proper cover of vegetation in the catchment area of any reservoir is vital to its proper functioning. Such vegetation regulates the flow of water into the reservoir, preventing floods and maintaining water flow in the dry season, and more crucially prevents excessive erosion of soil (Dasmann *et al* 1973; Pareira 1973). That soil erosion in the catchment area and the consequent siltation of reservoirs has been a major problem in India is well-known (Anon 1978). Thus, for the 18 reservoirs all over India for which data are available, the observed siltation rate has exceeded the expected siltation rate in all but one of the cases. Moreover, the observed rate is generally 3 to 10 times as high as the expected siltation rate. The consequent drastic reduction in the useful life of the reservoirs has obviously serious economic implications, as for example, has been pointed out by Verghese (1977) for the greater Ganga river system. Although no data are immediately available for the Western Ghats reservoirs, it is evident that siltation must be a major problem.

### 4.3 *Ecological imbalances*

Apart from the more evident loss of forest wealth and siltation of the reservoirs, the large-scale deforestation for the projects can lead to subtler ecological imbalances. One such has been the enormous increase in the population of the weed *Eupatorium glandulosum* in the Kali hydel project area. This composite weed of the moister forests smothers out all tree growth in clear-felled forest areas and is totally unpalatable to all herbivorous animals. It renders forests more susceptible to fire and to losses of minerals through leaching. This weed of the moist forests of the Western Ghats has come to Kerala from Assam and has rapidly spread northward from there. When the Supa and other submersion areas of the Kali hydel project were deforested some five years ago, *Eupatorium* had just begun to establish itself in North Kanara. The vast stretches of clear-felled forest land provided the optimum habitat for *Eupatorium* which has now totally clothed these areas. It spreads far and wide through its wind-borne seeds. The vast population of *Eupatorium* in the deforested Kali submersion area is likely to be serving as a major infective centre for the further spread of this weed into Belgaum-Goa-Savantwadi-Kolhapur areas, and into the many new plantations being taken up in North Kanara itself.

### 4.4 *Decimation of biological diversity*

The tremendous genetic diversity of living organisms created by the hundreds of millions of years of evolution is a precious heritage of man. These have yielded to us a variety of foods, fibres and vital drugs and their maintenance is crucial to further progress in these fields. This is why the Food and Agricultural Organisation of the United Nations has launched a vigorous programme for the maintenance of genetic diversity of wild relatives of cultivated plants. The Western Ghats harbour a large variety of these, ranging from ragi, paddy, cardamom and pepper to mango and jackfruit. The critical importance of preserving all genetic diversity, not just that of presently utilised species, is also what has prompted the U.S. Supreme Court to hold up a dam that will destroy the only known population of a small fish—the snail darter.

The large impact of the irrigation and hydroelectric projects on the Western Ghats has sharply reduced the biological diversity of this region. These projects have selectively affected high rainfall areas, and areas near water-courses which tend to harbour evergreen tree species. They have thus contributed to the sharp reduction in the extent of evergreen forests on the Western Ghats (Pascal & Meher-Homji 1978). These forests have been a unique storehouse of many plant and animal species occurring nowhere else in the world, and it is only our profound ignorance which has masked the many extinctions of biological species—the many snail darters —that must have vanished. Father Saldanha (1979) points to just one example, *Hubbardia heptaneuron* Bor, a grass that was once known to grow in the spray zone of the famous Jog Falls of Sharavathy and nowhere else in the world. This species has apparently gone extinct with the execution of the Sharavathy power project.

Another threatened species of the Western Ghats is a monkey, the lion-tailed macaque (*Macaca silenus*). There are now only two surviving viable populations of this monkey left in the world. One of these is in the Silent Valley and the other in the Mundanthurai-Kalakad sanctuaries near the Agastyamalai peak (figure 1). This monkey depends for its survival on trees of genus *Cullenia*, and if the Silent Valley hydroelectric project materialises, most of this *Cullenia* forest will be submerged and the monkey wiped out. The Mundanthurai-Kalakad population is also threatened by other impending projects in that area. For all we know, with this monkey we may lose the only biological material that may enable us to combat some future epidemic of a new mutant of encephalitis.

## 5. Conclusions

### 5.1 *Sustainable development*

As we stressed at the beginning, economic development ultimately depends on the intensification of the use of the earth's natural resources. For a true development, however, this process should not lead to a rapid exhaustion of the resource being tapped, nor should it be accompanied by a needless destruction of another resource. This suggests that we should be particularly concerned about maintenance of the long life of the reservoirs, and avoiding the adverse consequences on other resources such as soil, forest and wild animals. Only by aiming at development that retains

its harmony with nature, by aiming at environmentally sound development, will we achieve true and sustainable development.

Our current development effort obviously fails in many ways when viewed from this perspective. Why is it then that these failures have attracted so little attention so far in our country? The author believes that this is so because the urbanised decision-makers are several stages removed from direct dependence on the natural resources, and are therefore immune from the immediate negative consequences of the unbalanced development process. It is the local peasants and tribals depending much more directly on the natural resources that bear the brunt of the immediate negative consequences of the development process (Bahuguna 1978; Kannan 1979; Mishra & Tripathi 1978).

This is well illustrated by the first case study. The destruction of the tree cover in the catchment immediately profited the urban society of Pune by providing cheap wood charcoal. The tremendously increased siltation rate would no doubt affect this city population in the coming years by reducing the life of the reservoir which supplies water to the city. These effects would however be felt only over several decades. The local peasants on the other hand have come to suffer much more rapidly, by the reduction in fertility of their hill slope land and the reduction in the availability of wild animal protein.

The author would therefore like to suggest that the interests of these weaker sections of our society provide a very good index of how harmonious with the environment, and thus how sound a development project is. If these interests are given serious consideration, we will orient ourselves towards planning of the overall land use for the long-term sustained utilisation of soil, water, vegetation and animal resources and it is only then that we will turn to planning for true, sustainable development.

### 5.2 *Perspectives for future work*

The concept of environmentally sound development throws up a whole series of scientific and technological challenges. Our whole scientific and technological establishment is geared today towards the solution of such problems as: how can we, over the next five years, extract the maximum amount of power out of the rivers of North Kanara? Even this problem is posed in isolation of another typical problem: how can we, over the next five years, produce the maximum amount of paper out of the forests of North Kanara? The point of view sketched above suggests that the scientific and technological establishment ought to address itself to a very different kind of problem, namely, how can the whole gamut of natural resources of North Kanara be developed so as to improve on a long-term basis the quality of life of the weaker sections of the society of North Kanara? We would then think not just of the power requirements of the Kudremukh Iron Ore complex, but also of the fuel-wood requirement of the people of North Kanara and of why all the avenue trees on the Sagar road are being chopped down. We would also think of bamboo requirements for rural housing in North Kanara, and not just turn to bagasse production for our paper factories once the bamboo stocks of North Kanara are finished. We will then plan the resettlement of refugees of the Supa dam as carefully as we plan the details of the powerhouses for the Kali hydroelectric project. It is an exciting scientific and technological challenge that deserves to be taken up.

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Synopsis

# Participatory Forest Management in India

The Common Property Resources (CPRs) such as village forests and pastures which were owned by the village communities and acted as buffers between communities and government forests, suffered heavily due mainly to their overuse and lack of management. With dwindling CPRs, the reserved and protected government forests came under heavy pressure. It was, therefore, realized that these forests cannot be managed in isolation from the communities whose livelihoods are linked to their natural resources. Participatory Forest Manage-ment (PFM) envisages people involved in halting forest degradation. The vital objectives of rejuvenating degraded forest and alleviating poverty may be achieved by actively involving local people in planning and management of their forest resources.

In India, large-scale community development programs were started in the 1960s, mainly through structural improve-ments (land reforms aimed at achieving social justice through land redistribution) and institutional interventions (block develop-ment organ-izations and Panchayat Raj institutions, i.e. village level elected councils). Area-intensive technological interventions (implemented in resource-endowed regions of northern India), based on a high input and high output agricultural strategy, were initiated in order to achieve self-sufficiency in food-grain production. This resulted in an increase in the production of commercial cereals such as wheat and paddy, at the expense of traditional and subsistence-oriented agri-cultural systems. Consequently, the CPRs were further depleted because not only were they increasingly encroached upon, but were used heavily for grazing and for the small timber required for agricultural purposes. Their commercialization resulted in the environ-mental degradation of hitherto self-sufficient village systems. The problems involved in a trickle-down strategy of rural development were, however, realized and area-specific intervention was employed. However, the earlier approach of integrated development through village-level institutions disap-peared, thereby, neglecting the role of Panchayats.

Forest-management practices, which were initially meant to supply forest produce for the use of local inhabitants, gradually shifted away from the communities. The rural communities were either bypassed by forest management or received meager attention in the form of a limited supply of forest produce. This gave rise to dualism between local people and management with respect to customary rights and concessions and to modern forest laws and forest-management planning. Although communities had rights and concessions, they had no influence or say in the management of forests. The revised National Forest Policy (1) has taken account of some of these aspects.

## PARTICIPATORY FOREST MANAGEMENT (PFM)

The concept of PFM matches the philosophy of the new National Forest Policy, 1988, i.e. that the physical goals of managing forest resources must be a means towards achieving the ultimate objective of enhancing the lives of forest dwellers. This can be achieved by involving people in the planning and management of forest resources in order to create a vested interest. On the other hand, in the past, communities could not manage the village forests and pastures entrusted to them. Recent experiences from unilateral com-munity management of natural resources on a sustained basis also proved discouraging, as discussed below.

The Forest Labour Cooperatives were formed in 1979 in the Indian State of Maharastra for working timber areas with the provision that at least 20% of the total harvest would be distributed among the members. However, the socioeconomic conditions of the laborers have not improved significantly, due mainly to middlemen taking a major part of the distributed forest produce. Almost all the Working Plans in Madhya Pradesh prescribed Nister Felling Series for the forests that were to be managed by local Panchayats. However, all these areas are now devoid of trees due to overuse. It was therefore thought that the joint management of forests, both by people and Government may prove more viable.

The Indian State of Orissa has pioneered PFM practices by formalizing the traditional community-based forest-management systems which were taken up as early as 1955. In all, 13 100 Village Forest Committees (VFCs) for the management of social-forestry plantations have been formed in the villages adopted by the Orissa Social Forestry Project. Subsequently, the Government of Orissa promulgated the resolution dated 1 Sept. 1988 to ensure the involvement of rural communities in the protection and conservation of government forests by assigning peripheral degraded forests to the local people. For this a Village Forest Protection Committee (VFPC) was formed comprising the chairman of the local Panchayat, ward members, foresters, and other members of the village community.

Various factors that influence decision-making by a VFC have been identified by Sharma (2), based on an exhaustive socio-economic survey carried out in the State. It was found that besides the household and village-level attributes, the economic environment (unemployment, poverty, labor availability, community assets, land-use patterns, etc.) and social considerations (institutional, legal and technical support) greatly influence the uptake of social forestry by the villagers. The main responsibility of a VFPC is to protect the assigned forests from illicit felling, fire, and encroachment in return for free supplies of fuelwood, fodder, and timber. So far, 6140 VFPCs have been formed in 1200 villages for the protection of approximately 1.52 mill. ha of forest.

In the Jeypore Forest Division, nearly 300 and 250 ha of forests in Bichalkota and Boepariguda Reserve Forests, respectively, have been assigned to the Patraput and Boepariguda VFPCs. In addition to the protection of assigned forests, the Boepariguda VFPC has evicted shifting cultivators through persuasion and has planted the encroached area with technical and financial support from the Forest Department. The evicted cultivators are employed in forestry works . The protected forest areas have become stocked with pole crops. The local staff conducted regular meetings with the villagers to explain the urgency of halting forest degradation. It was observed that one of the main motivating factors for people's participation was income generation, which needs to be ensured in every forestry enterprise.

The Government of West Bengal followed Orissa by promulgating a resolution dated 12 July1989. However, the socioeconomic environment of West Bengal, coupled with the dispersed Sal (*Shorea robusta*) forests with good root stocks and coppice vigor, have already resulted in the active involvement of people in regenerating the assigned degraded forests. The structural interventions being implemented by the committed grassroot cadres of the Marxist State Government have ensured the willing involvement of people through highly politicized Panchayats. Intermediate yields from nonwood forest products (NWFP) such as Sal leaves, along with early harvests from short rotation coppice crops, have ensured early income to the people. The success of PFM in West Bengal and Orissa possibly resulted in the Government of India's guidelines issued on 1 June 1990 to all the States, to promote involvement of village communities in the regeneration of degraded forests. Consequently, in many States, forests have been assigned to the village communities for their protection.

Participatory Forest Management in southern India is still in its initial stages of implementation. For instance, a formal Government Resolution has been issued in the Indian State of Andhra Pradesh. Many success stories of informal PFM practices have occurred in this State, mainly due to acute scarcity of forest produce because of scanty forest cover and increases in human and cattle population. Such examples include the VFCs functioning in Algole, Badipur, Kuppanagar, Bida, Kanna, Hotibi, Kasimpur, etc. Algole VFC in the Zaheerabad Range of the Medak district was





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visited to identify the pattern associated with a successful PFM program. The VFC has its roots in a Women Tree Grower Society established by the Andhra Pradesh Forest Department for implementing a pilot project for the afforestation of degraded forests by involving local people. The VFC was formed with 60 women beneficiaries identified mainly from the weaker sections of landless laborers. Each woman beneficiary is assigned 0.5 ha of degraded forest land to raise plantations with high biomass and fruit-bearing species. The nurseries, each having 7000 seedlings, are developed by all the members in their household backyards, for which material and technical know-how are made available by the Forest Department.

Since1990-1991, each member plants 0.5 ha annually for eight years in the Didgi Reserve Forest. The spatial arrangement for plantation is 3 m x 1.5 m (2222 seedlings per ha) with alleys of 3 m width being planted with palatable grasses such as *Stylo hameta* (used for stall-feeding milk cattle). The plantations will be harvested with 8-year rotation schemes and 50% of the forest produce will be distributed equitably among the members, in cash or kind. Six women members guard the plantations daily, occasionally assisted by men.

The integrated approach to forest development adopted for Algole village is based on a poverty alleviation strategy of developing land-based resources through people's participation. Therefore, other rural development agencies are also associated in this endeavor. A motorized borewell has been developed by the local Panchayat and the District Rural Development Agency (DRDA) has provided adequate resources for purchase of at least one cow for each member household under the Milk Cattle Scheme: 50% of the money required is provided by the DRDA, 20% is by the Scheduled Caste Corporation, and 30% as a bank loan. On an average each household sells three liters of milk per day in Zaheerabad.

Enhancement of traditional skills and the development of ancillaries are important socioeconomic externalities of the entire scheme. This will help ensure sustainability of the program after the official support is withdrawn. Provision of clearings, thinnings and intermittent yields of NWFPs is essential and should be incorporated in the plantation model. Although the members are assured future benefits, no formal tree-ownership documents have yet been distributed. A two-way flow of information between the members and staff has, however, resulted in better communication and understanding.

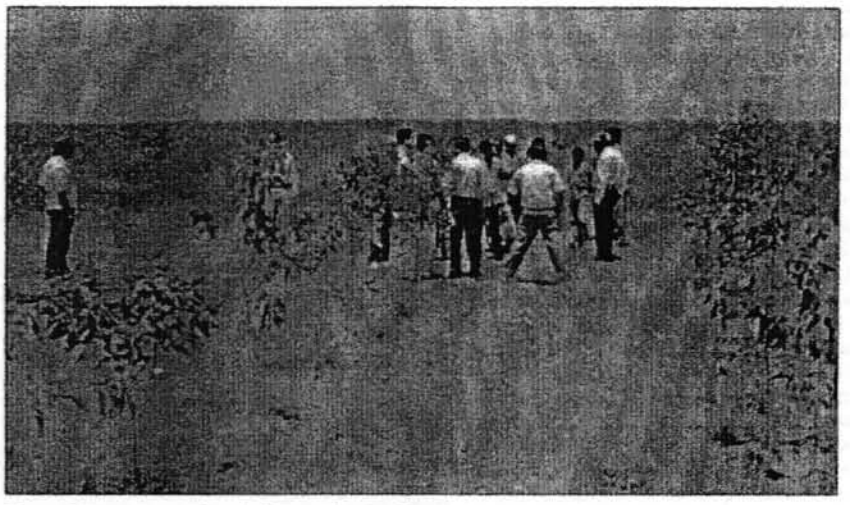
## POTENTIALS AND CONSTRAINTS OF PFM

Panchayats in Orissa (comprising 5 to 8 villages) have not been very active, whereas informal village-level organizations have evolved, particularly in tribal and uplands mainly due to favorable socioeconomic environment. But, in States such as West Bengal where representative Panchayats are still active, they have played an important role in the success of PFM. Therefore, the revitalization of moribund and fragmented institutions is necessary for the success of PFM. The association and role of VFPC, vis-à-vis Panchayat, are important aspects of PFM which need to be studied in detail.

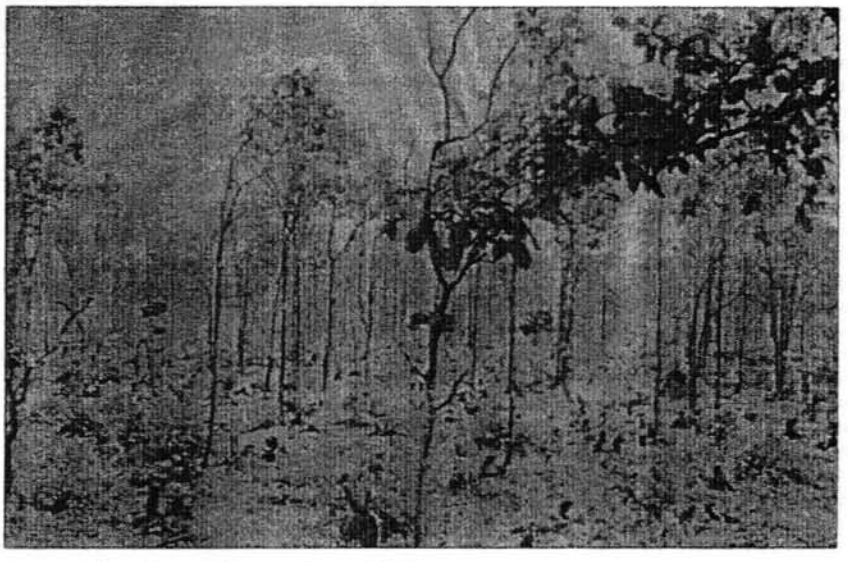
The people need to be motivated through the Forest Department or local nongovernmental organizations, by formalizing their perceptions, preferences, priorities and personal gains. This is necessary to avoid dependence, due to a paternalistic, delivery approach of the Indian development planning. Government interventions at appropriate levels may be planned in order to ensure the active involvement of women in decision- making. This is necessary in the predominantly patriarchal system of Indian, and also because women have a greater stake in forest protection.

The limited potentiality of extending benefits from extremely degraded forests may act as a disincentive to participation in PFMs. In such cases, the provision of employment, income generation, intermediate yield of grass, and other NWFPs, cleanings and thinnings, may be made to sustain people's interest. This means that forest-management practices should be designed to ensure maximum yield of NWFPs and biomass instead of timber only.

A bottom-up planning approach should be adopted by formulating "micro-plans" which should be linked to the working plans in order to formulate realistic prescriptions and operational guidelines. The productivity of assigned forests should never be compromised, as the sustainability of PFM depends on a regular flow of income to the people involved. The West Bengal experience has shown that many compromises, such as the adoption of a short-rotation coppice system, have been made which conflict with the principles of scientific forestry. The ecological succession of forests, biodiversity, and sustainability are the other important aspects which need detailed investigation in relation to PFM. A multiplicity of village-level institutions approaching the same target group in a village should be avoided by adopting an integrated approach.



**Forest Department staff and villagers involved in the forest protection efforts. Photo: R.A. Sharma.**



**Regeneration of degraded forests. Photo: R.A. Sharma.**

Lack of economic viability and legal authority may hamper effective functioning of the VFPCs. Therefore, provisions for incentives and adequate empowerment, both in terms of finance and legal enforcement are necessary. Appropriate rules should be framed for VFPCs, because vagueness about villagers' rights and responsibilities may prove counter-productive to securing active support. Ownership rights and distribution of forest produce should be formalized.

Land rights may be given to the beneficiaries in respect of barren lands controlled by the Revenue Department, as currently practiced in the Group Forestry and Farm Forestry for Rural Poor schemes in West Bengal and Orissa. In a predominantly agrarian economy such as India's, draught power has historically played an important role and a large number of cattle, fed on forest biomass through open grazing in the nearby forests, are maintained for agricultural purposes. The PFM practices may result in grazing restrictions in the assigned forests. This will necessitate the implementation of measures for meeting short-term biomass needs of the people, failing which a conflicting situation may arise between the users and forest staff: numerous such incidents have occurred in India, particularly in the management of national wildlife parks and sanctuaries where restrictions imposed on villagers' entry have often resulted in violent incidents.

The development of an adequate marketing policy and infrastructure is essential for arousing people's interest, particularly those who may be motivated to PFM for income generation through cash sale. A majority of NWFPs have been nationalized, with government agencies being designated as sole traders. This hampers free market sale by villagers who may not be inclined to sell their collected produce to the government agencies which are generally bureaucratic and formal.

**Regeneration of degraded forests. Photo: R.A. Sharma.**

Vested interests have to be developed among villagers by adopting PFM in order to rejuvenate degraded forests and pastures on which communities depended for their sustenance. This will also help improve the labor-output ratio and, hence, reduce underemployment and poverty. Although the potential of PFM is great as evident from success stories, the constraints in achieving it are substantial, if not insurmountable. Therefore, it may be essential to implement pilot projects in each agro-ecological and socioeconomic zone. The success of PFM requires enormous efforts and research, particularly in understanding the socioeconomic and technical issues involved.

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Synopsis

# The Sustainable Biosphere Project of SCOPE

The Sustainable Biosphere Project (SBP) is a new project sponsored by the Scientific Committee on Problems of the Environment (SCOPE) with two basic goals: to further understanding of the biophysical, social, and economic determinants of sustainability in ecological systems, and use the information to stimulate the implementation of policies for more sustainable resource use. To achieve this, the main tasks of the SBP are to *i*) synthesize existing knowledge of the ecological consequences of current resource practices and policies; *ii*) identify tested and potential alternatives that appear more sustainable; *iii*) design practical strategies for implementing those options; and *iv*) guide future research towards improved knowledge of resource uses and their ecological impacts.

In 1992, the United Nations Conference on Environment and Development warned that environmental problems are threatening the ability of Earth's natural systems to sustain human life. These problems stem from a continuing history of unsustainable uses of natural resources and generation of wastes, severely exacerbated by increasing human population growth. At the same time that we work to control population growth, we must find new policies and practices to produce food, shelter, and other goods, and to use ecological services such as detoxification of wastes without continuing to degrade the functioning of ecological systems and foreclosing the options of future generations. To give new options the best chance of success, we must base them on the best available scientific information: What are the ecological consequences of contrasting resource uses? and What are the social and economic factors that constrain the adoption of more sustainable alternatives? These are the questions the SBP addresses.

The key features of the Project's design are wide breadth of disciplines, range of participants, and integration of scales, facilitated by interactive processes and aimed at practical products. The Project crosses the disciplines of physics, chemistry, biology, anthropology, sociology, economics, geography, and law. Starting with the earliest steps of problem definition, it fosters cooperation between scientists, policy-makers, managers, and resource users. The combination of regional studies with local foci and a concluding synthesis explicitly builds subregional, regional, and global scales into





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# Supreme Court and India's Forests

ARMIN ROSENCRANZ, SHARACHCHANDRA LÉLÉ

The T N Godavarman vs Union of India case in the Supreme Court, also known as the "forest case", is an example of the judiciary overstepping its constitutional mandate. The court has effectively taken over the day-to-day governance of Indian forests leading to negative social, ecological and administrative effects.

In 1995, T N Godavarman Thirumulpad filed a writ petition with the Supreme Court of India to protect a part of the Nilgiris forest from deforestation by illegal timber felling.[1] The Supreme Court clubbed the Godavarman case with another writ petition with similar issues,[2] and expanded its scope from ceasing illegal operations in particular forests into a reformation of the entire country's forest governance and management. In its first major order in the Godavarman case on December 12, 1996, the court inter alia redefined the scope of the Forest Conservation Act 1980, suspended tree felling across the entire country, and sought to radically re-orient the licensing and functioning of forest-based industries. Subsequently, more than 2,000 interlocutory applications have been admitted,[3] and several hundred orders have been issued, many with far-reaching implications. But the case is still pending in the Supreme Court. In the process, the court has gone far beyond its traditional role as the interpreter of law, and assumed the roles of policymaker, lawmaker and administrator.[4]

The Supreme Court's assumption of such vast powers has no precedent, either in India or in other developing countries. While the initial orders may have been justified, the implications of this sweeping and continuing intervention by the judiciary are far more double-edged than celebratory accounts of the Godavarman case[5] suggest. Indeed, the time has come to call a halt to this judicial adventurism and focus on improving the quality of forest-related jurisprudence.

## From Reinterpretation to Execution

The Supreme Court began by reinterpreting the meaning of "forest" in the Forest Conservation Act (FCA) of 1980. The FCA essentially requires central government approval for conversion of forest land to non-forest purposes. Till 1996, the FCA was assumed to apply only to reserve forests. The Supreme Court said the act applied to all forests regardless of their legal status or ownership.[6] It also redefined what constituted "non-forest purposes" to include not just mining but also operation of sawmills. But it did not stop at reinterpreting the law for the cases at hand. The Supreme Court ordered all such non-forestry activities anywhere in the country that had not received explicit approval from the central government to cease immediately. It also suspended tree felling everywhere, except in accordance with working plans approved by the central government. It completely banned, with minor exceptions, tree felling in three whole states and parts of four other states in the forest-rich north-east. It ordered saw mills to close down not only where a complete ban was directed but even within a 100 km radius of Arunachal Pradesh's state boundary. Finally, it banned any transportation of timber out of the north-east states.

Very quickly, the court got sucked into a whole maze of administrative and management issues. Disposal of felled timber, timber pricing, licensing of timber industries, felling of shade trees, budgetary provision for wildlife protection, disposal of infected trees, determination and utilisation of the compensation paid for conversion to non-forest purposes, confidential reports of forest officers, and even painting of rocks in forests – all became grist to the Godavarman mill.[7] The court created high powered committees, authorities and a fund for compensatory afforestation. Eventually, as the number of matters coming to the court spiralled out of control (due to its own expansion of the case) it got a central empowered committee (CEC) set up under section 3(3) of the Environment (Protection) Act, 1986.

More importantly, the court insulated the committee's members from their roles as central government employees, delegated wide-ranging powers to it to dispose matters in accordance with the orders of the court, and made the committee answerable only to the court. The court has kept the case open under a "continuing mandamus" and continues to hear and dispose a large number of interlocutory applications every month. To maintain

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control of the case, it has excluded the jurisdiction of all lower courts in forest matters. The Supreme Court has become an executor and administrator of the law.

### Justification

The court's justification for such a dramatic intervention was the critical state of forest cover and the non-responsiveness of the governments concerned. Certainly, in 1996, the state of forest conservation in the country was generally poor, that indiscriminate felling (legal and illegal) was common in the north-east,[8] the FCA had become simply a procedure that still permitted large development projects to go through, and mining permits had been given out in contravention of the FCA in many parts of the country.

Forest records in the country were (and continue to be) in a mess. It is equally true that the state governments were quite apathetic in their response to the court's notices, especially prior to December 1996. The court had to use its power of "contempt" to evoke responses, and get its orders implemented. Subsequent behaviour of the state and central governments has not indicated a strong commitment to forest conservation or a carefully thought out balancing of local needs and forest sustainability. For instance, senior bureaucrats in Maharashtra state consciously violated the court's ban on sawmill licensing, eventually attracting contempt action. The response from the government of Meghalaya was simply to ask that all unregistered clan, community or individually owned forests be recognised as "plantation forests" in order to exclude them from the court's orders.

The ministry of environment and forests (MOEF) has tried to roll back the court's interpretation by proposing a redefinition of "forests" as "legally notified forests".[9] Given this state of forest governance in the country, a wake-up call was required. Not surprisingly, the conservationist community in the country has been generally very enthusiastic about the court's intervention. Many see the CEC and the Supreme Court as the only conservation-minded elements in the state apparatus today.[10]

### Overstepping Its Bounds

But is this level of intervention by the judiciary in the day-to-day governance of the country's forests constitutionally defensible?[11] While the doctrine of separation of powers does not find explicit enunciation in the Indian Constitution, the court has over the years elevated the separation of powers to the basic inviolable structure of the Constitution in the landmark judgment in Kesavananda Bharati vs Union of India. The judiciary's role is therefore primarily one of interpreting the law, resolving contradictions between laws and with the Constitution, and protecting the basic structure of the Constitution.

At the same time, the Indian Constitution endows the judiciary with certain extraordinary discretionary powers and powers of judicial review. Moreover, the court has innovatively read the right to a healthy environment into Article 21 (right





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to life) and thereby equated it to a fundamental right. The court's orders in the Godavarman case could therefore be justified by arguing that to enforce the right to life, the government has the legal responsibility to effectively conserve forests and protect biodiversity. The government's past inaction can be viewed not as exercises in executive discretion, but as violations of statutory responsibilities, and therefore of the law.

There is, however, ample basis to argue that, in its zeal to protect the right to a clean environment, the Supreme Court has, through a series of measures, strayed far beyond even this fuzzy boundary between the judiciary and the executive. Firstly, it has gotten involved in micromanagement to a level that simply cannot be considered as falling within its purview – whether it is defining the value of forests across the country, banning the transport of timber, determining the location of sawmills outside forest lands, or giving permission for pruning of shade trees in coffee plantations. Secondly, it has created a quasi-executive structure (the CEC) that, while legally notified, functions in a manner that is at complete odds with the separation of powers, since it is nominated by and reports only to the court. Not surprisingly, the court eventually had a confrontation with the MOEF, which sought to exercise its statutory right to constitute the forest advisory committee under the FCA, an issue that still remains unresolved.[12]

Thirdly, the court has extended its assumption of powers beyond any reasonable time frame. The notion of "continuing mandamus" is not envisaged by the Constitution. Its past use by the court has been carefully calibrated and justified for "extraordinary cases" where the court wanted to ensure that the execution of its orders was not being tampered with, not to interfere in the other functions of the executive.[13] In the Godavarman case, however, the court has kept the case open for more than 11 years now, during which it has essentially administered the law – deciding on applications that would normally be dealt with by the executive – thereby breaching constitutional limits.

Finally, there are severe practical limitations to what the court can actually do. The courts of India do not have the resources or the capacity to investigate and ensure implementation of orders that go beyond individual cases. Enforcing orders even in individual cases has proved hard enough, as in the Bandhua Mukti Morcha case.[14] The irony lies in the fact that the court itself has recognised that it has "no means for effectively supervising and implementing the aftermath of [its] orders, schemes and mandates... Courts also have no method to reverse their orders if they are found unworkable".[15]

## Mixed Outcomes

It is not even clear that the ends justify the means – that the outcomes justify this heavy-handed and continuous intervention in forest governance. The results are mixed, at best. Certainly, many irregularities in the implementation of the FCA have been brought to light and many illegal activities have been shut down. Dramatically increasing the value of compensation to be paid for converting forest to non-forest may act as a deterrent to commercial interests who want to convert forests into tourist resorts or golf courses. For the first time, some states, such as Bihar, actually examined how many sawmills their forests could sustainably support, and brought their licensing policy in line with this capacity. Moreover, by entertaining so many interlocutory applications, the court has given greater access to the decision-making process on forests than the MOEF or state governments typically gave. And there is willy-nilly greater "transparency" in the procedures through which the conversion of forest to non-forest takes place, since much of them are discussed in the court or in CEC hearings.

But the Godavarman orders have also had many negative impacts, socially and even ecologically, and certainly governmentally. The ban on felling severely hurt local forest owners, labourers and forest-based industries (many locally owned) in the north-east. The ban has perversely led to trees being felled for charcoal or firewood, since the ban was only on felling for and movement of timber. [16]

The Supreme Court triggered a series of mistakes in the MOEF's handling of the question of forest encroachment. The court-appointed amicus curia (in this case Harish Salve) suggested that states were allowing encroachments despite the court's directives. Motivated by the Supreme Court's attention to the matter, the MOEF unilaterally issued a directive on May 3, 2002 to all states requiring that they summarily evict all illegal (post-1980) encroachers on forest land, and to complete the process by September 30, 2002, ie, five months.[17] This directive was both impracticable, given the magnitude and complexity of the encroachment issue, and also completely in contradiction with the MOEF's own earlier (1990) detailed guidelines of how such matters should be dealt with.[18] The May 2002 MOEF circular led to a series of ruthless and often substantively unfair evictions in various parts of the country, sparking protests and hardening attitudes against the court and the state in tribal areas already under the influence of Naxalism.

The Godavarman case has also led to further concentration of power in the centre vis-à-vis the states. Working plans, even for individually owned forest patches, must now be centrally approved. The CEC has enormous investigative powers, making it a super-sleuth in forest matters. The MOEF has been in conflict with the court on certain matters such as the constitution of the forest advisory committee, but it is also the only other agency through which the court can implement its orders, and thereby has increased its role vis-à-vis state forest departments. And yet, many of the court's orders remain unimplemented or shabbily complied with. Working plans have been hurriedly prepared, but forest records still remain a mess.[19] The capacity of the MOEF or state agencies to better execute the FCA has probably atrophied, as all their attention is diverted towards either circumventing or zealously anticipating the court's orders. And permissions for development projects such as mining and large dams are being granted under the FCA, while well-defined forest use rights to local forest-dwelling communities are being withheld.

## Faulty Jurisprudence

The Godavarman case offers strong evidence to suggest that judicial overreach not only hurts the process of governance



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by undermining the role of the executive, but also the content of governance by producing flawed judgments, i e, interpretations of the law that are both unsound and impracticable. This happens for several reasons, including inadequate application of mind in the hurry to produce "landmark" judgments, and the impossibility of a central court knowing the complexities of conditions and laws across such a diverse country.

The problem starts with the expansion of the definition of forest. There is no doubt a lot of ambiguity in the FCA about whether it applies only to reserve forest. It is also true that there are many parcels of land in the country that are densely forested but by some quirk of the settlement process have been classified as revenue land, and that these lands have therefore evaded the FCA. But by the same token, many hundreds of thousands of hectares of legally notified forests, especially in the central Indian tribal belt, have been under continuous cultivation for several decades or more due to faulty settlement processes – an anomaly that the court simply did not recognise and that has finally led to the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Rights) Act 2006. In other words, rationalising the boundaries of "forests" will require notifying some revenue lands and de-notifying some forest lands whereas the court ordered that legally notified forests would continue to be under the purview of FCA.

Moreover, operating on the basis of physical status is eminently impracticable – what is required is a proper reinvestigation and resettlement of the boundaries. Additionally, drawing a sharp and simple distinction between forest and non-forest is counter-productive in a country that has enormously varied land use practices, including "fuzzy" land uses such as shifting cultivation.

The problem is compounded by the court's misinterpretation of what constitutes "non-forest" purposes. All over the world, "forestry" includes logging. Sawmills are an essential component of such forestry. To equate sawmills with mining, as the December 1996 order does, is really extreme. There is nothing then to prevent basket weaving or 'bhabbar' (a kind of grass) grass rope-making from also being declared as non-forest activities, and thereby requiring central approval. To further ban sawmills from being set up in a radius of 100 km from the Arunachal Pradesh state boundary – on any kind of land – is an astonishing interpretation of the mandate of the FCA.

One final example of poor jurisprudence is the court elevating working plans to a status that is neither tenable legally nor substantively. Nowhere in Indian forest law is there a requirement that working plans be approved centrally. The FCA is about regulating the conversion of forest to non-forest. Working plans are meant for management of forests as forests – whether for timber, firewood or wildlife. The FCA does not require central regulation of such management.

The whole idea that making a centrally-approved working plan will ensure conservation or sustainable use of the forest is highly questionable. Working plans are a legacy of colonial forestry, systematised ways of "working", i e, exploiting forests. Colonial and post-colonial forest departments did not manage forests for the purpose of either biodiversity conservation or local needs – forest management objectives that are now considered higher priority than commercial forestry, under the National Forest Policy 1988. The same policy also emphasised the idea of participatory forest management. It is a cruel irony that the court should deify the bureaucratic device of the working plan while the government is talking, however half-heartedly, of community-based micro-plans for forest management.

## Backing Off

The Supreme Court has played an important role in increasing awareness about the sorry state of forest governance in the country. But it cannot – constitutionally or practically – manage India's forests. It may be tempted to take on the tribal act, about which much misapprehension has already been created by the conservationist lobby. But it would have to tread very carefully, as this law attempts to redress a genuine anomaly in the settlement of forest boundaries in the country. The court should move towards closing down the Godavarman case and, if necessary, invoke the constitutional duty of the state (under section 48A) to prepare comprehensive legislation for a more decentralised, locally sensitive and sustainable use-oriented forest governance system.

NOTES

1 W P (Civil) No 202 of 1995, T N Godavarman Thirumulpad vs Union of India, Supreme Court of India; Down to Earth, 'Interview between TN Godavarman Thirumulpad and Surendranath C', August 31, 2002.
2 W P (Civil) No 171 of 1996, Environment Awareness Forum vs State of Jammu and Kashmir.
3 Based on Forest Case Update Oct 2007 (http://www.forestcaseindia.org/f14/Iss%2039%20Oct%2007.pdf).
4 *Down to Earth*, 'Deep in the Woods', January 15, 2003, at 1.
5 Eg, Ritwick Dutta and Bhupender Yadav, 2005, Supreme Court on Forest Conservation, Universal Law Publishing Co, Delhi.
6 T N Godavarman Thirumulpad vs Union of India (1996), 9 SCR 982.
7 See Dutta and Yadav, 2005, op cit for details.
8 Even critics of the court's decision to ban felling in the north-east have recognised that tribal, clan and private forests were not always sustainably managed, although they have argued that much of this helped local peasants improve their conditions, send their children to college, etc. See Dev Nathan, 2000, 'Timber in Meghalaya', *Economic & Political Weekly*, January 22, 25(4): 182-86 and Tiplut Nongbri, 2001, 'Timber Ban in North-East India: Effects on Livelihood and Gender', *Economic & Political Weekly*, May 26, 36(21): 1893-1900.
9 Debarshi Dasgupta, 2007, 'Lumberjack's Law: Will an Effort to Define Forests Open Them up to Commercial Use?' *Outlook*, December 17.
10 Dutta and Yadav, 2005, op cit, p xii.
11 For more details, see Armin Rosencranz, Edward Boenig and Brinda Dutta, 2007, 'The Godavarman Case: The Indian Supreme Court's Breach of Constitutional Boundaries in Managing India's Forests', *ELR News & Analysis*, 37: 10032-10042.
12 See *Forest Case Update*, Issue 38, September 2007 on www.forestcaseindia.org.
13 Vineet Narain vs UOI, 1998, SCC 226.
14 Bandhua Mukti Morcha vs UOI (1984), 3 SCC 161.
15 P Ramachandra Rao vs State of Karnataka, AIR 2002, SC 1856.
16 See Nathan, 2000 and Nongbri, 2001, supra note 8.
17 MoEF, Circular No 13-1/90-FP.
18 *Down to Earth*, 'Deep in the Woods', January 15, 2003.
19 Madhu Ramnath, 2002, 'Meghalaya: Impact of ban on Timber Felling', *Economic & Political Weekly*, November 30, 37(48): 4774-76.





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**Reference:** Clare Barden (1994), 'Combating the Illegal Timber Trade—Is There a Role for ITTO?', in Helge Ole Bergesen and Georg Parmann (eds.), *Green Globe Yearbook of International Co-operation on Environment and Development 1994* (Oxford: Oxford University Press), 55–65.

# Combating the Illegal Timber Trade—Is There a Role for ITTO?

*Clare Barden*

## Introduction

Illegal activities are rife within the international timber trade. Excessive profits are being made throughout the world by companies and individuals who openly violate or surreptitiously evade the laws of the country in which they are operating. These profits do not come cheaply. In financial terms costs are felt by governments which lose important revenue from the forest sector and sometimes also by traditional forest owners. But the costs cannot be measured solely in financial terms. Illegal logging can undermine efforts to manage forests and can lead directly to catastrophic environmental disruption. The impact of *any* logging can be severe for people who depend on the forests for their continued survival. When logging is practised illegally, these social consequences can be even more serious.

### *What Constitutes the Illegal Timber Trade?*

Illegal practices follow similar patterns throughout the world, but the exact nature of illegalities will vary from country to country and even from region to region within the same country, depending on the legislation governing the timber trade in different areas. To understand the problems of illegal trade it is necessary to examine the type of legislative framework in which the timber trade should operate.

International laws or restrictions have some influence on the trade, particularly the Convention on Trade in Endangered Species of Wild Fauna and Flora (CITES). At the moment a number of tree species are listed in the CITES Appendices and there are moves to increase this number. But by far the greatest potential to control the trade resides within national legislation and forest policies.

The exploitation and trade of timber is governed by a complex set of rules that are enshrined in national legislation. The general aims of these rules are to ensure that the government benefits from the timber trade through royalties, taxes, export duties, and other fees, to avoid unnecessary environmental damage, and often to increase value-adding processing of timber products within the country.

In industrialized countries forest ownership is split between private and public ownership, whereas in developing countries much of the forest area is under public ownership. However in some countries, for example Papua New Guinea, forest ownership and timber rights are accorded to the customary owners, and they are able to negotiate contracts directly with logging companies.[1]

Governments can exercise some control over the harvesting of trees and the subsequent trade in timber, whether this takes place on government, private, or traditionally owned land. In private forests logging may be carried out by the resource owners but the logging will probably be subject to government guide-lines. Public forests are usually logged by commercial companies which obtain concessions from the government and are obliged to pay the government a variety of charges in exchange for access to timber stands. These charges may be related to the size of the concession, the volume and/or value of timber removed, or to other variables.

Concession agreements will include a number of stipulations which should cover the size and location of the area to be logged, the duration of the agreement, the minimum diameter of trees to be felled, species which can or cannot be taken, environmental safeguards such as maintaining buffer strips along streams, and royalty rates and other fees.

Once timber has been felled it may be processed into sawn timber or other products within the country and then sold either on national markets or exported. Alternatively it can be exported as raw logs, to be processed overseas. In some countries, usually but not exclusively developing countries, the predominance of log exports has reduced the value received from in-country processing. Governments have attempted to alter this situation through a variety of incentives and restrictions. They may subsidize local industries, set quotas for the export of certain commodities such as logs or rough sawn timber, or completely ban their export. Restrictions imposed by exporting-country governments are not necessarily reciprocated by importers, thus enabling the import of timber which has been illegally exported.

Details of all timber shipments should be made available to government officials as all timber which is exported, whether it be from public or private forests, may be subject to taxes and these may differ according to species and the degree of processing.

There are few, if any, restrictions on the import of timber which have a legislative basis. In many countries concerns over unsustainable timber supplies have prompted voluntary boycotts of tropical timber, and in time these may be backed up by a legally enforceable selective ban.

### *Illegal and Unsustainable Timber—Are they One and the Same?*

The concept of sustainability is central to the timber trade. The necessity of sustainable forest management, which not only ensures a continuous supply of timber but also protects

wildlife and benefits local people, is widely recognized both within and outside the timber trade. However, despite this recognition sustainable forest management is more a question of theory than practice at the moment. A survey commissioned by the International Tropical Timber Organization (ITTO) revealed that the amount of tropical moist forests being managed sustainably was 'negligible', being less than one-tenth of 1 per cent of the total area being exploited.[2] In the temperate forests of the world, where it is often assumed forest mismanagement is less of a problem, forest degradation is widespread.[3]

Whilst it is fair to say that illegally produced timber can be considered unsustainable, the reverse is not the case, and legally produced timber is not necessarily sustainable. The elements which are essential for forest management to be sustainable are complex, and although adhering to legal requirements may fulfil some of these elements it is unlikely that legislation will be tight enough to ensure sustainability.

As mentioned previously, national legislation governing logging varies from country to country. In some countries the forest laws provide a comprehensive framework of social and environmental safeguards, and if enforced would give a good base for controlling logging. In other countries, laws are less comprehensive; for example, in many African countries 'quite a few of the elements that need to be part of the logging process, if forest management is to be sustainable, are not even mentioned in the present concession agreements'.[4] In other countries the present legislation actually makes sustainable forest management illegal.

### *The Main Problems*

Illegalities can occur at any stage along the timber-trade chain (see Table 1), from before an agreement is signed to the import and sale of timber in an importing country. Generally the aims behind illegal activities will be to either fell and/or export a greater volume (or value) of timber than authorized, pay less charges to the government or other forest owner, and to circumvent harvest or export restrictions.

Sometimes activities may not be strictly illegal but may be 'better described as fraudulent; trying to get around government restrictions and certainly going against the spirit of government policy and objectives. Another problem is that these types of activities seem to provide fertile ground for bribery and corruption, at all levels, both within and outside government'.[5]

### *The Scale of the Problem*

Given the underground nature of the illegal trade, its true scale can only be estimated. Most information on the illegal trade is available from countries which have taken the greatest action to stamp it out. Illegal trade spans the globe, but much of the international attention has focused on the big timber-producing countries of South-East Asia, as they have dominated the tropical timber industry over the last few decades. Both national governments and national and international non-governmental organizations (NGOs) have investigated the illegal trade in many of the countries in this area.

A recent report by TRAFFIC International, the wildlife monitoring arm of the World Wide Fund for Nature (WWF)

**Table 1. The main types of illegal activities, showing at which stage in the timber trade these occur.**

During Logging
- Logging without authorization.
- Logging outside permitted areas.
- Logging in Protected Areas.
- Felling protected species.
- Breaking conditions of logging contract or logging guide-lines, e.g.
  - logging in stream buffer zones;
  - logging on steep slopes;
  - unsatisfactory roading;
  - felling of undersized trees;
  - felling only some of mandatory species (high-grading).
- Non-payment or underpayment of royalties or other charges.
- Illegal re-entry into logged areas.

During Export
- Unauthorized export.
- Export of illegally felled timber.
- Export in defiance of trade ban or quota.
- Misdeclaration of shipments to reduce taxes, e.g.
  - under-grading of timber;
  - under-declaration of volume/quantity;
  - under-valuing price of timber;
- Export of CITES Appendix 1 species.
- Misclassification of species (to avoid higher taxes etc., to circumvent species-specific harvest, to gain market access for lesser-known species).

During export and import
- Transfer pricing.*

During Import
- Import of illegally exported timber.

During Retail
- Retail of illegal timber.
- Advertising of timber using false claims.

*Note*: *Transfer pricing is a widespread practice that occurs when colluding companies control the export and import of timber. At export the timber is priced at less than the market price, it is sold to a company in an intermediary country, and then sold on to the importing country at the full value. This practice of transferring pricing may have several aims, including tax-evasion or to transfer profits out of a developing country to a developed one, but ultimately the aim is to maximize profits which are shared amongst all participants but which may be retained in the intermediary country.

*Source*: Debra J. Callister (1992). *Illegal Tropical Timber Trade: Asia–Pacific* (TRAFFIC International—Headquarters of the TRAFFIC Network, the wildlife trade monitoring programme of WWF and IUCN).

and the World Conservation Union (IUCN), has collected information on illegal trade in the Asia–Pacific region.[6] This report concluded that 'reliable figures on the scale of the illegal trade are neither widely available nor easy to obtain', but that the results of the investigation pointed to illegal activities on a 'massive scale'.[7] The report found evidence of illegal trade in all countries in the region heavily involved in the timber trade. The estimated costs of the illegal trade, though extremely difficult to measure, run into millions and even billions of US dollars over the last decade. In Indonesia the World Bank estimates that US$1.2 billion were lost between 1980 and 1985 in forestry taxes that were not paid. Here the Ministry of Forestry reported that 55 per cent of concession-holders were breaking forestry regulations in 1989 and 37 per cent in 1990, though the true figure may be higher.[8]

The literature on illegal trade is dominated by accounts of malpractices in both exporting and importing countries involved in the timber trade in South-East Asia. A wide range of malpractices have occurred and continue in the region, with some countries being particularly prone to certain activities. In the Philippines, though there have been examples of nearly all illegal forestry activities, the most prevalent problems are log smuggling and illegal logging. The scale of the illegal trade has been reported as 'quite staggering'.[9] Even though forestry charges were very low, illegal felling and corruption in the Bureau of Forestry Department was rife during the early 1980s.[10] The extent of the violations was revealed following the downfall of the corrupt Marcos regime. Subsequently the government has cancelled concessions and introduced a log-export ban, but illegal logging continues.[11]

In Papua New Guinea, a government-instigated inquiry has provided some of the best-documented accounts of timber-trade malpractices. Started in 1987, the final report produced two years later revealed a forestry industry out of control, in which illegal activities were routine practice. Transfer pricing (see note to Table 1) was shown to be endemic and costing the government millions of dollars. The dealings of twenty companies were examined in detail and this showed that not one of the companies investigated by the Commission has a satisfactory record.[12] Judge Barnett, the chair of the Inquiry, provided many recommendations to stem the illegal trade, but many have not been followed and it is reported that the situation may now be worse than before.[13]

There is also substantial information on the illegal trade in Africa, especially in the countries of West Africa, which have been major timber exporters. As yet there have been no comprehensive accounts of the situation, though TRAFFIC is planning to release a report on the illegal timber trade in Africa. A Friends of the Earth report details the extent of malpractices on the Ghanaian timber trade in the 1980s. It describes the effects of a Structural Adjustment Programme which was intended to boost the flagging economy through a revitalization of the export timber industry. In 1987 an investigation of all aspects of the industry and trade was undertaken by the Timber Sub-Committee of the National Investigation Committee in response to reports of irregularities within the timber trade. It has been found that 'corruption, fraud and malpractice took place on the back of a massive injection of aid and credit from international development agencies'.[14] An estimated $59 million left the country illegally, with transfer pricing being a popular method through which illicit profits could be exported from the country.

As South America is becoming a more important timber exporter so the spotlight of international concern is falling on trade practices within the continent. In Brazil, an exposé on the mahogany trade has alleged that timber cutters are illegally infringing on Indian reserves. Companies use a variety of tactics to access the stands of mahogany, which due to overcutting in other areas are amongst the few remnants of commercially exploitable forest. Sometimes deals are struck with Indians after various forms of persuasion, coercion, or blackmail; at other times the cutters just take the timber without any permission.[15]

The illegal trade in temperate countries has attracted much less interest than in tropical countries. This is because illegal trade is less prevalent, or at least less blatant. Control over forestry operations is generally much greater in industrialized countries than in developing ones, and illegalities, when discovered, are usually stopped. However, timber companies use bribes or sweeteners to secure logging deals with favourable conditions in temperate forest areas. This is thought to be particularly widespread in the former Soviet Union. In Russia, which has 95 per cent of the former USSR forest reserves, there has been a dramatic upsurge in timber exports, 'often through the use of bribes'.[16] Here the situation resembles that found in many developing countries, with poorly paid government officials trying to police a large public forest estate which is being logged by multinational corporations.

Illegalities in importing countries are less well documented, although in the United Kingdom there have been several allegations, and even a seizure, of timber believed to be illegally imported. One of these allegations concerned the import of sawn timber from the Philippines. Though banned from export there are no reciprocal arrangements in the United Kingdom, and so the import can be considered legal.[17] The seizure was of a timber from Chile known as Alerce (*Fitz-Roya cupressoides*), which is listed on CITES Appendix I and hence banned from international trade but which was being openly sold in the United Kingdom.

It is impossible to quantify the scale of the illegal timber

trade or to determine the extent to which different malpractices are conducted. However, it is clearly an immense problem which is costing governments and other forest owners millions of dollars and which is undermining efforts to manage forests sustainably.

### *Factors Which Are Conducive to the Illegal Timber Trade*

In many countries there are physical, legal, economic, and political reasons why the illegal timber trade continues to flourish. Illegal activities may continue unchecked because they are undetected, ignored, condoned, or covered up by governments or individuals within government.

The exploitation of timber is spread over vast areas. Large tracts of forest are opened up, often in very remote areas. In public forests control of logging has to be done by the government, but poor access and communications mean that effective control is virtually impossible without substantial investment in the enforcement capabilities of the forestry service.

Throughout the world, especially in tropical countries, forestry departments are accorded a low priority and are under-staffed and under-resourced. As a result, they are incapable of adequately checking logging operations in the field. Field staff positions are often considered to be low-ranking jobs and field officers may be poorly paid and without transport. They may have to rely on logging companies to take them to the forest, and this reliance may jeopardize their impartiality, especially when there are inducements from a company to turn a blind eye to certain activities.

In many countries the timber trade makes a significant contribution to the national economy. However, forests may be seen as a source of standing capital which can be liquidated to provide short-term financial gain rather than as a potentially renewable resource. This short-term view is often reflected within legislation and policies. Logging agreements are usually issued for a number of years, long enough to harvest all the standing timber but not long enough to allow a second or third cut. A company which has a licence, which lasts just a few years, has no security of tenure and no interest in the future of the forests. Economic pressures encourage rapid exploitation, with a minimum of restrictions to maximize the return on the up-front costs which precede logging.

The economic imperative is, of course, very important to companies involved in the timber trade. For many companies this does not mean that they operate illegally, but the desire to increase profit margins can encourage the bending or breaking of laws which reduce financial return. The stricter the legislation, the greater the incentive to try to overcome the regulations. Where companies control many stages within the timber-trade chain the opportunities for illegalities are increased.

Where timber constitutes a major proportion of foreign-exchange earnings or gross domestic product then governments may be unwilling to impose tough sanctions on companies which are known to be breaking the law. This reluctance to rock the boat in order to safeguard economic and political stability may result in the loss of significant income. All too often the political will needed really to crack down on the illegal trade is absent. Additionally, there are often individuals within government who stand to gain personally from continued illegal operations. In many cases politicians hold positions of influence within logging companies, often sitting on company boards. Forestry staff may find that they are unable to examine logging operations closely because of this political influence.[18]

The illegal timber trade continues because too many people stand to gain from maintaining the *status quo*. Timber companies can make windfall profits, and as long as some of these profits are distributed to the right people, then they have little to fear in terms of fines or suspension of licences. Complicity on the part of government officials at all stages of the chain can be achieved through well-placed unofficial payments or other benefits. Reluctance to take action by the government can be partly attributed to inertia, partly to lack of resources, but mainly to a fear of clamping down too severely on a vital source of income, either national or private. The driving force behind the illegal trade is the international timber market, where price is all-important. At present there is little transparency in the timber trade and consumers have no way of knowing whether they are purchasing legally produced timber or are, in effect, buying illicit goods.

### *Responsibilities for Action—A National or International Issue?*

Ultimately, responsibility for halting the illegal timber trade falls on national governments in timber-producing countries. Only through changes in legislation, or through better enforcement of existing legislation, will the situation improve. But to lay sole responsibility at the feet of producer countries is to overlook the responsibilities and potential contribution of other interest groups.

Importing countries and consumers have a responsibility to ensure that their demand for timber is not fuelling the illegal trade. At the moment import regulations tend to be lax, and once timber has left its country of origin, it is extremely difficult to know if it has come from a legal or an illegal source. More reliable information on the origin and legality of timber imports would allow consumers to choose timber from a legal source. Additionally, developed countries could assist less developed countries through bilateral aid

programmes to enhance the efficiency of their policing of the timber trade.

The trade itself also has an important role to play. Though much of the timber industry is law-abiding, there are many companies which are caught up in the illegal trade, and the track record of the timber trade has so far shown it to be incapable of self-regulation. More openness within the trade and a greater scrutiny of timber suppliers from importers and retailers could help reduce breaches of the law.

International agencies could also have a strong influence. Their role could be multi-faceted: by providing a forum for exchange of information on trade restrictions and timber prices, supporting national efforts to investigate illegalities or to reform the trade, increasing international restrictions on the timber trade, or by providing a market-led incentive scheme which would encourage a law-abiding trade. The current success and future prospects for fulfilling these possibilities will be discussed in the rest of this chapter.

## International Response

To date, there has not been an international response specifically to tackle the problem of the illegal international timber trade. However, there are many international organizations and agreements which have a bearing on forests and the timber trade. These include the Tropical Forestry Action Plan (TFAP), the International Tropical Timber Organization (ITTO), the UNCED Forest Principles, and CITES. From this list, the latter two apply to forests in both tropical and temperate countries, whilst ITTO and TFAP are both restricted to tropical forests, reflecting the greater international concern that has surrounded the demise of the world's tropical forests and the implications for people and the environment.

### *The International Tropical Timber Organization*

ITTO is the only body which is directly and solely concerned with the international tropical timber trade. The organization was set up to administer the International Tropical Timber Agreement (ITTA), which after lengthy negotiation came into force in 1985, fifteen years after the first formal suggestion of an agreement. The ITTA is a commodity agreement negotiated under the United Nations Conference on Trade and Development, and which aims to promote and diversify the international trade in tropical timber and also to increase producer countries' share of the benefits.[19] In this respect the agreement was much like any other commodity agreement, such as those concerning jute or coffee, but unlike the others the bulk of the raw material was obtained not from managed plantations but from natural ecosystems, which were rapidly declining in extent.[20]

The central importance of conservation of the natural resource was recognized and incorporated into the Agreement's objectives. Objective *h*, the unique clause, spelt out the need for the development of national policies aimed at sustainable utilization and conservation of tropical forests.[21] This commitment has been further elaborated by the adoption of Target 2000 by the members of ITTO, which is a statement of intent that by the year 2000 all international trade in tropical timber should be based on supplies from sustainably managed forests.

The ITTA does not explicitly address the question of the legality of the trade, but if the commitment to the promotion of sustainable timber production is to become more than a paper promise, the thorny issue of the illegal timber trade must be tackled. Additionally, another of the objectives of the ITTA is to 'improve market intelligence with a view to ensuring greater transparency in the international tropical timber market'.[22] Clearly if the ITTO is to fulfil the mandate laid out in the ITTA then it must gather and disseminate information on the illegal trade, and it must encourage action to overcome the hurdles to Target 2000 presented by the illegalities within the trade.

In its six years of life ITTO has failed to take the illegal-trade problem seriously. This may seem surprising considering that attainment of Target 2000 will be impossible without significant reforms in the tropical timber trade throughout the world. But it is less surprising when the political nature of the issue, the consensual form of decision-making at ITTO's biannual meetings, and the lack of power wielded by the organization are considered.

### *Politics, Projects, and Policy*

The tropical timber trade is central to the concerns over the fate of the world's tropical rainforests. The trade is one of the causes of tropical-forest degradation, but conversely is a potential means to conserve the forests (if good forest management is practised). Calls for boycotts or bans by NGOs in developed countries have encouraged tropical-timber exporting countries to become protective of their timber industries. Attempts to impose standards of forest management and conservation on tropical countries have been interpreted as a throwback to imperialism, which is all the more intolerable considering that many developed countries have cleared most of their own forests and mismanage much of what is left.

The potential role of ITTO has been perceived in different ways by tropical-timber producing and consuming countries.

On the one hand, producer countries want to encourage greater in-country processing and to improve terms of trade and the structural conditions of the trade, so that they receive a fairer price for their timber. In contrast, the consumer countries tend to want to ensure their future tropical-timber supplies and to improve the management of the tropical

forests in order to conserve forest biodiversity and benefit local people. This dichotomy has produced in ITTO an organization that is torn between two somewhat conflicting aspirations. The result has been the creation of an organization which has two functions: to debate policies and to fund projects.[23]

The fifty members of ITTO meet twice a year to approve project proposals and discuss policy issues. Projects, although processed through an international organization, are usually bilateral arrangements and should directly contribute to ITTO's objectives. Discussion of projects has come to dominate the meetings, marginalizing the more politically charged policy debates. But even within the project side of the organization, political rather than technical, social, or environmental aspects are often paramount, and there has been growing disillusionment and criticisms from NGOs on the project cycle. Many projects have been approved which have little if any relevance to the overall objectives of the organization and have not helped the attainment of Target 2000. Some projects have been approved which do not even relate to the tropical-timber trade.[24]

The scope for ITTO to make a meaningful contribution to policy issues and to achieve real change on the ground has always been constrained by the organization's mode of operation. Although complex voting structures exist, in which votes are weighted to reflect the importance of countries as producers or consumers of timber, in practice voting has never taken place and decisions have always been reached through consensus. Continuing dialogue between producers and consumers, a main aim of ITTO, has been achieved only at the expense of avoiding many of the contentious issues which must be dealt with if the trade is to become sustainable. 'The wider problems facing the trade in tropical timber—such as intra-regional competition, inequitable prices, as well as rampant corruption and other malpractices—have been totally ignored.'[25]

Decisions, once agreed, are made in the form of Council Resolutions and Decisions. Far from prompting national action, many of these decisions, once made, are forgotten. As ITTO does not have any powers of enforcement or sanction it cannot take action against countries which do not fulfil the obligations to which they have agreed. For example, at the tenth council meeting in May 1991 countries agreed to report on their proposed progress towards the 2000 target at the next meeting. Only seven of the then forty-seven members produced any response, and most were simple reiterations of existing government policies.[26]

ITTO's powerlessness in the face of an ever-worsening situation is directly related to the political nature of the tropical-timber trade and the absence of any real influence over national policies. Without powers of sanction it is argued that ITTO is little more than a talking-shop.[27] Many governments claim that their response to the problems of the tropical-timber trade is membership of ITTO, and so not only is ITTO failing to reach its own objectives but it is also providing an excuse for inaction at the national level. A monitoring role has been suggested for ITTO, and the idea of labelling timber was discussed back in 1989, but at the time ITTO rejected the labelling concept without any detailed studies into its feasibility. At the fourteenth meeting in Kuala Lumpur the topic was again raised in response to a report on the links between the international timber trade and sustainable forest management.

### *So what could ITTO be doing?*

Despite the constraints upon ITTO acting in any sort of regulatory fashion, there is a range of actions which ITTO could undertake or facilitate to help limit the illegal trade.

There have been suggestions that the political deadlock between 'producers' and 'consumers' might be alleviated if the organization became truly international, and applied to all of the timber trade, both tropical and temperate. Whether this alone would make the organization any better able to tackle the illegal-trade problem is unclear. But certainly the organization could be seen to be more even-handed.

A clear statement on the need for action and the seriousness of the illegal trade would send a sharp message to producer and consumer countries that action must be taken. Such a statement could be backed up with a series of programmes aimed at the international, bilateral, and national levels.

ITTO can bring attention to the prevalence of the illegal timber trade and its effects on the management of forests in tropical countries. ITTO as a high-profile organization could act to focus attention on this area which has up till now been ignored. The TRAFFIC report on the illegal trade in the Asia–Pacific region was presented to the ITTO meeting in November 1992. The report, which recommended actions which should be taken by ITTO, provoked much discussion and interest, but there has as yet been no follow-up action by ITTO.

Furthermore, ITTO has scope within its remit to collect and disseminate market information, including statistics on timber prices, volumes of traded timber, and production capacity. This aspect of its work has been rather poorly carried out, and even basic data is either unreliable or has not even been collected. Much of the blame for the deficiency must be borne by members who should provide the relevant statistics, rather than by ITTO itself. But ITTO could assist countries to provide more reliable information and could also encourage and assist investigations into the illegal timber trade.

ITTO could also disseminate information on trade bans and restrictions which have been imposed by producer countries. The regulations governing the export of logs and timber products vary from country to country, and there is no

centralized system by which importing countries can find out what restrictions exist. Without reciprocal trade restrictions to match those of exporters, consumer countries can legally (according to their own legislation) import illegally exported timber.

ITTO could not, however, impose trade restrictions itself, as this is something that has to be done at the national level. As well as trade bans to favour in-country processing, there is growing interest in selective trade restrictions which would favour sustainably produced timber. Currently any such restriction would contravene the regulations of the General Agreement on Tariffs and Trade. Exemptions to the GATT regulations can be made by an intergovernmental commodity agreement such as ITTA and it could seek a waiver to GATT regulations for measures which contribute to forest conservation.

At the field level ITTO could, through its project work, promote bilateral aid projects which directly seek to increase the enforcement capabilities of national forest services, or other government departments. Such projects would contribute directly to the promotion of sustainable forest management, to national efforts to monitor the trade, and to increasing the proportion of revenue from the trade retained in producer countries.

A bilateral aid project in the Solomon Islands, although not a member of ITTO, could provide an example to be followed. The Australian-funded Timber Control Unit Project is attempting to train and better equip the existing Timber Control Unit personnel, so that the activities of the mostly foreign-owned logging companies can be controlled. The aims are to reduce the environmental impacts of logging and to ensure that the correct royalties are paid to landowners and that government receive the correct level of taxes and other charges. Under-pricing of export logs by companies has consistently lost the government revenue, and increased vigilance should pay off, both financially and environmentally.

### *The Tropical Forestry Action Plan*

The growing awareness of the scale of tropical forest destruction during the 1980s led not only to an international agreement on the timber trade but also to the joining of forces of a number of prominent international agencies to form the Tropical Forestry Action Plan (TFAP). Co-ordinated by the World Bank, United Nations Development Programme, Food and Agriculture Organization, and the World Resources Institute, the Plan set out to channel aid funds thorough five main areas, to try to abate the rising rate of forest loss and subsequent environmental degradation and social hardship. These areas (forestry in land use, forest-based industrial development, fuel-wood and energy, conservation of tropical forest ecosystems and institutions) do not relate directly to the illegal timber trade, but the process through which the TFAP operated, the preparation of country forestry-sector reviews, provided scope for investigation into and recommendations for the mitigation of illegal practices.

TFAP has had a relatively short but difficult life, and has run into increasing criticism for its top-down approach, its neglect of conservation issues, and its inability to tackle the underlying causes of forest loss. Various critiques of the activities of TFAP have all pointed towards the need for a radical reshape, but despite some attempts at reform the TFAP, now renamed the Tropical Forestry Action Programme, it is still floundering without any apparent direction.[28] The preparation of country plans still leaves some room for action to be taken on illegal trade, and in Papua New Guinea the National Forest Action Plan has addressed some of the issues and has led to substantial reforms within the forestry sector. NGOs, though welcoming some of the changes, are suspicious of the Plan and wait to see if it really does improve forest management and reduce logging malpractices.

### *The Convention on International Trade in Endangered Species of Wild Fauna and Flora*

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) came into force in 1975, with the aim of controlling the international trade in wild plants and animals. Regulation through a permit system allows trade to be monitored and controlled. Each of the 120 countries which are parties to the Convention, as of September 1993, is responsible for implementation within its country, although the agreement applies only to international, not domestic, trade.

Species which are or may become threatened by international trade are listed in CITES Appendices, of which I and II are the most important for the control of the timber trade. Appendix I covers species which are threatened by extinction, and within this category international trade is banned in all but exceptional cases. Appendix II covers species which may become endangered by trade and for which monitoring of the international trade is advisable. Trade in these species requires an export permit which should be issued only if it can be proved that the specimen was legally obtained and export will not be detrimental to the survival of that species.

Until 1992 fifteen timber species were listed in CITES Appendices. Most of these are not widely traded, but Alerce (*Fitz-Roya cupressoides*) is sometimes traded, although its listing on Appendix I should prevent export. The March 1992 CITES meeting in Kyoto, Japan, saw the addition of a number of species, including *Dalbergia nigra* (Brazilian Rosewood) on Appendix I and *Pericopsis elata* (Afrormosia) on Appendix II.

There is much greater scope for inclusion of more species

on CITES Appendices. A report by the World Conservation Monitoring Centre (WCMC) for ITTO on the conservation status of tropical timbers in trade showed the status of many African and South-East Asian timber species was alarming, with over 300 species endangered or threatened with extinction.[29] But the criteria by which to judge timber species is unclear and there are practical problems in the enforcement of control requirements.

Although timber species have been listed since 1975 there has not been much experience of controlling species which have been heavily traded. The inclusion of *Dalbergia nigra* on Appendix I has raised difficult issues such as the granting of certificates for pre-listing supplies.

Identification of timber species can prove very difficult because there are groups of species which are hard to distinguish. It is uncertain whether national CITES Management Authorities will have the expertise to be able to carry out identifications. Also, there is an added complication with timber, as not only can it be processed into a variety of forms but it can also be combined with different species to form composites.[30]

There has been resistance from the timber trade, which has tended to view CITES listings as a first step towards banning trade. ITTO considered the report by WCMC to contain unreliable information, and has so far failed to take the project any further.

### *UNCED Forest Principles*

During the late 1980s the poor performance of both ITTO and TFAP was coming to light and the need for a new approach was becoming apparent. With the release, in 1990, of figures on tropical deforestation which showed that the deforestation rate had increased by over 50 per cent during the 1980s, the inadequacy of the existing institutional arrangements was underlined.

Meanwhile, there had been a growing awareness of the need for an international approach. This has stemmed partly from political considerations and an attempt to break the North–South divide, but also in response to a growing awareness of the very poor condition of forest management throughout the temperate world.

The idea of a Global Forest Agreement was first put forward during an independent review of the TFAP in 1990, and picked up by the G7 meeting later that year.[31] Subsequently, the idea was developed by FAO, which produced a first draft of a Forest Convention which it was envisaged could be signed at the 1992 Earth Summit.

The evolution of the Convention was plagued with difficulties, with developing countries fearing an assault on their national sovereignty. There were also concerns that the developed countries' desire for a Forest Convention was a thinly veiled attempt to avoid the issue of reducing greenhouse gases.

As a result, the Forest Convention was diluted down into a Non-legally Binding Authoritative Statement. The text of the statement includes principles and elements which refer to the management, conservation, and sustainable development of all types of forests. There are no specific commitments and contentious areas have been side-stepped. The resulting agreement, though a valuable first step, will not by itself make any difference to the problem of the illegal timber trade.

## Obstacles to Effective International Solutions—Are They Insurmountable or Is a New Approach Required?

Why, given the desperate need for action, have all the international efforts so far made little difference to the widespread malpractices in the timber trade?

One of the most obvious answers is that none of them have appeared to have taken the need for action seriously. ITTO, the organization with most relevance and scope for action, has consistently shied away from difficult issues such as illegalities. This reluctance is attributable to the politically sensitive and underground nature of the problem. The problem is exacerbated by the fact that ITTO relates only to tropical timber. Interference from outside on such issues can be seen as directly challenging national sovereignty.

Apart from the political undesirability of interference, there are also considerable constraints on the power and influence that international organizations wield. The illegal timber trade is an international problem, but it is the breaking of national laws that constitutes illegalities. International agencies cannot directly enforce national laws, and organizations like ITTO are unable to take any action against governments which do not take sufficient measures to combat malpractices; they cannot even expel them from the organization. Only CITES has any regulatory capabilities and the right to restrict trade, and this applies only to international trade.

Without any powers of enforcement, international organizations are better placed to play a supportive role in which they can help national governments impose stronger controls on their timber industries. But this could be viewed suspiciously by governments which fear interference in national affairs from outside. For this sort of approach to be effective there must be a strong commitment from national governments to eradicate the illegal trade, which must be backed up with an adequate allocation of funds and resources. Help could consist of investigations into illegal trade, reforming forest policies, or supporting enforcement efforts.

Though there have been attempts by national governments to investigate and subsequently reduce the illegal trade, the apparent commitment has not always permeated all layers of

government. The continuance of the illegal trade has been proved to be of financial interest to government employees throughout the world. Whether it is a forest officer receiving a small 'gift' from a logging company or a senior government official who has large interests in the fortunes of timber companies, all along the government chain there are often inducements to allow 'business as usual'. It takes a strong government to stand up effectively to the illegal timber trade, especially when a high proportion of government revenue is derived from the forestry sector.

In Papua New Guinea, a country where malpractices are amongst the most prevalent and serious, the government has taken measures to reduce the illegal trade. The Barnett Inquiry provided substantial documentary evidence of transfer pricing and many other misdemeanours. Yet within this country many believe that the trade carries on as before, with little heed paid to the law. Corruption is still widespread and the rate of logging continues to increase. Many people stand to gain by resisting reform, and without a massive increase in the regulatory capacity of the government there can be no chance of change.

Yet there is another role which international organizations can play. That is to incentivize the legal trade in timber, or rather the trade in sustainably produced timber.

Logging companies which are either evading royalties or taxes or which are not paying the cost of forest management will have lower costs than companies which are dedicated to sustainable (and by definition legal) timber production. Timber from unsustainable, and often illegal, operations is currently flooding the international timber markets, suppressing prices below the level which would reflect the cost of good forest management. It has been suggested that the power of the market which is at present driving the illegal trade can be harnessed to act as an incentive to manage forests well. A labelling system which would allow consumers to choose sustainably produced timber could encourage timber producers to improve forest management if they wish to sell to the 'green' market.

Labelling has been interpreted by many producers as a thinly disguised attempt to impose trade discrimination. Some of the political problems might be avoided if such a scheme applied to all forests, not just those in the tropics, and if it acted at the level of individual forest management and timber enterprises rather than at the national level.

## Future Prospects

The international response to the illegal timber trade problem has been extremely limited. As a result, its contribution to eradicating malpractices has been negligible. Nevertheless, in the future there is the potential for this contribution to be greatly expanded. It is unrealistic to believe that the illegal timber trade can be totally wiped out, but there is much, much more that could be done by the international community. It can ensure that the problem is paid more attention and that governments or companies that really do want to kick the habit are given support.

If the international community is to use its potential, then a combination of regulatory measures, support packages, and incentives will have to be developed. These will have to act at the intergovernmental, national government, and trade levels. The overall effect should be to increase the regulatory power of international agencies, provide support for government enforcement efforts, and to enable consumers to use their buying power to favour legal timber supplies.

Maximizing the international community's effectiveness will require a radical revision of existing international agencies and probably also the creation of new agencies. At the time of writing there is a range of suggestions for the development of existing organizations and also the emergence of a new international organization, the Forest Stewardship Council.

Much talk has surrounded the future of ITTO as the original ITTA expires at the end of March 1994. A successor agreement must be negotiated before this time if the organization is to continue. Opinions vary on the best course of action, from those who want to see the agreement simply rolled over and ITTO to carry on as before, to those who would like to see a major redefinition of the organization's remit. Changes will have to be made if the organization is to make any real difference to forest practices on the ground and if it is to have any impact on illegal logging, timber smuggling, and other illegal practices within the trade. There are three major changes to the functioning and structure of ITTO which would go some way to increasing its effectiveness.

First, widening the scope of ITTO to become the International Timber Trade Organization, which would deal equally with tropical and temperate timber, would go some way to ease the consumer–producer deadlock. Secondly, considering the abject failure of ITTO to deal adequately with social and environmental issues, many NGOs now believe that it should concentrate more on the actual trade of timber, rather than on conservation and forest-management issues which could be more effectively dealt with by a more appropriate organization such as a revamped TFAP.[32] It could devote more attention to collecting and disseminating market information and monitoring the international trade through improved statistical analysis. Finally, the regulatory roles of the organization could be increased, giving it 'teeth' with which it could exert some control over the international timber trade, and possible allow it a role in introducing enforcing trade restrictions, perhaps along similar lines to the International Whaling Commission.

However, the re-negotiation of the ITTA has, so far, been a slow, painful process with little sign of a breakthrough.

There is division amongst the ranks of the temperate countries, and some tropical nations, about whether the organization should become truly global in approach. Voluntary adoption of Target 2000 by temperate countries could go some way to alleviate the deadlock without necessitating a radical change in ITTO. But if ITTO is to deal successfully with issues such as equitable terms of trade, then the ITTA must be extended to all timbers.

It may be seen as a regressive move to restrict the role of ITTO to purely a trade body without responsibility for the social and environmental aspects of sustainable forest management. But given the organization's inability to deal with these issues, and considering that governments use membership of ITTO as an answer to the forest crisis, then removing these areas from ITTO's remit can be seen as a positive step—provided that the wider issues are not forgotten but are clearly the responsibility of another agency.

The slow progress with the re-negotiation and the generally poor performance of ITTO is unlikely to change. There is little hope that in the short-to-medium term ITTO will develop effective solutions to the illegal timber trade and the wider issues facing the world's forests. Clearly the answer will have to be found elsewhere.

Alternatively, greater regulatory powers could be enacted through a legally binding Global Forest Convention, which could commit countries to specific targets regarding the sustainability and legality of the timber trade. But considering the political difficulties faced during the negotiation of the Forest Principles, it may be more fruitful to push for greater controls to be exerted through existing agencies. The only agency with any regulatory role at the moment is CITES, and this role could be enhanced through better implementation of existing listings and further additions of other threatened species. It may also be possible to use CITES as a mechanism through which record-keeping of all international timber trade is tightened, but this could not be achieved unless national customs controls become much tighter.

Pursuing a path of greater external regulation on the timber trade is fraught with difficulties. Deciding on the boundary between international and national control is a grey area which can be seen to conflict with ideas of national sovereignty. Trying to develop legally binding commitments is likely to lead to intractable political stand-offs, as demonstrated during the lead-up to the Earth Summit, let alone trying to develop processes whereby governments can be held to the commitments that countries have made. A far more productive approach will be to support national governments which are dedicated to tackling the illegal-trade issue, and to encourage greater action amongst those countries which have so far taken fewer mitigative steps.

Support for national governments could come through a number of channels, bilateral aid being one of them. But international organizations are able to direct support packages to countries where enforcement efforts are being stepped up. ITTO, to some extent, could fulfil this role, but other agencies, especially TFAP (if significantly reformed), could provide a more suitable mechanism through which to deliver assistance. The development of country plans could directly deal with illegal trade by analysing the existing forestry-sector legislation and its enforcement, and providing recommendations and support for the needed reforms.

Support could also come through other international organizations such as the Global Environment Facility and the World Bank. The success of support packages will, of course, depend on the political commitment within countries really to overcome the illegal-trade problem.

In terms of providing incentives for improving logging practices there have been suggestions of national-level incentive systems. Countries with demonstrable commitment to improving logging could have debt burdens reduced or be offered other benefits. Any such system would be extremely difficult to develop and administer, and would of course be politically sensitive.

An alternative approach is being developed by a new, international, non-profit organization, the Forest Stewardship Council (FSC). The FSC is aiming to set a world-wide standard for good forest management and to offer incentives to individual forest-management enterprises through a labelling system. This would allow consumers to distinguish timber from well-managed and legal sources.

Such an approach could avoid some of the seemingly intractable problems which are generated through national-level initiatives. The ideas behind the FSC have emerged from a series of meetings between timber-traders, environmental organizations, human-rights groups, indigenous peoples' organizations, and certification companies. At a meeting in March 1992 an Interim Board was elected which was to direct the FSC through its preliminary consultative phases until the first General Assembly of the FSC in Toronto in October 1993.

The FSC will offer an opportunity for consumers and producers who wish to buy or sell sustainably produced timber. Growing concern over forest loss has been accompanied by consumer awareness of the part played by the unsustainable timber trade in forest degradation. More and more consumers wish to buy timber which can be shown to have come from a well-managed source. Though at the moment many timber products carry labels of environmental acceptability, there is no international or national monitoring to ensure that the claims are reliable. A study commissioned by WWF UK showed that over half of all tropical timber retailers in the United Kingdom were willing to make some reassurance of the environmental acceptability of their tropical timber products. Further investigations into a number of

claims showed that the vast majority of companies were unwilling or unable to substantiate the claims that had been made.[33] The result of this proliferation of eco-labels has been to confuse consumers who may wish to buy sustainably produced timbers.

The FSC may provide a solution to this confusion by providing a world-wide standard for good forest management, in the form of *Principles of Good Forest Management*. The FSC will promote improved forest management through the development of an independent monitoring system. Such a system must have the capacity both to assess forest-management operations in the field and to trace timber from the forest, through any processing operations, and on to the final retail outlet, where it would be labelled with an internationally recognized symbol. Both the forest-management assessment and timber-tracing aspects relate to the question of the illegal timber trade. The issue of the legality of the trade is clearly addressed in the FSC Principles. In Draft 6: 'Management and harvesting activities must operate within all national and international laws, treaties and agreements which apply, including the payment of all legally prescribed fees, royalties, taxes and other charges.'[34]

The FSC will not be monitoring forest management itself, but will accredit certification programmes which voluntarily apply to use the FSC name in their labels. In order to qualify for the use of the FSC name they will have to show that their assessment procedures adhere to national and international laws and to the FSC Principles. In effect, more-detailed, locally specific standards will be developed throughout the world, all of which are based on the founding Principles. Exact details of monitoring systems are being developed, but it is intended, at least initially, that they will operate independently from national enforcement efforts. However, the intent of the FSC is to 'complement, not supplant, those initiatives which support the pursuit of "sustainable" forest management on a worldwide basis'.[35] 'The FSC will not replace existing national forestry or environmental laws, but it will establish a system which monitors whether existing national legislation as well as international principles and criteria of good forest management are being implemented on the ground.'[36]

At the time of writing a number of certification companies are actively involved in certifying timber sources. In the United States there is the Smartwood Program of the Rainforest Alliance, and in the United Kingdom a number of systems are being developed, one by the Soil Association which has considerable experience in certifying organically produced food. As these schemes develop, an international standard is essential so that they do not use incompatible or conflicting criteria of good forest management.

The evolution of the FSC is a process which is intended to encompass the views of a wide range of interest groups. As yet the exact nature of the organization has not been formalized and the Principles of good forest management are still being refined. However, it is clear that the FSC provides a ray of hope in the otherwise gloomy situation facing the world's forests.

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# From trade to synergy

The proliferation of environmental, sustainability, trade and issue-focused agreements has highlighted the need for the conventions to work together more effectively, clarify their areas of conflict and overlap, and sort out the discrepancies. This raises questions of approach, strategy and implementation, as shown through consideration of the World Trade Organization, IUCN's work on incentives and international conventions, and communication relating to biodiversity and CITES.

# Trade in forest products and the WTO: towards a sustainable regime

The new generation of environmental conventions do not exist in a vacuum. However they were negotiated, they must be applied in a world with different priorities and different conventions. Forest products provide an instructive example.

By Richard Tarasofsky

Trade in forest products was one of the rallying points for the demonstrators in Seattle at last year's WTO Ministerial Conference who were protesting against proposals to eliminate tariffs in this sector. Although dramatic, this was not an isolated event — indeed, trade in forest products is one of the most contentious points of intersection between the trade and environment agendas. A key means for ensuring that this trade is sustainable is an international legal landscape that sets clear and effective rules. This entails eliminating contradictions between applicable treaties, as well as maximizing the potential of environmental agreements, such as the Convention on Biological Diversity.

## The current legal agreements

As with most multilateral environmental agreements, the legal instruments underpinning the international trade and biodiversity regimes were each negotiated in isolation. Though interaction between multilateral environmental agreements and WTO rules is now one of the major items on the work programme of the WTO Committee on Trade and Environment, there are in-built tensions between the articles of the biodiversity convention and the 'case law' of international trade agreements. The problems begin with the basic premise of the WTO Agreements: to

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advance the liberalization of international trade of goods and services. This contrasts with the CBD as a regime that seeks to create holistic policy integration for conservation of biodiversity and the sustainable use of its components. Articles 7(c) and 8(l) of the CBD, for example, call on Parties to identify activities that may have an adverse effect on biodiversity and to regulate them — trade in some circumstances can be such an activity.

The CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) has identified several trade-related activities that may require action under these provisions.

The principle of non-discrimination between imported and domestic products that are alike is a fundamental tenet of WTO (Article III). The dispute settlement panels of the General Agreement on Tariffs and Trade (WTO's predecessor) have interpreted the definition of "like" as *not* relating to the production and processing methods used to make the product. This runs up against environmental strategies based on cradle-to-grave approaches.

GATT rules do not prohibit environmental regulation of production and processing methods, but they do bar countries from seeking to offset any competitive disadvantage through trade measures. Almost all the trade-related environmental measures that were challenged under GATT/WTO have been ruled illegal.

## Applying the CBD to trade in forest products

The extent to which the CBD institutions should work on forest issues has been a subject of sharp debate within the Conference of its Parties (COP). However, it is agreed that forest biodiversity generally falls squarely within the scope of the treaty itself.

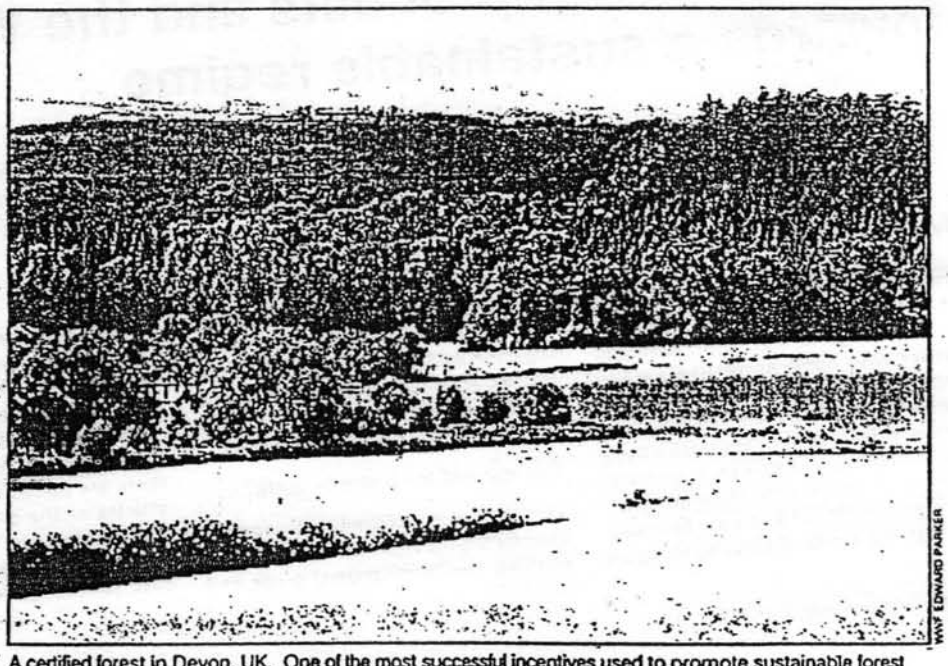
A number of CBD requirements relating to forests may raise trade issues. For example:

- Illegal timber trade is estimated to account for a major portion of several countries' exports. Although not a WTO matter in itself, dealing effectively with this threat to biodiversity conservation may entail controls on trade.
- Measures taken by countries to prohibit the imports of substances containing alien (and potentially invasive) species, in line with CBD requirements, are governed by the WTO Agreement on Sanitary and Phytosanitary Measures (SPS Agreement). While the SPS Agreement does grant countries considerable latitude in responding to risks, it is unclear whether it can fully accommodate the precautionary approach set out by the CBD.
- The CBD calls on Parties to the Convention to use incentive-based measures rather than a command-and-control regime alone. One of the most successful incentives used to promote sustainable forest management has been independent certification and labelling. Yet these programmes also form one of the most contentious issues in trade policy. The WTO Technical Barriers to Trade and its Code of Good Practice may not permit such regimes, even though they are voluntary. The issue is not yet resolved.
- At the other end of the spectrum, the CBD approach requires elimination of perverse subsidies: i.e., those which adversely affect biodiversity. In the forest sector, this can involve low stumpage fees and concession royalties, as well as subsidization of activities connected with the exploitation of forests or the conversion of forest lands. The problem is not a conflict with the WTO. But at present WTO subsidy rules are too narrow to cover most of these perverse subsidies. This is an opportunity for the WTO to adjust its rules, and Japan called recently for this to take place specifically with regard to forest products.
- The CBD recognizes that conservation cannot take place unless traditional and local communities benefit. However, though the UN Intergovernmental Panel and Forum on Forests have recognized that traditional forest-related knowledge is an important component of any successful package for sustainable forest management, these objectives may clash with the WTO Agreement on Trade-Related Intellectual Property Rights (TRIPS). The TRIPS Agreement is based on Western notions of property rights that do not sit easily with many indigenous traditions. Although the TRIPS Agreement possibly allows for some flexibility on plant varieties, it is still uncertain what is to be covered.

## Sustainable forest management: the first priority

The market can make unsustainable exploitation worse or sustainable use more profitable, but it alone cannot achieve sustainability. What is needed is the political will to develop and implement regimes for sustainable forest management and the conservation of forest biodiversity on the ground in a manner that deals effectively with the challenges and opportunities provided by increased global trade.

Thus, although sustainable forest management is the first priority, it is still necessary to ensure that the trade regime is supportive. This requires



WAYNE EDWARD PARKER

A certified forest in Devon, UK. One of the most successful incentives used to promote sustainable forest management has been independent certification and labelling.



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working through the WTO and CBD frameworks.

The optimal solution would be to come to a global agreement on the accommodation of Multilateral Environmental Agreements (MEAs) by the WTO. This could be done through an unambiguous political statement – strong enough to guide policy makers and the WTO dispute settlement body – or through amending the WTO Agreements.

### The next steps

The WTO Agreements should be limited to eliminating trade protectionism. They should not interfere with the pursuit of legitimate environmental objectives. MEAs, on the other hand, should encourage the positive aspects of trade liberalization, while contributing to setting limits where liberalization interferes with its objectives. With regard to the CBD, for example:

- The CBD framework could endorse the validity of voluntary certification and labelling schemes in achieving its objectives, which could help safeguard these initiatives from WTO challenge.
- Systematic monitoring of trade impacts on biodiversity should be developed under the CBD framework. With regard to forests this could probably be best carried out as a cooperative effort with CITES, FAO, TRAFFIC (the IUCN/WWF wildlife trade monitoring programme), the International Timber Trade Organization (ITTO) and the UNEP-World Conservation Monitoring Centre (UNEP-WCMC).
- The CBD should be used to provide guidance to countries seeking to incorporate trade considerations into national plans and strategies, as well as in regulating trade-related activities that have an adverse effect on biodiversity.
- The CBD, FAO and WTO should examine and make recommendations for the removal of harmful subsidies in the forestry sector.
- The CBD should continue its work on furthering consensus on the entitlements of traditional and local people arising from their knowledge.

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This article draws in part from a larger study prepared for the IUCN project by Markku Simula, "*The Convention On Biological Diversity and the International Trade Regime: The Case Of Forests.*" *See* http://www.wto.org/

WWF/M. J. TOLEDO

Confiscated mahogany in the Philippines. The Union is seeking to promote sustainable forestry in the absence of a forest convention.

# Forest conservation: increasing impact through partnership

Ever since the "non-binding principles on forests" were adopted at the 1992 UNCED in Rio, progress on forest issues in the international policy arena has been slow. Meanwhile, forest degradation and overexploitation continue, and action is needed urgently (*see World Conservation 3-4/99*). One way to promote sustainable forestry in the absence of a formal convention is for conservationists to work with the major actors on the forest scene, among them the multilateral institutions funding activities for sustainability in this sector.

By William J. Jackson

Recognizing the shortcomings of its 1991 forest strategy, which underestimated the pressures to obtain revenues and the conflict that could arise with local people, the World Bank asked IUCN to help organize the process of consultations with stakeholders to make its efforts in the forest sector more credible and more focused on poverty alleviation.

The nine consultations facilitated by IUCN took place between February and early May. IUCN and WWF produced a joint "Challenges and Recommendations" paper with contributions from both the global and regional IUCN/WWF networks. It is posted on the Bank's FPIRS website (http://wbln0018.worldbank.org/essd/forestpol-e.nsf/). It provides both a synopsis of the more than 1000 pages of analytical studies available on the World Bank website and comments on key issues. In addition, IUCN Regional Offices worked closely with interested IUCN member and partner organizations to produce country and regionally specific inputs to the process — holding consultations and targeted discussions with key players in the region.

The consultation process, after a first session in North Africa, included multi-stakeholder consultations in Brazil, South East Asia, Bangladesh, South Africa, Finland, Ecuador, the United States and Switzerland. The process now moves to a global level with meetings of the Technical Advisory Group in June and October. The updated Forest Policy is to be presented to the World Bank's Executive Directors in December 2000.

Bill Jackson is Coordinator of the IUCN Forest Conservation Programme.

A full summary can be found in the newsletter *arborvitae* for May 2000. *See* http://iucn.org/themes/fcp/index.html.

5 Pace Envtl. L. Rev. 463 1987-1988

# Protection of Wetlands by International Law

**Alexandre S. Timoshenko***

## I. General Comments

According to Article 1 of the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, known as the Ramsar Convention,[1] wetlands are areas of marsh, fen, peatland or water (including areas of marine water) the depth of which at low tide does not exceed six meters. Wetlands are found in practically all regions of the world and sustain important ecological functions. Wetlands regulate the hydrologic regime and thus favor climate stability and serve as a habitat for a wide variety of indigenous and migratory bird species. Due to their unique ecosystem characteristics and relatively difficult accessibility, wetlands represent one of the most important resources of genetic diversity.

Wetlands, which are very ecologically fragile, have long been an object of human activities. These activities have continued for the last hundred years without any serious evaluation of possible environmental consequences. For example, of the nearly two hundred large-scale polder (wetlands reclamation) projects now completed or under way worldwide, in only nine cases has any serious study been made of environmental and ecological consequences.[2]

The nature of wetlands dictates that conservation should be their main, and most effective, form of protection. This follows from the use of the term "conservation" in the text of

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* Doctor of Law; Institute of State and Law Academy of Sciences of the USSR, Moscow.

1. Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb. 2, 1971, T.I.A.S. No. ___, 996 U.N.T.S. 245, *reprinted in* 11 I.L.M. 963 (1972) [hereinafter Ramsar Convention].

2. T. Stoel, *Pulling Out the Plug*, 10 IUCN Bull. 144 (1985).

the Ramsar Convention. Therefore, the notion of "wise use" may have only a very limited application in this field of environmental protection. Wetlands have international importance in two specific instances: when they serve as habitat for migrating birds, and when they are situated simultaneously within the territory of two or more states.

The most important internationally significant factor concerning wetlands is their role as a habitat for migrating birds, particularly waterfowl. Conservation of this wildlife resource is the principle objective of the Ramsar Convention. This Convention is the only multilateral treaty regulating the protection of this category of wildlife. In the system of international environmental law this was one of the first international agreements of global coverage.[3] In a narrower sense the Ramsar Convention is one of the more important legal instruments of international wildlife law.

Under the Ramsar Convention, the contracting parties, while considering their international responsibility for the conservation, management and wise use of migratory stocks of waterfowl, designate suitable wetlands within their territories for inclusion in the List of Wetlands of International Importance. The inclusion of a wetland onto the list does not prejudice the exclusive sovereign rights of the Contracting Parties in whose territories the wetland is situated. The Contracting Parties formulate and implement their planning so as to promote the conservation of wetlands included on the list and, as far as possible, the wise use of wetlands in their territories. Meanwhile, the Convention gives preference to the establishment of nature reserves as another protection measure. In the case of a wetland extending over the territory of more than one state, the Contracting Parties consult each other regarding possible impacts on the wetland area. They also coordinate their present and future policies and regulations concerning the conservation of wetlands and waterfowl. As the

3. *See* O. Kolbasov, Miezdunarodno-pravovaja ochrana okruzhajushej sredy [International Legal Protection of the Environment] 135-36 (1982); B. Johnson, International Environmental Law 62-3 (1976); A. Kiss, Survey of Current Developments in International Environmental Law 86-7 (1976).

necessity arises, the Contracting Parties convene conferences on the conservation of wetlands and waterfowl.

The Ramsar Convention became effective in December 1975 and has been operating for more than a decade, with the number of Contracting Parties exceeding forty. The List of Wetlands of International Importance includes more than three hundred wetlands covering over twenty million hectares. Thus far, two Conferences of the Contracting Parties have taken place and a third is upcoming.

## II. Critical Analysis

The starting point for strengthening wetlands protection by means of international law is a critical analysis of the content and application of the international laws now in force. The main objective of this paper is the critical analysis of the Ramsar Convention itself. The effectiveness of an international law is determined in the first place by the sphere of its application. In this respect the Ramsar Convention does not comprise a sufficient number of countries (about forty countries, compared with ninety countries participating in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[4] for example). Only very recently have major countries such as the United States and France begun to participate in the Convention. A considerable number of developing countries possessing many wetlands of international importance are among the non-participants.

The Ramsar Convention is justly appraised as the first international environmental treaty aimed exclusively at wildlife habitat protection on a global scale.[5] At the same time, the content of the Convention reflects certain deficiencies of juridical approach to environmental problems which typify the early seventies. The Convention does not exhaustively stipulate the legal status of wetlands of international importance, nor does it provide for the necessary degree of unified state actions for wetlands conservation. It also contains a

4. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087, T.I.A.S. No. 8249.

5. *See, e.g.*, S. Lyster, International Wildlife Law 206 (1985).

number of gaps in its procedural clauses.

The Ramsar Convention attempted to coordinate exclusive sovereign rights on states' natural resources, state responsibility for environmental protection, and rational use. This concept provided a cornerstone for all international environmental law. A year later the concept was more or less adequately formulated in the Principle 21 of the Stockholm Declaration.[6]

Under the Ramsar Convention, the territorial sovereignty over wetlands of international importance is interconnected with state responsibility for the protection and wise use of migrating waterfowl resources. Since the condition of migrating waterfowl is directly related to the state of their habitat, the above mentioned stipulation can be regarded as indirect evidence of the international responsibility of the Contracting Parties for conservation, management and rational use of wetlands.

The Article 2 formula[7] of the Convention gives every reason to believe that even a wetland of international importance is related to the category of national resources. At the same time, Article 5 indicates that individual wetlands can extend over the territories of more than one state.[8] Such wetlands acquire the status of a shared natural resource or, according to the terminology proposed with in the framework of the World Commission on Environment and Development, of a trans-

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6. The official text of the Stockholm declaration is contained in The Report of the U.N. Conference on The Human Environment, U.N. DOC. A/Conf. 48/14 at 2-65 and Corr.1 (1972), *reprinted in* 11 I.L.M. 1416-69 (1972). Principle 21 of the Stockholm Declaration states:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

7. Article 2 of the Ramsar Convention provides for the designation, addition, modification and deletion of wetlands from the List of Wetlands of International Importance. Ramsar Convention, *supra* note 1, art. 2, 996 U.N.T.S. 245, 247, *reprinted in* 11 I.L.M. 963, 970 (1972).

8. Ramsar Convention, *supra* note 1, art. 5, 996 U.N.T.S. 245, 248, *reprinted in* 11 I.L.M. 963, 972 (1972).

boundary resource.[9]

It may be assumed that individual wetlands covered by the Ramsar Convention have such great ecological value and unique characteristics that their conservation would affect the common interests of the international community as a whole. In such a case it is possible that the concept of "common heritage of mankind" or "common property" may be applied. We cannot exclude this possibility as the "common heritage" concept is getting more and more international recognition although its preeminence has not been confirmed by opinion of law.

As stated earlier, the objective of wetlands protection is conservation. Nevertheless, according to Article 2 of the Ramsar Convention, wetlands conservation is envisaged as being parallel to "wise use." In this context, the very possibility of coupling effective conservation of a wetland (as an integral ecosystem) with any intensive use, even when it is considered to be wise, seems doubtful. The exact scientific and legal meaning of the term "wise use" is itself unclear. Even the broader term "rationale use" is far from being uniformly interpreted in international law, and as such the content of the term "wise use" seems to be especially vague. It is understood that the term "wise use" was introduced into the Ramsar Convention with the goal of establishing certain limits to the human utilization of wetlands. However, practical application of these limits seems questionable.

The gaps in the Ramsar Convention are not confined to the insufficient determination of the status of wetlands of international importance. This deficiency may be explained by the fact that the Convention took place before the concepts of shared resources, world heritage, or biosphere reserves were developed. Given the present level of international environmental law, the international quality of wetlands included in the Ramsar List might be formulated more clearly. The conservation of wetlands of international importance should be

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9. World Commission on Environment and Development, WCED Doc. WCED/86/23/Add.1; *see also* R. Monro & J. Lammers, Environmental Protection and Sustainable Developments. Legal Principles & Recommendations (1987).

insured not only by the nations in whose territories such wetlands are situated, but by all nations with an environmental interest in the wetland. It is necessary to stipulate exact obligations of all nations on whose territories or under whose control an activity significantly affecting the ecological quality of a wetland takes place. In other words, international legal assurances of the effective conservation of wetlands having international importance must be guaranteed against negative transboundary interferences. In this context it is appropriate to refer to the statement made by the Swedish delegation at the Groningen Conference of the Contracting Parties which indicated the close interdependence between conservation of wetlands of international importance and the "acid rain" problem caused by the activities under the control of other countries.[10]

Certain difficulties in the application of the Ramsar Convention are created by the fact that the text contained no procedures for introducing amendments to the Convention. Meanwhile, the experience gained in the field of international environmental law demonstrated that an important characteristic of any international environmental treaty is its ability to evolve according to changing external factors: accumulation of knowledge, technological developments, or the evolution of political situations. Necessary amendments to the treaty should be introduced with the aim of ensuring optimal correlation between treaty provisions and the external "techno-socio-political environment." These changes in the treaty provisions may take the form of amendments, annexations, or other analogous acts. It is not by chance that in the field of environmental protection the so-called "framework conventions" are so widespread. The reason is that such conventions presuppose that further developments in international legal regulation will be necessary to respond to changed external conditions.

The necessity of introducing special amendment proce-

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10. Convention on Wetlands of International Importance Especially as Waterfowl Habitat Proceedings of the Second Conference of the Parties, Groningen, Netherlands, May 7-12, 1984 [hereinafter Groningen Conference].

dures to the Ramsar Convention had been indicated at the Cagliari and Groningen Conferences of the Contracting Parties. This problem has been settled in principle by the signing and entering into force of the Paris Protocol.[11] As a result, it may be expected that a number of the recommendations proposed at the Cagliari and Groningen Conferences will be transformed into legal rules. However, a new question immediately arises: how to apply these new rules since not all Contracting Parties of the Ramsar Convention are participants to the Paris Protocol?

In the formal juridical sense this question is to be settled according to Article 30 and Article 40 of the Vienna Convention on the Law of Treaties,[12] which provide that in relations between a State who is party to both treaties, and a State who is party to only one of the treaties, the treaty to which both States are parties governs their mutual rights and obligations. This means that relations between two states, one of whom is a signatory to only the Ramsar Convention and the other who is a party to both the Ramsar Convention and the Paris Protocol, are governed exclusively by the Ramsar provisions.

Thus, the problem of the limited application of possible amendments to the Ramsar Convention arises. This problem extends beyond the framework of jurisprudence. The effectiveness of a legal rule depends directly on the states which accept its obligatory character and on the degree of uniformity of activities of those participating in international relations. In the sphere of international environmental protection such uniformity is particularly important since non-participation at certain stages may substantially reduce the effectiveness of these measures or even render them useless.

The practical application of the Paris Protocol demands

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11. The Paris Protocol, which is designed to establish the procedures for introducing amendments to the Convention, was signed in 1982. Its provisions have been in force since the end of 1986. Contracting Parties of the Convention on Wetlands of International Importance Especially as Waterfowl Habitat: Protocol to Amend the Convention, Dec. 3, 1982, *reprinted in* 22 I.L.M. 698 (1983).

12. United Nations Conference on the Law of Treaties, Vienna Convention on the Law of Treaties; United Nations, May 22, 1969, T.I.A.S. No. ___, 1155 U.N.T.S. 331, *reprinted in* 8 I.L.M. 679 (1969).

not only settlement of purely juridical problems, but an evaluation of the positions of the majority of states with respect to proposed amendments to the Ramsar Convention as well. In addition, it is necessary to take into account not only the views of current members but also of potential participants to the Convention. Otherwise, the introduction of "unpopular" amendments may negatively influence both accession of new participants to the Convention, and inclusion of new territories onto the List of Wetlands of International Importance. Every amendment to the Ramsar Convention should adequately reflect the balance of what should be done and of what realistically can be done. Only the collective wisdom and sagacity of the Contracting Parties will secure further improvement of the Ramsar Convention's efficacy.

## III. The USSR Participation in the Ramsar Convention

The Ramsar Convention was signed by the USSR on February 15, 1974, and ratified on December 26, 1975. Upon signing the Convention, the following statement was made: "The Government of the Union of the Soviet Socialist Republic deems it necessary to state that the provisions of Article 9 of the Convention limiting participation of certain States is in contradiction with the universally recognized principle of sovereign equality of States."

The USSR ratification instruments were deposited with the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Director-General on October 11, 1976. In accordance with paragraph 2, Article 10, the Convention entered into force for the Soviet Union from February 11, 1977 onward.

To perform its obligation under the Ramsar Convention, the USSR carried out a number of activities of national character. First, the USSR Council of Ministers adopted the Decree of December 26, 1975, entitled "On Measures to Carry Out the Obligations of the Soviet Part Under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat." The Decree entrusted the Ministry of Agriculture (now Gosagroprom) with the responsibility for the imple-

mentation of the Ramsar Convention and pertinent control over Soviet involvement.[13]

The Council of Ministers of the Union Republics, the Ministry of Agriculture, and the USSR Academy of Sciences are responsible for securing wetlands protection under the Ramsar Convention and for carrying out necessary scientific research. The National List of Wetlands of International Importance includes the following territories: Kandalaksha Bay of the White Sea, Matsaalu Bay of the Baltic Sea, Volga River Delta, Kirov Bay, Krasnovodsk Bay and North-Chelenk Bay of the Caspian Sea, Karkinit Bay of the Black Sea, Danube River downstream marshes, Khanka Lake, Issyk-Kul Lake, Kurgaldjin, Teghis, Turgaj and Irghis River downstream.[14] These wetlands are major reserves and habitats for migrating waterfowl. The protection of these species must be also secured in their habitats situated in other countries.

As it was stated by the Soviet delegation at the Groningen Conference, besides the twelve wetlands from the Ramsar List located in the Soviet Union, sixteen additional wetlands covering nearly three million hectares satisfied the Ramsar criteria. All the above stated wetlands were treated as nature reserves and protected in state *zapovedniki*[15] and *zakazniki*.[16] The report of the USSR delegation also bore wit-

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13. *See* S. Postanovlenij, The USSR Collected Decrees, No. 4, st. 16 (1976).

14. Ob Ochrane Okruzhajushej Sredy, Sbornik documentov party i pravitelstva [On environmental protection: Collected Documents of the CPSU and Soviet Government] 408 (1986).

15. The Soviet government has developed a nation-wide network of natural areas devoted to the study and preservation of biotic resources. These areas are known as *Zapovedniki* and are somewhat similar to American national parks but place much less emphasis on tourism. *Zapovedniki* are specified as being forever withdrawn from economic utilization, being reserved for scientific research and cultural-educational purposes.

16. A second category of natural preserve exists in the Soviet Union, known as *Zakazniki*. There are two types of *Zakazniki*, temporary and permanent. Temporary *Zakazniki*, established for a specific period of time, are normally concerned with animal resources, and generally with only certain species found within the *Zakazniki*. Within a *Zakazniki*, the hunting of a particular species of animal may be controlled over a period of years if the animal is being threatened. Permanent *Zakazniki*, like temporary ones, protect only a portion of the natural resources within them, but are not limited to wildlife resources.

ness to an impressive range of studies to identify and describe three hundred sites of international or national importance beyond the additional sixteen sites earlier referenced.[17]

## IV. Conclusion

The Ramsar Convention is an important international act in the sphere of environmental protection and a unique document in the field of wetlands conservation. The birth of the Ramsar Convention coincides with the initial period of vigorous development of environmental treaties. The Convention serves as a useful model for the elaboration of other important international treaties such as the UNESCO Convention on World Heritage, the Bonn Convention on Migrating Species, and such important international programs as the creation of a biosphere reserves network. In recent international law one can find a number of acts analogous to the fundamental concept and distinct provisions of the Ramsar Convention. While utilizing this valuable experience, the States take into consideration both the advantages and shortcomings of the Convention.

The Ramsar Convention, like any international treaty based on the compromise of different state interests, is not free of drawbacks. After more than a decade of existence, the rise in the number of Contracting Parties and the expansion of the territory of wetlands protected in accordance with the Ramsar List provides a convincing demonstration of the great practical value of this international treaty. Juridical and political improvement of the Ramsar Convention continues and is generally positive in character. The basis of these processes should be the understanding that the efficacy of the protection of wetlands of international importance can be secured by the maximum possible participation of the majority of states.

However, problems relating to the protection of wetlands of international importance still exist. These problems have both juridical and political characteristics and include:

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17. Groningen Conference, *supra* note 10, at 9-10.

- the need for an increase in the number of the Ramsar Convention participants;

- an achievement of maximum uniformity of the activities according to the Convention provisions;

- a more precise definition of criteria of the wetlands of international importance, of their status and regime both under national and international law;

- a more precise definition of the regime of the wetlands falling under the category of shared natural resources;

- the need for ensuring the protection of the wetlands of international importance from significant negative trans-boundary impact; and

- strengthening the conservation of wetlands as an important resource of biological diversity.

# CASE SUMMARIES

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# CASES

## I. CLIMATE CHANGE

Climate litigation is in its infancy in India. Climate-related claims have yet to be litigated in the courts. There are a few cases in which climate change has been referred to but only in passing. This situation may well be set to change. Climate change and its impacts are rapidly capturing the popular imagination in India. There is a growing recognition of the importance and urgency of the climate challenge, and a slew of climate policies and initiative at the national and state levels have been launched in response. The petitioners raise climate concerns, among others, to argue for more environmentally friendly decision-making. In such cases petitioners appear to be using 'climate concerns' as a sword to stimulate better-informed decisions and actions relating to the environment. In other category of cases, respondents raise climate concerns to justify their actions. In such cases respondents appear to be using climate concerns as a shield to defend their actions.[1]

### 1. Manushi Sangthan, Delhi v. Govt. Of Delhi, 168 (2010) DLT 168 (Delhi High Court)

The petitioners challenged the limit set by the Delhi Municipal Corporation on the issuance of cycle rickshaw licenses, arguing, inter alia, that the IPCC's Fourth Assessment Report, 2007, had emphasized the need for policies that encourage use of more fuel-efficient vehicles, hybrid vehicles, non-motorized transport, (such as cycling and walking), and better land-use and transport planning. Although not directly with reference to this argument, the Court held the limit imposed by the Delhi Municipal Corporation to be arbitrary, and ordered a more detailed study on urban transportation options.

### 2. We the People v. Union of India, 2011 (7) ADJ 163 (Allahabad High Court)

The petitioners argued that State authorities were cutting down old growth trees in the execution of development projects such as road expansions, thereby contributing to global warming, without planting oxygen-generating trees to compensate for the loss of such old growth trees. The Allahabad High Court found merit in this argument and ordered the Principal Chief Conservator of Forest to appear before the Court and provide details of

[1] Lavanya Rajamani, ***Rights** Based Climate Litigation in the Indian Courts: Potential, Prospects & Potential Problems*, CENTRE FOR POLICY RESEARCH CLIMATE INITIATIVE Working Paper (May, 2013)

compensatory tree planting measures. The Court heard details of trees, including varieties, felled and planted in the State of Uttar Pradesh in the context of road construction and expansion projects, and directed the government to make provision for sufficient space to plant trees, the majority of which should be old growth trees, while constructing roads.

3. **Nar Bahadur Bhandari and Ors v. State of Sikkim, (Writ Petition (C) No. 40 of 2005, decided on 14.10.2010) (Sikkim High Court)**

The petitioners challenged the construction of a hydro electric power project on the Teesta River. The Court referred to a Ministry of Environment and Forests affidavit that had been filed in the Supreme Court in a related case before the T. N. Godavarman bench. In this affidavit, the Ministry of Environment and Forests justified their decision to permit the construction of this hydro electric power project. They argued inter alia that India suffered from a severe peak power shortage, and 'this position needs to be corrected through execution of more and more hydro power projects to generate environment friendly and peak power and reduce dependence on power generation based on fossil fuels which are contributing enormously towards atmospheric pollution and global warming.'

4. **Narmada Bachao Andolan v. Union of India, AIR 2000 SC 3751**

The Supreme Court while allowing the continued construction of the controversial Narmada Dam, noted as part of the rationale for favouring hydro electric power projects that '*...thermal power projects use fossil fuels, which are not only depleting fast but also contribute towards environmental pollution. Global warming due to the greenhouse effect has become a major cause of concern. One of the various factors responsible for this is the burning of fossil fuel in thermal power plants. ...On the other hand, the hydel power's contribution in the greenhouse effect is negligible and it can be termed ecology friendly.*'

5. **Tamil Nadu Newsprint And Papers Ltd. v. Tamil Nadu Electricity Regulatory Commission, 2007 ELR (APTEL) 157**

In this case the Appellate Tribunal for Electricity upheld an order fixing a tariff for the purchase of power from non-conventional energy sources. The Tribunal observed in its order that, 'the danger (of climate change) needs to be averted by undertaking measures to curtail emission of greenhouse gases. Though largely it is the developed countries which are major contributories of greenhouse gases, we also need to regulate electricity sector for protection

of environment in accordance with the spirit of the Constitution and the Electricity Act, 2003. Small steps in the first instance, to reduce dependence on fossil fuel to the extent possible, which does not impact the progress of electricity sector, can ultimately lead to generation of momentum for a giant leap in the development of technology for production of clean energy.'

6. **Karnataka Industrial Areas Development Board v. Sri C. Kenchappa, (2006) 6 SCC 371**

The Supreme Court, in ordering authorities to properly consider the adverse environmental impacts of development before acquisition of lands for development, referred to the devastating impacts of human intervention on the planet, including the impacts of climate change and ozone layer depletion.

7. **Bombay Dyeing and Mfg. Co. Ltd. v. Bombay Environmental Action Group, (2006) 3 SCC 434**

The Supreme Court noted the need to prioritise environmental issues, inter alia, due to climate change concerns. The Court has also acknowledged climate concerns in the context of considering the merits of different sources of energy.

8. **Reliance Natural Resources Ltd. v. Reliance Industries Ltd, (2010) 7 SCC 1**

While describing the benefits of natural gas, the Court observed that 'Its low carbon content, relative to other fossil fuels, implies that its use may help in combating global warming problems'.

9. **The Allahabad High Court in Swami Parmanand Bhatta Company v. Union of India, 2011 1 AWC 681 All**

Allahabad High Court ruled that the government could regulate in the interests of the environment the petitioner's exercise of his right to operate his brick kiln. The Court noted in this context that the *"adverse effect of environmental pollution are now felt, as evidenced, like global warming, recurring natural calamities and on health of people."*

10. **Outdoors Communication v. PWD and Municipal Corporation of Delhi, 2007 (2) CTLJ 179 (Del)**

The Delhi High Court in a case relating to the tendering of outdoor advertising space, noted that *'the warnings of global warming have deserved scant attention.'*



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**11. Goa Foundation v. Goa State Coastal Zone Management, 2001 (4) Bom CR 226.**

The Bombay High Court refused to review a decision to allow the construction of a resort on Bagga beach on the grounds that their power of judicial review was limited. However, the Court observed that, '*as far as the State of Goa is concerned, the entire coastline is filled with sand dunes. Sand dunes do play a key role in protection of the hinterland, in as much as the sand dunes as sentinel against any destructive cyclones, rising water level of the sea due to global increase in temperature. ...Their protection is, therefore, absolutely necessary and they are rightly placed in CRZ I [Coastal Regulation Zone] category.*'

## II. FOREST CONSERVATION AND ILLEGAL TIMBER TRADE

### 1. T.N. Godavarman Thirumulkpad v. Union of India, AIR 1997 SC 1228

In 1995, T.N. Godavarman Thirumulpad filed a writ petition with the Supreme Court of India to protect the Nilgiris forest land from deforestation by illegal timber operations. The Supreme Court clubbed the Godavarman case with another writ petition with similar issues, 2 and expanded its scope from ceasing illegal operations in particular forests into a reformation of the entire country's forest governance and management. In its first major order in the Godavarman case on December 12, 1996, the court inter alia re-defined the scope of the Forest Conservation Act 1980, suspended tree felling across the entire country, and sought to radically re-orient the licensing and functioning of forest-based industries. Subsequently, more than 2,000 interlocutory applications have been admitted, and several hundred orders have been issued, many with far-reaching implications.

Conservation of forest was greatly manifested through this case. Prior approval of Central Government was required by Section 2, Forest Conservation Act, 1980 in respect of certain activities in forest area which were of commercial nature. Hence, this petition. It held that Forest Conservation Act was enacted with view to check further deforestation which results in ecological imbalance. Therefore, provisions enacted in Act for conservation of forests and matters connected therewith must apply clearly to all forests irrespective of ownership or classification thereof. Running of saw mills of any kind including veneer or ply-wood mills, and mining of any mineral were non-forest purposes. Thus, prior approval of Central Government was required. Any such activity was prima facie violation of provisions of Act.

Hence, felling of trees in all forests was suspended except in accordance with Working Plans of State Governments, as approved by Central Government. In absence of any Working Plan in any particular State, where permit system exists, felling under permits could be done only by Forest Department of State Government or State Forest Corporation. Thus, ban on felling would operate subject to any order. Thus, *"Authority shall take effective steps and implement orders made against deforestation."*

**2. T.N. Godavarman v. Union of India, AIR 2000 SC 1636**

Officers of Ministry of Environment and Forest detected and detained wagons at two Railway Stations containing illegal timber. Hence, this application. High Power Committee was held to be established and no other authority could take action in manner which was done by Applicant of detention of said wagons. However, action was taken, according to Solicitor General, whereby Ministry of Environment and Forest was given liberty to issue suitable directions for proper and effective implementation of orders of Court. Thus, various actions taken by Ministry of Environment and Forest (MOEF) for detention, seizure and investigation was ratified MOEF was authorized to take such steps as was proper for necessary/appropriate investigation, storage, disposal etc. of detained timber. Moreover, seized timber, to extent which was illegal or in respect of which there was no lawful claimant could be sold by public auction by MOEF or by sealed tenders and sale proceeds thereof could be kept in separate bank account. Thus, *"No authority shall take cognizance of any matter, unless expressly mentioned in statutory provisions."*

**3. Birjoo Prasad v. State of UP, AIR 2000 SC 3399**

The case pertains to Sections 5, 25, 41 and 42 Indian Forest Act, 1927 with Indian Forest Conservation Act and U. P. Protection of Trees in Rural and Hilly Areas Act, 1976. The appellant was prosecuted for having excess quantity of Khair wood than permitted to him under different permits. He was acquitted by trial court but conviction and sentence by High Court. Validity permit in respect 196 cubic meters of Khair wood. 197 cubic meters of Khair wood already sold 113 cubic meters found in balance for which no explanation offered. It was held that High Court rightly convicted and sentenced appellant by setting aside acquittal. Thus, *"If accused does not prove his innocence against offence then he shall be liable for conviction."*

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**4. State of west Bengal v. Gopal Sarkar, AIR 2002 SC 221**

The case pertains to Section 59A (3) Indian Forest Act, 1927. Confiscation of forest produce as well as implements used for commission of illegal operations in relation to the forest offence committed. The question that arose was whether High Court justified in holding that implements like band-saw and other implements not being property of State not liable to confiscation. It held that High Court was not is authorised by Section 59A (3) and hence, judgment of High Court clearly unsustainable and liable to be set aside.

On fair reading of Section 59A (3) of the Indian Forest Act, 1927, (West Bengal Amendment, 1988) it is clear that in a case where any timber or other forest produce which is the property of the State Government, is produced under sub-section (1) and an authorised officer is satisfied that a forest offence has been committed in respect of such property, he may pass order of confiscation of the said property (forest produce) together with all tools, ropes, chains, boats, vehicles and cattle used in committing the offence. The power of confiscation is independent of any proceeding of prosecution for the forest offence committed. This position is manifest from the statute.

On the facts of the present case, the finding of fact recorded by the authorised officer which remained undisturbed was that he was satisfied that the band-saw and the implements in question were used in commission of the forest offence in illicit removal and use of the timber from the forest area. It is relevant to note the validity of confiscation of timber was conceded before the High Court. It follows that the finding recorded by the authorised officer that the band-saw and implements in question were used in commission of the forest offence relating to the illicit felling and removal of the timber remained undisturbed. The High Court, therefore, clearly erred in interfering with the confiscation order of the band-saw and the implements. The position of law that is manifest on a reading of the provision of the statute is that if tools, implements, vehicles, etc. seized were used in commission of the forest offence alleged, it is open to authorised officer to pass order of confiscation under Section 59A (3). In that view of the matter, the judgment under challenge is clearly unsustainable and has to be set aside. *"Authorised Officer can pass order of confiscation under Section 59A(3) of Act."*

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**5. Tej Bahadur Dubey v. Forest Range Officer, AIR 2003 SC 1680**

Transportation of sandalwood products without transit permit was questioned under A.P Forests Act, 1967 and Section 2 (o) and 29. A.P sandalwood and Red Sandalwood Transit Rules, 1969 and Rules 3 to 7. Deceased appellant was the licensed dealer of sandalwood, after obtaining, permission from appropriate authorities converting sandalwood into sandalwood handles and transporting them. Consignment was seized and confiscated by Forest Authorities on ground of transportation without transit permit. Correctness of such action was challenged. Confiscation held to be illegal as Act prohibiting only transportation of sandalwood as defined under S.2 (o) and not sandalwood products. It was held that no requirement of law to obtain permit for sandal wood products under Rules of 1969 and no other rules produced to show that transit permit is required Direction to State to return the confiscated consignment within three months.

**6. State of Bihar v. Kedar Sao, AIR 2003 SC 3650**

Indian Forest Act, Sections 52, 52C and 52D (as inserted by Indian Forest (Bihar Amendment) Act, 1990, w.e.f. 10.9.1990). Sections 15, 20, 21 and 32, Bihar Forest Produce (Regulation of Trade) Act, 1984 (Trade Act) pertained to seizure and confiscation. Trucks carrying illicit 'katha' and other forest produce were seized and confiscated under Section 52 of Forest Act. Writ petitions allowed by High Court on ground that by virtue of Section 32 of Trade Act, provisions of Forest Act excluded and authorities had no power to confiscate vehicles, Whether justified? Held, no as nothing wrong in more than one statute conferring same powers to be exercised in same or different circumstances upon two and different classes of authorities. Section 32 of Trade Act was held to be merely exclusionary and has no effect of Forest Act as amended by Bihar Amendment Act completely. Judgment of High Court was set aside.

The provisions contained in Section 32 of the Trade Act are merely exclusionary in nature rendering the provisions contained in the Indian Forest Act, 1927, inapplicable to only such of the specified forest produce as defined under the Trade Act, and that too only in respect of matters for which the provisions are contained in the Trade Act. Likewise, the application of any other thing having force of law in any region of the State is excluded in respect of such produce and such matters as are provided for in the Trade Act. Section 32 of the Trade Act, thus, has no effect of effacing the Central Act as amended by Bihar Amendment Act, 1990,

completely so as to disarm the concerned authorities totally from having recourse to those provisions even in respect of offences which pertain, arise and relating to the provisions contained therein. The assumption on the part of the High Court that once by virtue of a notification under Section 1 (3) and (4) of the Trade Act, a produce becomes specified forest produce, any and every offence in respect of such produce, could be dealt with only under the Trade Act rendering meaningless the specific words, in respect of matters for which provisions have been made in this Act. Section 32 cannot be viewed merely from the angle of offences and punishments and procedure in respect of offences. The regulatory measures in the Central Act and the Rules made thereunder, on the one hand, and those under the Trade Act and the Rules made thereunder, on the other, differ and consequently, the main object of Section 32 of the Trade Act seems to be to do away with the need to comply with and/or adhere to the rigor of the restrictions in the Central Act, in addition to satisfying the requirements of the stipulations contained in the Trade Act and the rules made thereunder. There is nothing as a matter of any general principle for denying the very same Legislature, the power to enact different provisions in either separate Acts or in one and the same Act conferring distinct and separate powers upon more than one authority to deal with a particular situation arising, as it may deem fit, or as the exigencies of the situation may warrant.

All the more so, in this case, having regard to Section 53C inserted by the Bihar Amendment Act 9 of 1990 in the Indian Forest Act, 1927, which in unmistakable language of a mandatory nature, ordaining that on receipt of intimation under sub-section (4) of Section 52 about initiation of proceedings for confiscation of property, by the Magistrate having jurisdiction to try the offence on account of which the seizure of property, which is subject-matter of confiscation, has been made, no Court, Tribunal or authority (other than the authorized officer, appellate authority and revision authority referred to in Sections 52, 52A and 52B) shall have jurisdiction under the said Act or any other law for the time being in force to make orders with regard to possession, delivery, disposal or distribution of the property in regard to which proceedings for confiscation are initiated. The assent of the President to the 1984 Trade Act may help for its survival notwithstanding the Central Enactment/Indian Forest Act, 1927, in relation to matters provided for under the Trade Act by virtue of Section 32 contained therein, but in view of the subsequent State Enactment the Bihar Amendment Act 9 of 1990, which had also obtained the assent of the President, the special procedure introduced under the Bihar Amendment Act, 1990, empowering the designated authorities with more comprehensive and stringent powers to order for the confiscation of the property to the

exclusion of the Court, Tribunal or any authority cannot be curtailed, whittled down or circumscribed, in any manner, by any of the provisions contained in the Trade Act of the year 1984. Section 52C, which seems to have been completely overlooked by the High Court, clinches the issue and dissuades any such construction. There is also nothing wrong in more than one enactments conferring the same powers to be exercised in the same or different circumstances upon two different and distinct class of authorities and merely because they may have some overlapping features alone, conflict or inconsistency cannot be attributed to the Legislature to deny thereby such powers to the category of officers upon whom the Legislature has chosen to specifically confer powers with the object of ensuring a deterrent exercise of the same keeping in view the growing attempts to deplete forest wealth. Any such construction which tends to defeat the very purpose of conferring such powers upon the authorities of the department and frustrates completely the object of the legislative amendment itself, is to be meticulously avoided by Courts, particularly in the context of overriding effect engrafted in Section 52C, stipulating that on receipt of a communication by the Magistrate concerned from the specified officer of the Forest Department of the intention of the specified authority to invoke powers under Section 52 to confiscate or forfeit the property, which is subject-matter of the offence, no Court, Tribunal or authority other than the authorised officer, appellate authority and revision authority shall have jurisdiction over the said matter. Consequently, the Supreme Court cannot agree with the decision of the High Court or approve of the reasoning given in the judgment in support of its conclusion.

**7. Environment Awareness Forum v. State of J & K & Ors., AIR 1999 SC 1495**

'Katha' is minor forest produce and is manufactured from 'khair' wood. Court exempted minor forest produce from ban of felling. State Government allowed felling of 'khair' trees. Whether 'khair' can be treated as minor forest produce and was exempted from ban of felling. It was held that only 'katha' is minor forest produce and 'khair' is timber and hence, 'khair' was not minor forest produce and not exempted from ban from felling. katha is a minor forest produce and that it is manufactured from khair wood and it was categorically recorded that even as per the books on the subject, it is only katha which is MFP while khair is timber go to show that the distinction was very much present to the minds of the officials and they were also conscious of the fact that the order of this Court was not applicable to khair trees vide orders of this Court ban was placed on felling of various trees including khair tree. The order did riot lift the ban on the felling of khair trees and yet the State Government

officials allowed the felling of khair trees. Prima facie, the Court was satisfied that there has been a deliberate attempt to circumvent the order of this Court and there has been a wilful breach of the orders of this Court. The Court therefore, considered it appropriate to issue notice to the alleged parties.

## III. FOREST ENCROACHMENT

### 1. Nature Lovers Movement v. State of Kerala, (2009) 5 SCC 373

The case pertained with the de-reservation of forest u/s 2, Forest Conservation Act, 1980. The issue arose was whether Section 2 of the Forest (Conservation) Act, 1980 is prospective in operation and whether the Government of Kerala could, without obtaining prior approval of the Central Government grant pattas/lease hold rights to the unauthorised occupants/encroachers of forest land. It was held that policy decision taken by the Government of Kerala to assign 28,588.159 hectares of forest land to unauthorized occupants/encroachers after seeking approval from the Central Government does not suffer from any legal infirmity and High Court rightly declined to interfere with the said decision. Where the State Government had not taken any policy decision to regularise pre-25th October, 1980 occupation/encroachment of forest land as per central Government guidelines no order for regularisation of such occupation/encroachment can be passed without obtaining prior approval of the Central Government even though Section 2 is prospective in operation.

It was held that neither the State Government nor any other authority can make an order or issue direction for de-reservation of reserved forest or any portion thereof or permit use of any forest land or any portion thereof for any non-forest purpose or assign any forest land or any portion thereof by way of lease or otherwise to any private person or to any authority, corporation, agency or organization not owned, managed or controlled by the Government except after obtaining prior approval of the Central Government. The direction was issues that as and when the State Government decides to assign 10,000 hectares of forest land to unauthorised occupants/encroachers, it shall do so only after obtaining prior approval of the Central Government and the latter shall take appropriate decision keeping in view the object of the 1980 Act.

2. **K.M. Chinnappa and T.N. Godavarman Thirumalpad v. Union of India, AIR 2003 SC 724**

Mining operations carried on by the Kudremukh Iron Ore Co. Ltd. in Kudremukh Nationanl Park, a part of Western Ghat. Interlocutory Application filed by a trustee, Wildlife pointing out mining activities being conducted by KIOCL in violation of orders of Supreme Court seeking directions to stop mining activities, polluting the Bhadra River and laying new slurry pipe line in the forests of the National Park and to take action against KIOCL for illegal encroachments in the forests. Plea that the land in question was outside the purview of the operations of the Wildlife (Protection) Act, 1972 Forest (Conservation) Act, 1972 and the Environment (Protection) Act, 1986. Forest Advisory Committee under the Conservation Act examined the renewal proposal in respect of the company's mining lease and recommended that the mining may be allowed for a period of four years, i.e. upto the year 2005 by which time the weathered secondary ore available in the already broken up area would be exhausted. The Court observed no reason to vary the majority view of the committee, a statutory one, when its findings and conclusions are based on assessments of the factual aspects and after duly considering the materials and reports placed before it by the parties and the modalities as to how these have to be worked out, should be done in the manner recommended by the committee.

3. **T.N. Godavarman Thirumulpad v. Union of India, (2000) 10 SCC 494**

The case involved revelation of encroachment of forest land all over state. The total extent of such encroachment was held not been disclosed in affidavit. Court directed to file an affidavit, indicating total extent of encroachment of forest land also disclose steps taken by State to retrieve encroachment and preventive measures taken after refusal by Government of India to regularize encroachment which had occurred after 1978, till date. The Court also held that the State shall also indicate non-forestry use to which encroached land has been put by encroachers where coffee plantation has taken place. Court also directed joint survey to furnish a copy of report. Court appointed Commissioner and directed to immediately go to Forest and give a report about present state of affairs in that forest and needful to be done by him within two weeks. Court has directed to restrain person occupying any part of forest land not to change nature of encroachment during pendency. Court ordered to publicize it and affidavit be filed by the State within six weeks.

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4. **Orissa Mining Corporation Ltd v. Ministry of Environment and Forest and Ors., (2013) 6 SCC 476**

Central Empowered Committee (CEC) objected to grant of clearance sought by Parent Company/Vedanta from Respondent/Ministry of Environment and Forests (MOEF) on ground that Refinery would be totally dependent on Bauxite Mining. Hence, this writ petition. The issue arose was whether Respondent was justified in making decision on application forest clearance for Bauxite Mining for Refinery project. The Court held that Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 Act has been enacted conferring powers on Gram Sabha constituted under Act to protect community resources, individual rights, cultural and religious rights. Further, Act also states that recognized rights of forest dwelling STs and other TFDs include responsibilities and authority for sustainable use, conservation of bio-diversity and maintenance of ecological balance and thereby strengthening conservation regime of forests while ensuring livelihood and food security of forest dwelling STs and other TFDs.

Furthermore, forest rights on ancestral lands and their habitat were not adequately recognized in consolidation of State forests during colonial period as well as in independent India resulting in historical injustice to them who were integral to very survival and sustainability of forest ecosystem. Moreover, Section 6 of 2006 Act confers powers on Gram Sabha to determine nature and extent of "individual" or "community rights". However, said matter had not been placed before Gram Sabha for their active consideration but only individual claims and community claims received from Rayagada and Kalahandi Districts most of which Gram Sabha had dealt with and settled. Hence, State of Orissa was directed to place these issues before Gram Sabha then Gram Sabha should communicate its finding to Respondent on basis of which it should take a final decision on grant of stage II clearance for Bauxite Mining project.

Whenever any Act protects a wide range of rights of forest dwellers and STs including customary rights to use forest land as a community forest resource and not restricted merely to property rights or to areas of habitation, then that should be taken into a consideration.

5. **Rajiv Sarin v. State of Uttarakhand, AIR 2011 SC 3081**

Discrimination in regard to compensation under Sections 4A, 18(1) (cc) and 19 (1) (b) of the Kumaun and Uttarakhand Zamindari Abolition and Land Reforms (KUZALR) Act, 1960.

Section 18(1)(cc) read with Section 19(1)(b) of KUZALR Act were alleged repugnant to Section 37 and Section 84 of the Indian Forests Act, 1927, in so far as no compensation was provided for private forests which were preserved and protected through prudent management. Hence, present appeal. The question which the Court was asked to address was whether the High Court was justified in holding that the Appellants were not entitled to any compensation even when their forest land was acquired by the government. It was held, that repugnancy between the two statutes would arise if there is a direct conflict between the two provisions and the law made by the Parliament and the law made by the State Legislature occupies the same field. Hence, whenever the issue of repugnancy between the law passed by the Parliament and of State legislature are raised, it becomes quite necessary to examine as to whether the two legislations exercise their power over the same subject matter and secondly whether the law of Parliament was intended to be exhaustive to cover the entire field. Answer to both these questions in the instant case was in the negative, as the Indian Forest Act, 1927 deals with the law relating to forest transit, forest levy and forest produce, whereas the KUZALR Act deals with the land and agrarian reforms Thus, not only do the aforesaid Acts relate to different subject matters, but also the acquisitions mentioned therein are conceptually different.

With regard to compensation part it was held that intention of the legislature to pay compensation was abundantly clear from the fact that Section 19 itself prescribes that the compensation payable to a hissedar under Section 12 shall, in the case of private forest, be eight times the amount of average annual income from such forest In the instant case, income also includes possible income in case of persons who have not exploited the forest and have rather preserved it - Otherwise, it would amount to giving a licence to owners/persons to exploit forests and get huge return of income and not to maintain and preserve it but the same cannot be said to be the intention of the legislature in enacting the aforesaid KUZALR Act In fact, the persons who are maintaining the forest and preserving it for future and posterity cannot be penalised by giving nil compensation only because 109 of the reason that they were in fact chose to maintain the forest instead of exploiting it. Hence, appeal was partly allowed. Direction was given to Respondent No. 2 to determine and award compensation to Appellants by following a reasonable and intelligible criterion. Thus, where forest land of Appellant is acquired by Government, Entitlement of Appellant to compensation cannot be denied, merely because Appellants had not derived any income from the said forest.

## IV. BIODIVERSITY, WILDLIFE PROTECTION AND SETTLEMENT OF RIGHTS

### 1. Suo Motu v. The State of Karnataka represented by the Chief Secretary, 2009 (4) KCCR 2360

Article 48A, 51A (g) of Indian Constitution deals with wild life protection. Under Sections 21, 29, 33A, 34 and 38, Wild Life Protection Act, 1972, Public interest litigation initiated by High Court suo motu based on press report as to mysterious death of elephants in Mysore forest area, intended to draw attention to executives their statutory duty and obligation and also to impress upon public at large as to their role and contribution for protection of wild animals, birds and plants in general, the conservation of elephants in particular to ensure environmental and ecological security of the country. Earlier direction of High Court, in compliance of which Action plan was submitted by state government and direction was issued for the Constitution of advisory committee. The Court reflected at the objective of the Wildlife (Protection) Act, 1972 was enacted by the Parliament to provide for the protection of wild animals, birds and plants and for matters connected therewith or ancillary or incidental thereto with a view to ensure the ecological and environmental security of the Country.

Article 48-A of the Constitution provides that the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country. Article 51-A(g) of the Constitution casts a duty on every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have a compassion for living creatures. Having regard to the various provisions contained in the Wildlife (Protection) Act, the empowerment on the State Government under Article 48-A and the duty cast on every citizen under Article 51A(g) of the Constitution of India, considering the various comprehensive reports/action plan submitted and the suggestions made by the Bar and prima facie showing deep concern to the wildlife, environment, ecology and wealth of animal life and natural habitats and in the interest of public at large.

It was held to be appropriate to direct that the State Board for Wildlife shall hold periodical meeting at least once in two months, review the issue relating to the protection of wildlife, animals, birds and plants with a view to ensure ecological and environmental security in the State of Karnataka in general and particularly the conservation of and protecting the elephants from unnatural death and to review the situation periodically. The Court indicating the importance of flora and fauna mentioned the following poem:

*Have you not heard his silent steps?*
*He comes, comes, ever comes.*
*'Every moment and every age, every day and every night*
*He comes, comes, ever comes.*
*Many a song have I sung in many a mood of mind,*
*'But all their notes have always proclaimed,*
*"He comes, comes, ever comes"*
*In the fragrant days of sunny April through the*
*Forest path be comes, comes, ever comes.*
*In the rainy gloom of July mights on the thundering*
*Chariot of clouds be comes, comes, ever comes.*
*In sorrow after sorrow it is his steps that press upon*
*My heart, and it is the golden touch of his feet that makes my joy to shine.*

*---Sri Rabindranath Tagore*

**2. Suo Motu v. The State of Karnataka, MANU/KA/2097/2013**

The preservation of elephants under Prevention of Cruelty to Animal Act, 1960 was the subject matter under present petition which was initiated suo moto on directions of Chief Justice pertaining to death of four elephants in Mysore Forest Area reported in daily newspaper. The issue was whether direction could be issued for preserving elephants. The Court directed State and Union of India to initiate rapid action against culprits who involved in death of elephants and held that Provisions of Act shall be observed while putting captive elephants to any use of display. State was directed to review all clearances given to various projects in elephant habitant and corridor in time bound manner. Diversion of forest lands falling within elephant habitant and corridor, must be referred to Chief Wildlife Warden for assessment of potential impact, before issuance of any approval or clearance by State. State Government shall review user of land on periphery of forests falling within elephant habitat and corridor and took requisite steps for its conservation and preservation. Other directions were given to preserve elephants' safety.

3. **Sankareswaran and R. Arunagiri v. The Commissioner, Land Ceiling and Land Reforms W.P.(MD) Nos. 3536 of 2005 and 943 of 2006 (Madras High Court)**

Under Tamil Nadu Land Reforms (Fixation of Ceiling on Land) Act, 1961 petitioner sought direction forbearing Respondents from granting pattas in respect of lands in question to various individuals. Hence, this Petition. It was held that major portion of land in question was covered by thick forest and only small extent of land was left barren. However, use of barren land for any other purpose including for agricultural purpose, could result in deforestation. Disputed area was held to be the source for continuous water flow and such water was only source of drinking water for Municipality. Thus, land in question could not be either assigned or pattas could be granted to any individual. Any attempt to put land for different use could endanger preservation and conservation of forest. Thus, *"It is obligation of State to guard against alienation of vacant land within reach of forest growth in order to maintain natural forest."*

4. **T.N. Godavarman Thirumulpad v. Union of India and Ors., (2006) 1 SCC 1**

The Supreme Court in paragraphs 86 & 87 has observed as follows:

The national development agenda must recognise the necessity of protecting the long-term ecological security. The problem area is the growing population, high degree of mechanism and steep rise in energy use which has led to activities that directly or indirectly affect the sustainability of the environment.

It is recognised that the sustainable use of biodiversity is fundamental to ecological sustainability. The loss of biodiversity stems from destruction of the habitat, extension of agriculture, filling up of wetlands, conversion of rich biodiversity sites for human settlement and industrial development, destruction of coastal areas and uncontrolled commercial exploitation. It is thus evident that the preservation of ecosystems, biodiversity and environment whether examined on common-law principle or statutory principle or constitutional principle, eyeing from any angle, it is clearly a national issue to be tackled at the national level. All initiatives are required to be seriously pursued.

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5. **M/s. Gateway Hotels, Bangalore v. Nagarahole Budakattu Hakku Sthapana Samithi, Virajpet, Coorg District and Others, 1999 (5) KarLJ 63**

Use of Leasehold land under Section 20 and 35(3) of Wildlife Act and Section 2(iii) of Forest (Conservation) Act. This writ appeal was filed against order of Single judge whereby issue directions to appellants to immediately stop his project and all activities on forest land in question and hand over its possession to State Government. Held, keeping in view facts and circumstances of case, Single Judge was justified in holding that State Government had assigned portion of forest land by way of lease in favour of appellant, which was private company, admittedly without seeking prior approval of Central Government. He, however, felt that in view of his finding that there existed absolute prohibition on grant of such rights under Section 20 read with Section 35(3) of Act, lease itself was void which could not be acted upon by appellant - In case lease was contrary to provisions of Section 2(iii) of Forest (Conservation) Act, it could not be said that lease agreement was void ab initio without conferring any right upon appellant, particularly in view of finding regarding interpretation of Sections 20 and 35(3) of Act.

Even though the lease is not hit by the provisions of Section 20 of Act, yet it being contrary to the mandate of Section 2 of the Forest (Conservation) Act, cannot confer any right upon appellant to carry on with their scheme, proposals and objects accorded to them on basis of lease deed executed in their favour, unless and until approval of Central Government is obtained. In absence of such approval no activity of renovation, repairs etc., in terms of impugned lease deed can be carried on till approval of Central Government in terms of Section 2 of Act is granted. Under circumstances, appeals are partly allowed by holding that judgment of Single Judge insofar as it declares impugned order and lease deed to be contrary to Section 20 of Act, is set aside. In event of approval being granted, State Government may appoint committee comprising of responsible Government officials and representatives of public opinion, including representatives of tribals in area and writ petitioners, for monitoring execution of scheme to ensure its completion strictly in accordance with conditions prescribed by lease agreement without violating any provisions of law or doing violence to ecological atmosphere by endangering forest, its produces, or wildlife therein.

## 6. Animal and Environment Legal Defence Fund v. Union of India, (1997) 3 SCC 549

The petitioner is an association of lawyers and other persons who are concerned with protection of the environment. They have filed the present petition in public interest challenging the order of the Chief Wildlife Warden, Forest Department, Government of Madhya Pradesh (second respondent) granting 305 fishing permits to the tribals formerly residing within the Pench National Park area for fishing in the Totladoh reservoir situated in the heart of the Pench National Park Tiger Reserve. Accordingly, by Notification No. 5/15/82-10/77 dated 1.3.1983 the Government of Madhya Pradesh Forest Department declared its intention under Section 35(1) of the Wild Life (Protection) Act, 1972, to constitute the areas specified therein as a National Park. The area of Pench National Park so notified was within the two districts of Seoni and Chhindwara. On such declaration, the Collecter of the concerned district is required under Section 19 of the Wild Life (Protection) Act, 1972 to enquire into and determine the existence, nature and extent of the rights of any person in or over the land comprised within the limits of the sanctuary.

The petitioner as well as the State of Maharashtra have pointed out that if fishing is permitted in the heart of the National Park and as many as 305 fishing permits are issued, the bio-diversity and ecology of the area will be seriously affected. Fishing activity is a potential source of danger to the National Park because it may also lead to illegal felling of trees or poaching. It will be humanly impossible to monitor 305 licensees, their ingress and egress and to ensure that these licensees do not indulge in poaching and other ecologically harmful activities. It is also pointed out that in the Totladoh reservoir there are other wild life varieties such as crocodiles and turtles. There are also a wide range of local fishes. All these may face extinction. The water birds as well as migratory birds that use dead or dying trees and small islands in the reservoir as their roosting and nesting sites will also be disturbed. The fishermen uproot such dead and dying trees to clear the path for movement of their boats. Their activity along the peripheral shallow areas also prevents vegetation along the coast line. The fishermen may light fires for cooking and other purposes or may throw garbage and polythene bags which may also prove damaging to the ecology of the area. There is also a danger of large scale poaching of wild animals. The National Park is also a tiger reserve and all these other activities have a direct bearing on the protection of wild life in the National Park area.

The petitioner was undoubtedly justified in expressing his apprehensions and in pointing out the dangers of permitting 305 licensees to fish in the Totladoh reservoir. The fishing permits, however, have been granted to the tribals in lieu of their traditional fishing rights. Although the petitioner relies upon the provisions of the Indian Forests Act in support of the contention that the tribals cannot have any rights in a Reserved Forest which has subsequently become a National Park, but the same was rejected. They were hold to have traditional fishing rights in Pench river. After displacement these persons have not been rehabilitated systematically. No agricultural land has been made available to them, no work has been made available to them and they do not have any means of livelihood except catching fish which is their traditional occupation. If they are not given fishing permission a serious problem of feeding and supporting their families will arise. It was directed that every attempt must be made to preserve the fragile ecology of the forest area, and protect the Tiger Reserve, the right of the tribals formerly living in the area to keep body and soul together must also receive proper consideration. The Court directed that the State Government of the State of Madhya Pradesh shall expeditiously issue the final notification under Section 35(4) of the Wild Life (Protection) Act, 1972 in respect of the area of the Pench National Park falling within the State of Madhya Pradesh. It was held that monitoring steps to be taken to prevent any destruction or damage to the environment, the flora and fauna and wild life in those areas.

**7. Pradeep Krishen v. Union of India, AIR 1996 SC 2040**

The Supreme Court had pointed out that the total forest cover in our country is far less than the ideal minimum of l/3rd of the total land. We cannot, therefore, afford any further shrinkage in the forest cover in our country. If one of the reasons for this shrinkage is the entry of villagers and tribals living in and around the sanctuaries and the National Park there can be no doubt that urgent steps must be taken to prevent any destruction or damage to the environment, the flora and fauna and wild life in those areas.

**8. Banwasi Seva Ashram v. State of U.P, (1986) 4 SCC 753**

The question that required detailed consideration was relating to the claim of the Adivasis living within Dudhi and Roberts ganj Tehsils in the District of Mirzapur in Uttar Pradesh to land and related rights. The State Government declared a part of these jungle lands in the two Tehsils as reserved forest as provided under Section 20, Forest Act, 1927, and in regard to the other areas notification under Section 4 of the Act was made and proceedings for final

declaration of those areas also as reserved forests were undertaken. It is common knowledge that the Adivasis and other backward people living within the jungle used the forest area as their habitat. They had raised several villages within these two Tehsils and for generations had been using the jungles around for collecting the requirements for their livelihood, fruits, vegetables, fodder, flowers, timber, animals by way of sports and fuel wood. When a part of the jungle became reserved forest and in regard to other proceedings under the Act were taken, the forest officers started interfering with their operations in those areas.

Criminal cases for encroachments as also other forest offences were registered and systematic attempt was made to obstruct them from free movement. Even steps for throwing them out under the U.P. Public Premises (Eviction of Unauthorised Occupants) Act, 1972. were taken. pending before this Court and there has been a general direction that there should be no dispossession of the local people in occupation of the lands, Government has decided that a Super Thermal Plant of the National Thermal Power Corporation Limited (for short 'NTPC') would be located in a part of these lands and acquisition proceedings have been initiated. Government wanted to dispossess adivasis in order to make their habitat as reserved forest. Forests are a much wanted national asset. On account of the depletion thereof ecology has been disturbed; climate has undergone a major change and rains have become scanty. These have long term adverse effects on national economy as also on the living process. At the same time, a scheme to generate electricity, therefore, is equally of national importance and cannot be deferred. Court gave directions and stated that it was open to claimants to establish their rights with respect to lands declared as reserved forest as Court itself declined to express opinion about maintainability of claim.

**9. Dr. R. Dwarakinath v. State of Karnataka, Writ Petition No. 28040/2009**

The adverse effect of the formation of road was the matter of consideration under Section 37 of the Biological Diversity Act, 2002. Petitioners challenged construction of a link road through GKVK campus of University of Agricultural Sciences through this writ petition. The issue was whether, formation of link road would adversely affect biodiversity and research projects of University. Held, no scientific environmental impact assessment had been made relating to link road project and it was hazardous to take any view in matter in absence of clear scientific environmental impact assessment by an expert body, relating to link road project on biodiversity of University. If environmental impact, assessment' indicated that, notwithstanding any compensatory measures to minimize pollution, vehicular movement on

link road would result in irreversible damage to biodiversity and research programmes of University, then link road project might had to be cancelled in public interest and alternative solutions to ease traffic in locality had to be explored.

State Government was directed to set up Committee for resolution of controversy. Moreover Petitioners\former Vice Chancellors of University were permitted to present their views both orally and in writing to Committee, they were also at liberty to produce relevant documents in support of their claim. Till Committee takes decision in matter, BBMP was directed not to proceed with further construction of link road, BBMP should take further steps in matter as per decision of Committee. Thus if Petitioners were aggrieved by decision of committee, they were at liberty to challenge same in accordance with law. It was also held that clear scientific environmental impact assessment by an expert body can be necessary for order of stoppage of construction of road.

**10. Ramgopal Estates Pvt. Ltd., v. The State of Tamil Nadu, 2007 (2) CTC 369**

State Government accorded sanction to acquire lands in Kattupalli Village, for setting up of Petrochemical Park on ground of environment hazards and violations of guidelines of Coastal Regulation Zones. The issue under the petition was whether, proposal to set up Petrochemical Park be detrimental to eco-friendly environment in locality. Held, Petrochemical Park was going to be remarkable one in years to come so far as use of Petrol, Diesel, fuel oil, etc. were concerned. Petrochemicals would have phenomenal increase by way of manufacture of different plastic, rubber materials, etc. discovery and extraction of oil and other natural gas in eastern coast of southern region had given further thrust for development of petrochemicals and other associated industries. Therefore, in order to achieve self-sufficiency in petrochemicals and to reduce expenditure on foreign exchange in production of petrochemicals, Petrochemical Park was planned and thus, it was held that Petrochemical Park would contribute remarkable growth in very economy of country.

**11. Chief Forest Conservator (Wild Life) v. Nisar Khan, (2003) 4 SCC 595**

It was held therein that the business of breeding of birds in captivity by procuring them by trapping is prohibited. The Court gave interpretation to the term 'hunting' u/s 9, Wildlife Protection Act, 1972. Sec. 9 puts Prohibition on Hunting and states: No person shall hunt any wild animal specified in Schedules I, II, III and IV except as provided under Section 11 and Section 12. The Supreme Court clarified that the term 'hunting' also includes 'trapping of

birds'. The Court held, 'Trapping' of birds, which comes within the purview of the meaning of the term 'hunting', is thus prohibited in terms of Section 9 of the Act. When hunting of the birds specified in Schedule IV is prohibited, there cannot be any doubt whatsoever that no person can be granted a licence to deal in birds in captivity which are procured by hunting which as indicated hereinbefore, would also include trapping.

**12. Consumer Education and Research Society v. Union of India, (2000) 2 SCC 599**

The petitioner had filed the writ petition challenging the government notification dated 9-8-1995 and the resolution passed by the State Legislature reducing the area of "Narayan Sarovar Chinkara Sanctuary" from 765.79 Sq. K.M. to 444.23 Sq. K.M. The Supreme Court held that the power to take a decision for reduction of the notified area is not given to the State Government but to the State Legislature. The State Legislature consists of representatives of the people and it can be presumed that those representatives know the local areas well and are also well aware of the requirements of that area. It will not be proper to question the decision of the State Legislature in a matter of this type unless there are substantial and compelling reasons to do so. Even when it is found by the Court that the decision was taken by the State Legislature hastily and without considering all the relevant aspects it will not be prudent to invalidate its decision unless there is material to show that it will have irreversible adverse effect on the wild life and the environment. Thus, Section 18 of Wild Life Protection Act, 1972 gives power to take decision for reduction of notified area to State Legislature.

The Court observed the reports of the experts committees which in its opinion only point out the ecological importance of the area and express an apprehension, that any major mining operation within the notified area and large scale industrialisation near about the sanctuary as originally notified, may adversely affect the ecological balance and bio-diversity of that area. It would, therefore, be proper and safer to apply the 'Principle of Protection' and the 'Principle of Polluter Pays' keeping in mind the 'Principle of Sustainable Development' and the 'Principle of Inter-generation Equity'.

The following directions were made: (1) the interim order passed by this Court shall continue for a period of one year. If a need arises to carry out mining operation in a large area that may be permitted only after obtaining an order to that effect from this Court; (2) the State Government shall constitute a Committee headed by a retired Judge of the Gujarat High

Court and consisting of experts in the fields of hydrology, soil erosion and other related disciplines to make a comprehensive study of the relevant environmental aspects and also to study the effects of the present limited mining operation permitted by this Court. It shall also study the effect of running of the cement plant set up outside the old sanctuary area. The Committee shall, for this purpose, visit the area twice in a year, once before the monsoon and thereafter sometime after the monsoon, and submits its report to the State Government and to this Court; (3) the State Government is restrained from giving permission to others to carry on any mining operation or to put up a cement plant within the area of 10 km from the periphery of the old sanctuary area without obtaining an order from this Court. The State Government shall also take steps to monitor air and water pollution in this area every three months through its officers and submit its report in that behalf. After considering the reports the State Government shall take appropriate steps for controlling and improving the same. The State Government shall also submit a yearly report to this Court as regards the action taken by it.

**13. Dahanu Taluka Environment Protection Group v. Bombay Suburban Electricity Supply Company Ltd. and Ors. (1991) 2 SCC 539**

The petitioners, "Environment Protection Groups" objected to the clearance, by the State of Maharashtra and the Union of India, of a proposal of the Bombay Suburban Electricity Supply Company Limited (hereinafter referred to as "BSES") for the construction of a thermal power plant over an area of 800 hectares or thereabouts in Dahanu, Maharashtra. The petitioners under Environment Protection Rules, 1986 petitioners challenged clearance by respondents for construction of thermal power plant on grounds of atmospheric pollution. contended that fly ash and coal contaminants likely to have adverse effect on plants and forests. The adherence and continuous monitoring of stock emissions and ambient air quality will have no significant impact on environment and clearance to thermal power station was granted by Central Government after fully considering all aspects relating to environmental pollution. It also directed installation of electrostatic precipitators and a Flue Gas Desulphurisation Plant (FGD).

**14. N.R. Nair and Ors. v. Union of India, (2001) 6 SCC 84**

The Court held that the power contained in Section 22, Prevention of Cruelty to Animals Act, 1960 (Central Act 59 of 1960) is not unguided and in exercise of Judicial review the courts will not go into the correctness of the decision in issuing the notification. The main challenge in these appeals was concerning the validity of Section 22 of the Act and the notification issued under Section 22 to the effect that no person shall train or exhibit any animals specified therein namely, monkeys, tigers, panthers and lions. The impugned notification was challenged by the Indian Circus Federation before the High Court of Delhi. By an Order, dated 21st August 1997, a Division Bench of the High Court required the Government of India to have a fresh look at the notification after taking into account materials placed before it by the Petitioners therein and other authorities. Accordingly a committee was constituted with eminent persons in the field of wild life and animal welfare. The Committee gave a detailed report and in pursuance there to the impugned notification was issued.

The notification was challenged in a Writ Petition in the Kerala High Court. The High Court upheld the validity of the notification. It was held that in exercise of the judicial review it was not possible for the courts to examine the correctness of the decision of the Government in issuing the notification. The Writ Petition was dismissed. The Judgment is challenged in appeal under Special Leave. The Indian Circus Federation was allowed to intervene in the appeal. In the very nature of things when the animals are used for performance in circus, it requires their training. It is for the Government to decide on the basis of the evidence on record and after taking into consideration other factors whether the training and exhibition of those animals would result in unnecessary pain or suffering being inflicted on them. It is pertinent to note that even with respect to the animals whose exhibition and training is prohibited the Act does not prevent the owner from keeping them as domestic pets.

It is the welfare of the animals which is of paramount consideration and it is only if the Government is satisfied on the basis of the materials on record that unnecessary pain or suffering is inflicted on an animal during the course of training or at the time when it is exhibited that a notification under Section 22 (ii) is issued. The Court therefore, was unable to agree with the learned Counsel for the Appellants that the power contained in Section 22 is unguided. The reading of the Act as a whole clearly shows that implicit in Section 22 is the necessity for the Government to come to the conclusion that if a notification under said section is issued there would be unnecessary pain or suffering in the training or exhibition of

the animals. The existence of the said fact is a pre-condition to the issuance of the Notification. The Court agreed with the decision of the High Court that in exercise of judicial review neither the High Court nor this Court can go into the correctness of the decision of the Government in issuing the impugned Notification.

**15. State of Himachal Pradesh and others etc. v. Ganesh Wood Products, (1995) 6 SCC 363**

The Supreme Court invalidated forest based industry, recognizing the principle of inter-generational equity and sustainable development. A petition was filed by Ganesh Wood Products against the decision of the Government of the State of Himachal Pradesh to refuse the establishment of katha factories in the State. The Government submitted that such an establishment would have led to the indiscriminate felling of the khair trees which would have a deep and adverse effect upon the environment and the ecology of the State. It was submitted that the raw materials available in the State, that is, the khair trees for the manufacture of katha, was insufficient to sustain the proposed industries. The High Court allowed the petition and the Government appealed to the Supreme Court of India.

It was stated in the ruling with Justices Reddy B. Jeevan and M.K.Mukherjee presiding:

*"The sub-committee of IPARA seems to have been proceeding on the assumption that so long as there is no commitment on the part of the government to supply khair wood to the proposed factories, there is no harm in approving any and every proposal that comes before it. This Cannot but be termed as a totally faulty and a myopic approach. It is also violative of the National Forest Policy and the State Forest policy evolved by the Government of India and the Himachal Pradesh Government respectively - besides the fact that it is contrary to public interest involved in preserving forest wealth, maintenance of environment and ecology and considerations of sustainable growth and inter-generational equity. Afterall, the present generation has no right to deplete all the existing forests and leave nothing for the next and future generations."*

The obligation of sustainable development further requires that a proper assessment should be made of forest wealth and the establishment of industries which are based on the forest produce. They should not only be restricted, accordingly, but they should also be closely monitored to ensure that the required environmental balance is not disturbed, since it fails to make a difference whether the trees used belong to the government or not.

## V. HERITAGE

### 1. Association for Environment Protection v. State of Kerala, AIR 2013 SC 2500

The significance of heritage conservation was observed in this case seeking demolition of a construction which was denied and hence, this challenge under Articles 21 and 48-A of Constitution of India, 1950 (Constitution). Kerala High Court dismissed writ Petition filed by Appellant for restraining Respondents from constructing a building (hotel/restaurant) on banks of river Periyar within area of Aluva Municipality. Hence, present Appeal. Whether construction of hotel building in question was liable to be demolished being ultra vires provisions of G.O. dated 13th January, 1978 issued by State Government, which mandated assessment of environmental impact as a condition precedent for execution of any project costing more than Rs.10,00,000/- - Held, execution of project including construction of restaurant was ex facie contrary to mandate of G.O. dated 13th January, 1978, which was issued by State in discharge of its Constitutional obligation under Article 48-A of Constitution. High Court ignored said crucial issue and casually dismissed writ Petition without examining serious implications of construction of a restaurant on land reclaimed by Aluva Municipality from river - G.O. dated 13th January, 1978 was illustrative of State Government's commitment to protect and improve environment as envisaged under Article 48A of Constitution. By omitting to refer project to Committee, District Tourism Promotion Council and Department of Tourism conveniently avoided scrutiny of project in light of parameters required to be kept in view for protection of environment of area and river - Subterfuge employed by District Promotion Council and Department of Tourism had resulted in violation of fundamental right to life guaranteed to people of area under Article 21 of Constitution. There was no justification to condone violation of mandate of order dated 13th January, 1978. Respondents were directed to demolish structure raised for establishing a restaurant as part of renovation and beautification of Park - Impugned order was set aside. The appeal was allowed.

### 2. Surendra Kumar Singh v. State of Bihar, 1991 Supp (2) SCC 628

The petitioners sought special leave to appeal to this Court from the two orders of the Patna High Court. Those orders were interlocutory in character by which the High Court, in substance, directed that as the three Hills - Ramshilla, Prethilla and Brahmyoni had been declared protected monuments no stone crushing industry should be allowed to be located within a distance of 1/2 kilometer from the area so declared and any stone crushing industries

located within such 1/2 kilometer area should be, shifted. This measure was intended to prevent illegal quarrying on and consequent desecration of the Hills. Petitioners urge that their stone crushing establishment, admittedly, not being within the protected-area, they should not be asked to move further away by the artificial extension of the area brought about by the High Court's orders which petitioners say are without jurisdiction. The State of Bihar seeks to support the directions of the High Court on the ground that such directions were issued to effectuate the purpose of the notifications and prevent their violation. Petitioners 8 and 10 say that they are willing to shift to places to be provided to them if facilities for shifting of the electric supply are made available at new sites. Therefore, the Supreme Court directed the authorities of the State Electricity Board to act in aid of the assurance given by the Government and provide facilities for shifting of the electrical installation of petitioners 8 and 10 to the place allotted to them for their stone crushing operations.

3. **Rajeev Mankotia v. The Secretary to the President of India, AIR 1997 2766**

Ancient Monuments and Archeological Sites and Remains Act, 1958. The issue remain whether 'viceregal lodge' at Shimla required to be maintained as historical monument of national importance. It held that the said monument witnessed two historical conferences held by Indian leaders with Viceroy and the entire area of viceregal lodge to be notified as protected ancient monument - protection and preservation of viceregal lodge and appurtenant land as historical heritage made final by Court Orders. The Government was directed to provide necessary budget for effecting repairs and restoring building its natural beauty and grandeur.

4. **Niyamavedi v. State of Kerala, AIR 1993 Ker 262**

Petition under Forest Conservation Act, 1980 challenging action of respondent to establish biological park. State Government on consideration of opinion of experts and scientists decided that establishment of park would be conducive to proper maintenance of forest wealth and it was needed for afforestation. Court did not interfere so long as policy decisions of Government does not offend provisions of statute or constitution hence, petition liable to be set aside.

## VI. WETLANDS

### 1. *Dahanu Taluka Environmental Welfare Association v. the Union of India, 1991 (2) SCC 539*

The case filed by the leading environmental lawyer in the country, Mr. M. C. Mehta, the Supreme Court gave a landmark decision to conserve the biodiversity rich network of wetlands in Dahanu and limited industrialisation to 500 acres in Dahanu. Furthermore the Court ruled that the Ministry of Environment and Forests should designate and notify Dahanu as an 'ecologically sensitive' area permitting only certain types of industries in this area.

Thus the Environment (Protection) Act can be used to notify certain ecologically harmful industries, operations and processes particularly in cases of wetlands which are on the brink of extinction.

### 2. Indian Council for Enviro-legal Action v. Union of India, AIR 1996 SC 1446 and in S. Jaganath v. Union of India, (1997) 2 SCC 87

In both these decisions, the Courts upheld the validity of the Coastal Regulation Zone Notification which seeks to impose restrictions upon industries, operations and processes in the CRZ areas. This does bring into sharp focus the need to address not just listed wetlands but wetlands in a particular region i.e. the coastal region or the wetlands.

### 3. Forum for Human, Legal and Ecological Rights, Bansdroni v. Union of India, Writ Petition No.606 of 2011. (Calcutta High Court)

The High Court of Kolkata directed the West Bengal Government, India to formulate a Wetland and Water Bodies policy in response to a Public Interest Litigation (PIL) filed by the Forum for Human, Legal and Ecological Rights, Bansdron. The petitioners argued that India is a signatory to the Ramsar Convention, a global environmental treaty which is specifically meant for the protection of wetlands. Hence, the state government has an obligation to implement the provisions of the agreement at state in order to protect the wetlands. The State appointed a High Powered Committee to draft a policy and a law for the protection of Wetlands in the State in accordance with the High Court order.

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4. **People United for Better Living v. State of West Bengal And Others, A Cal 215.**

The High Court allowed construction of a water treatment plant in the East Kolkata Wetland Area, a declared Ramsar Convention site under the East Kolkata Wetlands (Conservation and Management) Act, 2006. Further the court appointed a monitoring committee and ordered to do the construction in a most eco-friendly manner and remedial measures in the vicinity of the area.

The Court observed the following:

"Wetlands are being an unseen storehouse of nature's bounty and a gift of nature to mankind which act as regulators and reservoirs for rivers. It was held that in a developing country like India, there shall have to be development, but that development shall have to be in closest possible harmony with the environment, as otherwise there would be development but no environment, which would result in total devastation, though, however, may not be felt in present but at some future point of time, but then it would be too late in the day, however, to control and improve the environment."

It was pointed out that there must be a balance between the developmental activities and the environmental protection. The present case was with regard to the protection of wetlands in the eastern fringes of the city of Calcutta which was declared as a Ramsar site. The Court decided the case in favour of the petitioner by staying all Developmental activities at the sites.

The Court held that, Wetland acts as a benefactor to the society and there cannot be any manner of doubt in regard thereto and as such encroachment thereof would be detrimental to the society which the Courts cannot permit. This benefit to the society cannot be weighed on mathematical nicety so as to take note of the requirement of the society, what is required today may not be a relevant consideration in the immediate future, therefore, it cannot really be assessed to what amount of nature's bounty is required for the proper maintenance of environmental equilibrium. The importance of maintaining the ecosystem is aptly explained by the court in this case and later on and still now this Judgment was considered as a milestone in the interpretation of statutes and in the wetland protection.

5. **M.C. Mehta v.Kamal Nath, Writ Petition (C) No. 182 of 1996.**

The SC confirmed the above proposition and also invoked the Roman and English common law principle of "Public trust doctrine." The court pointed out that the public trust is more than an affirmation of State power to use public property for public purposes. It is an affirmation of the duty of the State to protect the people`s common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rate cases when the abandonment of that right is consistent with the purposes of the trust. Thus the "Public trust doctrine" is now a part of the law of the land through this decision. The Court also ordered the Motel to pay compensation by way of cost for the restitution of the environment and ecology of the area

6. **M.C. Mehta v. Union of India (Taj Mahal Case), (1997) 2 SCC 353**

It was held that the development of industry is essential for the economy of the country, but at the same time treating the principle of sustainable development as a fundamental concept of Indian Law, it was opined that the development of the doctrine of sustainable development indeed is a welcome feature but while emphasizing the need of ecological impact, a delicate balance between it and the necessity for development must be struck. Whereas it is not possible to ignore intergenerational interest, it is also not possible to ignore the dire need which the society urgently requires. The two essential feature of sustainable development are the precautionary principle and the polluter pays principle.[2]

7. **M.Indira and Others v. State of Tamilnadu, W.P.Nos.17233, 20469 and 21261 of 2009 and W.P. No.7941 OF 2010, Judgment dated 7 March 2012.**

The petitioners questioned the de-notification of 317 hectares of the Marsh land (swamp) near Pallikaranai, 20 KM south of Chennai, under the Tamilnadu Forest Act, 1882 and Forest (Conservation) Act, 1980 by the Government.

Government of Tamilnadu argued that originally 5000 hectares of wetland reduced to 500 hectares in a period of time and it is the duty of the state to protect the wetland which was included by the Government of India under the National Wetland Conservation Programme. The Court declared that the Government can declare any land under the Forest Act against

[2] M. C. Mehta v. Union of India, (2002) 3 SCJ 11).

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de-forestation and environmental protection and affirmed the decision of the state government. In this case, it is interesting to note that there is no special legislation to protect wetlands in Tamilnadu. But the State found the Forest Act is appropriate to invoke the protection of the wetland in this case. Absence of specific laws is an impediment to protect wetlands in States. This case substantiates the argument that there must be a Union law on wetlands to be followed by the states for the protection of wetlands in India, especially, in the urban cities. It is the usual definition of this kind of government land as "puramboke," meaning excess waste land, according to land records and later on "pattas" (ownership rights) will be issued to the occupants in a period of time. This is mainly due to the lack of a uniform definition of wetland in the land laws of India.

## VII. MINING

### 1. Rural Litigation & Entitlement Kendra v. State of UP, AIR 1987 SC 359

Rural Litigation and Entitlement Kendra, made an allegation related to unauthorized and illegal mining operations carried on in Mussoorie Hills and area around adversely affecting ecology to environmental disturbances. Held, at present Valley was in danger because of erratic, irrational and uncontrolled quarrying of limestone Green cover about 10 per cent of area while from decades ago it was almost 70 per cent. Moreover, 105 mining leases and various reports indicated that direct environmental impact on area and limestone deposits of high grade having up to 99.8 calcium carbonate. Digging and blasting of limestone allowing waste to roll down had affected villages as also agricultural lands located below hills and disturbed entire ecology of area and traffic hazard for local population. Therefore, it was appreciation steps taken by Rural Litigation and Entitlement Kendra for Preservation of environment. *It is duty of citizen of India to preserve environment and ecological balance of country.*

### 2. Kinkri Devi v. State of Himachal Pradesh, AIR 1988 HP 4

Environment mining lease Articles 48A and 51A of Constitution of India. Petitioner sought cancellation of mining lease for excavation of limestone granted in favour of X as it posed danger to adjoining land, water resources, pastures, ecology and environment sought compensation for damage Article 48A prescribes that State shall endeavour to protect environment and to safeguard the forest and wild life Article 51A (g) provides that it will be duty of every citizen to protect and improve natural environment of country and to have

compassion for living creatures indiscriminate grant of mining lease and unscientific exploitation of mines by lessees might result in evil consequences need of judicial intervention may not arise where administration takes preventive measures directed constitution of committee to recommend evolution off long term plan for grant of mining lease in State and suggest regulatory measures for repair of such damage further directed respondent to stop all mining activities in area leased to him till further Order further directed no grant of mining lease till committee submits its report.

**3. Janak Lal v. State of Maharashtra, AIR 1989 SC 2225**

Allotment of land under Rules 21 (2), 58 and 59 of Mineral Concession Rules, 1960 and Mineral Concession (Amendment) Rules, 1963. The land was used for nastier purposes allotted on lease for mining purpose. The procedure prescribed under Rule 58 for such allotment not followed hence, appeal filed against such Order. It was contended that allotment was illegal under Rule 59. Court opined that meaning of words any purpose used under Rule 59 very wide and no ground found for limiting scope of Rule 59. Rule 59 found applicable in present case. Held, grant of such land on lease found to be in violation to Rule 58.

**4. Tarun Bharat Sangh, Alwar v. Union of India, AIR 1992 SC 514**

The case pertains to the conservation of nature. In relation to Sections 29 and 30 of Rajasthan Forest Act, 1953 and Rajasthan Wild Animals and Birds Protection Act, 1951 petitioner brought public interest litigation to impose restriction on carrying on any activity in protected area which would impair environment and wild life. Petitioner alleged that Government has illegally and arbitrarily issued about 400 mining privileges to various persons and therefore causing threat to diminish ecology of area and habitat of wild life - Government is directed to appoint Committee to prevent devastation of environment and wild life within protected area. Interlocutory direction was provided that no mining operation of whatever nature shall be carried on within protected area.

For environmental protection under Articles 21 and 32 of Constitution of India Supreme Court passed Orders for Constitution of committee for protection of tiger park. The petitioner alleged violations of earlier Order by mine owners - mines were not allowed to be continued in protected areas - udyog sangh had envinced helpful attitude to cooperate with work of

committee - police administration was directed to ensure that workers of petitioner were not subjected to any hindrance in their activity and expenses incurred by committee to be met by State Government.

**5. Samaj Parivartana Samudaya v. State of Karnataka, AIR 2013 SC 3217**

The direction as to Action plan to stop indiscriminate mining issued. Section 2(d) of Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act); Forest (Conservation) Act, 1980 (FC Act); Environment (Protection) Act, 1986 (EP Act); Articles 14, 21, 32 and 142 of Constitution of India, 1950. Present Petition was filed complaining of little or no corrective action on part of State and seeking

(a) to issue a Writ of Mandamus or any other appropriate writ, order or direction, directing immediate steps be initiated by both Respondent States and Union of India to stop all mining and other related activities in forest areas of Andhra Pradesh and Karnataka which were in violation of orders of present Court dated 12th December, 1996 in W.P. (C) No. 202 of 1995 and FC Act;

(b) To issue a Writ of mandamus or any other appropriate writ, order or direction, directing as null and void retrospectively all 'raising contracts' / sub leasing because which were in violation of Mines and Minerals (Development and Regulation) Act, 1957 and initiate penal action against violators;

(c) To issue a Writ of mandamus or any other appropriate writ, order or direction, directing stoppage of all mining along border and in forest areas in Bellary Reserve Forest till a systematic survey of both interstate border and mine lease areas along entire border was completed by Survey of India along with a representative of Lokayukta of Karnataka;

(d) To issue a Writ of mandamus or any other appropriate writ, order or direction, directing action against all violators involved either directly or indirectly in illegal mining including those named in Report of Lokayukta of Karnataka (Part-I);

(e) To issue a Writ of mandamus or any other appropriate writ, order or direction, directing recovery of illegal wealth accumulated through illegal mining and related activities; and

(f) To issue a Writ of mandamus or any other appropriate writ, order or direction, directing null and void notification and other related notifications/orders de-reserving lands for mining operations - What should be appropriate contours of present Court's jurisdiction while dealing

with allegations of systematic plunder of natural resources by a handful of opportunists seeking to achieve immediate gains.

In circumstances, questions concerning credibility of CEC (Central Empowered Committee) were unfounded, particularly in absence of any materials to substantiate apprehensions, if not allegations, that had been leveled - Said body had been performing such tasks as had been assigned by present Court by its orders passed from time to time - Directions on basis of which CEC had proceeded and had submitted its Reports were within framework of terms of reference of CEC as determined by present Court. Acceptance of recommendations made by CEC on basis of which orders of Court were formulated was upon satisfaction of Court. Exercise of jurisdiction under Article 32 /142 of Constitution, on basis of facts revealed by Reports of CEC i.e. large scale damage to forest wealth of country due to illegal mining on an unprecedented scale vis-à-vis resort to remedies under provisions of MMDR Act, FC Act, and EP Act.

Mechanism provided by any of Statutes in question would neither be effective nor efficacious to deal with extraordinary situation that had arisen on account of large scale illegalities committed in operation of mines in question resulting in grave and irreparable loss to forest wealth of country besides colossal loss caused to national exchequer. Situation being extraordinary, remedy must also be extraordinary. It was not understandable how any of recommendations of CEC, if accepted, would come into conflict with any law enacted by legislature.

Wide terms of definition contained in Section 2(d) of MMDR Act, encompassed all such activity viz., dumping of mining waste (overburden dumps), within meaning of expression "mining operations". Use of forest land for such activity would require clearance under FC Act. In case land used for such purpose was not forest land then mining lease must cover land used for any such activity. Acceptability of Recommendations of CEC with regard to (i) categorization, (ii) Reclamation and Rehabilitation (R&R) Plans, (iii) Reopening of Category 'A' and 'B' mines subject to conditions, (iv) Closure/reopening of Category 'C' mines and (v) future course of action in respect of Category 'C' mines if closure thereof was to be ordered by Court

Inter-generational equity and sustainable development had come to be firmly embedded in constitutional jurisprudence as an integral part of fundamental rights conferred by Article 21

of Constitution. In enforcing such rights of a large number of citizens who were bound to be adversely affected by environmental degradation, present Court could not be constrained by restraints of procedure. CEC which had been assisting Court in various environment related matters for over a decade was assigned certain specified tasks which had been performed by said body giving sufficient justification for decisions arrived and recommendations made. If said recommendations could withstand test of logic and reason then there could be no reason not to accept said recommendations and embody same as a part of order
(i) Categorization:

Arbitrariness in adoption of a criteria for classification had to be tested on anvil of Article 14 of Constitution, and not on subjective notions of availability of a better basis of classification. Test was whether categorization on basis adopted results in hostile discrimination and adoption of criteria of percentage had no reasonable nexus with object sought to be achieved, namely, to identify lessees who had committed maximum violations and damage to environment, categorization made did not fail test of reasonableness and would commend for acceptance.

(ii) Conditions which had been suggested for opening of Category 'A' mines and additionally the R& R Plans for Category 'B' mines

Conditions subject to which Category A and B mines were to be reopened and R&R Plans that had been recommended as a precondition for reopening of Category B mines were essentially steps to ensure scientific and planned exploitation of scarce mineral resources of country - Such recommendations were wholesome and in interest not only of environment and ecology but mining industry as a whole so as to enable industry to run in a more organized, planned and disciplined manner. There was nothing in preconditions or in details of R&R plans suggested which were contrary to or in conflict or inconsistent with any of statutory provisions of MMDR Act, EP Act and FC Act. In such a situation, while accepting preconditions subject to which Category A and B mines were to be reopened and R&R plans that must be put in place for Category B mines, suggestions made by CEC for reopening of Category A and B mines as well as details of R&R plans should be accepted.

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## VIII. BIOPIRACY

**1. Bt-Brinjal Case:** PIL filed by Environment Support Group

The following the extract of the issues involved in the PIL filed by the ESG:

Public Interest Litigation in Karnataka High Court challenging callous disregard for biodiversity protection Environment Support Group has filed a Public Interest Litigation (WP No. 41532/2012) in the Karnataka High Court challenging widespread violations of the Biological Diversity Act, 2002 and various interconnected laws, and thereby the Convention on Biological Diversity, 1992. Taking note of the PIL, the Principal Bench of the High Court constituted by Chief Justice Mr. Vikramjit Sen and Justice Mrs. B. V. Nagarathna listed the petition for further consideration on 20th November, 2012. ESG's PIL holistically addresses the shocking state of biodiversity conservation in India, and urges the Court to direct attention to the widespread practice of biopiracy by national and international corporate bodies. Further, the petition highlights a number of specific defects, lacunae and failures in the legal and institutional regimes that are accommodating rampant loss of India's biological diversity and associated traditional knowledge, thus threatening livelihoods of indigenous and natural resources dependent peoples.

The Petition draws the attention of the Court to the reports of the Comptroller and Auditor General of India and the Indian Parliament's Committees on Agriculture and Public Accounts, which have independently come to the conclusion that there has been colossal failure on the part of the Ministry of Environment and Forests and National Biodiversity Authority in protecting the country's biodiversity.

Specifically, the Petitioners highlight that the Ministry's 26 October 2009 Notification listing 190 plants as Normally Traded Commodities (NTC) includes at least 18 critically endangered plants. While hundreds of community and regional initiatives are desperately trying to protect such plants, the Ministry's Notification callously promotes their unfettered international trade thus driving them potentially into extinction, state the Petitioners. The Petitioners highlight that the main beneficiaries of such trade are Indian and foreign corporations, and very little benefit is accrued to the national exchequer or by communities conserving biodiversity. The Petitioners contend that Sec. 40 of the Biodiversity Act, 2002, which allows such unfettered trade in India's biological wealth, also paves way for rampant biopiracy and calls for

quashing this section as being ultra vires of the Biological Diversity Act, 2002 and the Constitution of India.

Additionally, the Petitioners have drawn the attention of the Court to the continuing failure on the part of regulatory authorities to initiate action against M/s Mahyco, M/s Monsanto, and various public agricultural universities involved in promoting B.t. Brinjal by bio-pirating local varieties of brinjal (egg plant). The Petition draws the Court's attention to the fact that over a year after the Indian Environment Minister Mrs. Jayanti Natarajan assured Parliament that violators would be criminally prosecuted, no legal action has followed till date. This failure by regulatory authorities has been strongly criticised by the Parliamentary Committee on Agriculture in its August 2012 report on "Cultivation of Genetically Modified Food Crops Prospects and Effects" which has called for *"....a thorough inquiry in the matter of continued paralysis in decision making on a case of this dimension"*.

On such and other grounds, the Petition prays that environment, social and bio-diversity impact assessments based on meaningful compliance with the Principle of Prior and Informed Consent must be made mandatory for all decisions impacting biodiversity, associated traditional knowledge and livelihoods. The prayer seeks the quashing of the Ministry's Notification on NTC as being illegal and urges the Court to direct the Ministry and the Authority to institute appropriate structures, procedures and norms to protect India's biodiversity in strict conformance with the Biological Diversity Act, 2002, Panchayat Raj Act, 1992, Nagarpalika Act, 1992 and Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, Environment Protection Act, 1986, amongst others. HC evicts pleas seeking quashing of criminal complaint.

The High Court of Karnataka dismissed, on October 11, 2013 petitions challenging criminal complaints against the developers of Bt Brinjal. The Environment Support Group (ESG), the not for-profit trust involved in environmental and social justice initiatives, launched in 2006 its campaign against Bt Brinjal, the first-ever genetically modified food in the country, posing the unprecedented risk to public health posed by releasing 'lab-cultured' food that was "developed intransparently" and after being "poorly tested".

The verdict paves the way for the first-ever case of bio-piracy in the country, when the provisions of the Biodiversity Act dealing with biopiracy come into play. The HC decision to

let the law run its course in the lower court is the culmination of claims that endemic varieties of brinjal were accessed by University of Agricultural Sciences (UAS) and Ms Monsanto/ Mahyco.

Monsanto's proprietary 'Bt gene' was inserted in local varieties of brinjal to create Bt Brinjal. ESG claimed that permission from local biodiversity management committees, the State Biodiversity Board and the National Biodiversity Authority was not taken. As part of its campaign to stop corporations from "deciding what one eats and drinks", the ESG had filed a public interest petition in the high court, seeking criminal proceedings against the alleged bio-pirates. It was this that prompted the National Biodiversity Authority (NBA) and the Karnataka State Biodiversity Board (KBB) to file a criminal complaint before a magistrate's court in Dharwad.

The complaint is against the multinational company Ms Mahyco/Monsanto and officials of the University of Agricultural Sciences (UAS), Dharwad, including the vice-chancellor, the registrar and, former vice chancellor of the university who was also the chairman of the Karnataka Krishi Mission and the director of the Indian Agricultural Research Institute. The NBA and KBB had filed their complaint on November 24, 2012, and the UAS representatives responded by filing two separate petitions seeking quashing of this criminal complaint. In January this year, the HC had stayed proceedings, but on October 11 last week, Justice AS Pachhapure dismissed these petitions. This paves the way for the continuation of criminal proceedings in the lower court in Dharwad.

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# "Greening India" but losing forests

'aveen Bhargav

**Planting trees or raising plantations does not recover lost habitats or create pristine natural forests. It is, therefore, no antidote to habitat fragmentation.**

Forests are among the first casualties as human populations explode. An insatiable thirst for land has shrunk India's forest cover alarmingly. It is timated that between 1950 and 1980, ound 50 lakh hectares of forestland was verted for non-forestry activities. Consetiently, forest cover shrunk to around 19 per nt of the country's land area as against the tional goal of 33 per cent. Yet forestlands ntinue to be diverted for non-forestry purses in an ad hoc manner.

Responding to the urgent need to stop the pletion in the face of diminishing political ll, the Supreme Court is now enforcing mpulsory levies on mining, power and her developmental projects that gobble up tural forests and intrude into wildlife habits. A sum of Rs. 5,000 crore thus collected now lying in a corpus fund with the Comnsatory Afforestation Fund Management d Planning Authority (CAMPA). The fund mprises monies collected for compensatoafforestation as mandated by the Forest nservation Act and from realisation of the t Present Value (NPV), a levy based on luation of the forestland diverted for nonestry activities. The Ministry of Environnt and Forests (MoEF), for the moment, he custodian of this huge corpus.

And what does the MoEF propose to do th it? The plan seems to be to await prosals from State governments for compenory afforestation projects. As the name plies, compensatory afforestation is an atnpt to make up for the loss of natural ests in one area by planting trees in anher area. Unfortunately, this has often led situations in which a pristine natural for- is destroyed, say, for a mining project, d on nearby natural grassland, which ould have been left alone, are planted usees exotic species such as acacia, eucalyptus d casuarina. The net result is the destruction of two natural habitats.

While this kind of 'afforestation' is in itself astrous, the money lying with CAMPA is nerating other fanciful ideas. One is to transfer this huge fund to the National Bank for Agriculture and Rural Development and distribute it to people who will then ostensibly plant saplings that would hopefully grow into mature trees – a sure way of frittering away the funds and having virtually nothing to show for it.

## Consolidate shrinking forests

Greening India, compensatory afforestation, increasing forest cover – all these may be perceived by citizens as important and necessary. Political leaders too are quick to lap up simplistic solutions that claim to solve the problem of shrinking forest cover. But do these populist methods and solutions actually help? Unfortunately, they do not.

It is scientifically established that fragmentation or shrinking of forests into smaller patches honeycombed with human settlements, highways, dams, mines or developmental projects is the most serious threat to biodiversity and forest conservation. When a large block of forest gets fragmented, the edges of all the bits come into contact with human activities, resulting in degradation of the entire forest. With continuity of forested landscapes and corridors getting disrupted, populations of single species and the composition of entire animal communities are affected. Rare interior forest species are replaced with common, adaptable 'trash' species of plants and animals.

Habitat fragmentation has other consequences at more practical levels. Fragmentation also facilitates intensive exploitation of forest produce and poaching of wildlife, thanks to easier access to previously remote, interior forest areas. Finally, fragmentation aggravates human-wildlife conflicts that are increasing across the country. Competing with humans for the same food sources, tigers and leopards kill cattle and wolves, and lift children, and elephants raid paddy fields and farms. In such conflicts, wildlife inevitably loses out.

Fragmentation and its deleterious consequences have already shrunk the range and distribution of large mammal species such as tigers and lion-tailed macaques to less than five per cent of their former range in India. Other species have suffered even more. We lost the cheetah and are left with practically a single surviving population of the Asiatic lion and the rhinoceros.

These consequences of fragmentation cannot be brushed aside as idle speculation. High-resolution satellite imagery along with ecological surveys can objectively monitor the negative impacts. Planting trees or raising plantations does not recover lost habitats or create pristine natural forests. It is, therefore, no antidote to habitat fragmentation.

The need of the hour is to prevent fragmentation and consolidate the already fragmented natural forests by eliminating or reducing human intrusions. This will ensure that large forested landscapes which still exist conserve the nation's incredible biodiversity wealth for the present and future generations.

Unfortunately, this approach is nowhere in evidence in the planning and decision-making process of the MoEF. This is starkly reflected in the fact that proposals for diversion of forestland are not even required to indicate whether a development project will fragment a large forest block. The Ministry in New Delhi continues to permit development projects and sanction in-situ grants of forestland without this piece of crucial data.

From the MoEF's perspective, "Greening India" through a pit-and-plant approach is far more rewarding. It not only presents an opportunity to share the huge funds accumulated under the compensatory afforestation stream with States for lucrative "afforestation" projects but also legitimises the continued sanctioning of projects within forest areas in an ad hoc manner using 'compensatory afforestation' as a fig leaf. This must be stopped immediately.

## De-fragment large blocks

With over a billion people and an economy growing at eight per cent, some amount of forest loss is inevitable. To mitigate its impact, we must innovate radically to de-fragment and consolidate large blocks of forests and facilitate natural recovery through protection measures. While addressing this, the knotty issue of relocating people living deep within pristine forest areas cannot be swept under leaf litter. Ecologically robust and socially just solutions that are site-specific must be crafted with care and offered to the people.

The Tiger Task Force constituted by the Prime Minister has recommended that 'inviolate' areas are required for maintaining breeding tiger populations. It has also estimated that relocating around 65, 000 families from reserves would cost the government Rs.1,663 crore at Rs. 2.5 lakh compensation for each family. The Rs. 5,000-crore corpus can surely provide the much-needed budgetary support to ensure proper redress of past injustices meted out to forest dwellers. This offers an additional bonus too. Voluntarily relocating people from remote interiors to areas where socio-economic services exist will ensure significant savings to the exchequer by eliminating the need to build new roads, bridges, power lines and communication infrastructure and provide health services – all of which have the potential to cause more fragmentation.

Therefore, using such a huge fund transparently for addressing the genuine resettlement demands of people marooned inside critical wildlife habitat would be extremely valuable. This would be a major decision which requires the Prime Minister's urgent intervention. Flawed policies and bureaucratic mindsets that impede the devolution of this corpus to State governments for resettlement and consolidation must be changed.

Apart from this, the government must accept that the present system of afforestation through artificial plantations (other than natural recovery) does not adequately compensate the loss of dense forests. With emerging challenges triggered by climate change, effective sequestration of carbon to mitigate the impact is best achieved through protection of natural old-growth forests. This will also rake in much higher carbon credits under the Kyoto Protocol as valuations for artificial plantations are far lower.

We are at a critical moment in India's fight to achieve ecological security while ensuring economic and social progress. Myopic ideas that promote failed pit-and-plant projects must be jettisoned. It would be a monumental folly if we allow Rs. 5,000 crore to be squandered on digging pits and buying polythene bags for raising saplings.

The government must heed scientific advice on this crucial issue. The funds lying with CAMPA present a great prospect to de-fragment the last remaining patches of old-growth natural forests. India just cannot afford to lose this fantastic opportunity to implement a win-win solution that not only consolidates critical wildlife habitats but also delivers social justice to disenfranchised forest communities.

*(Praveen Bhargav is a trustee of Wildlife First, and a member of the National Board for Wildlife.)*

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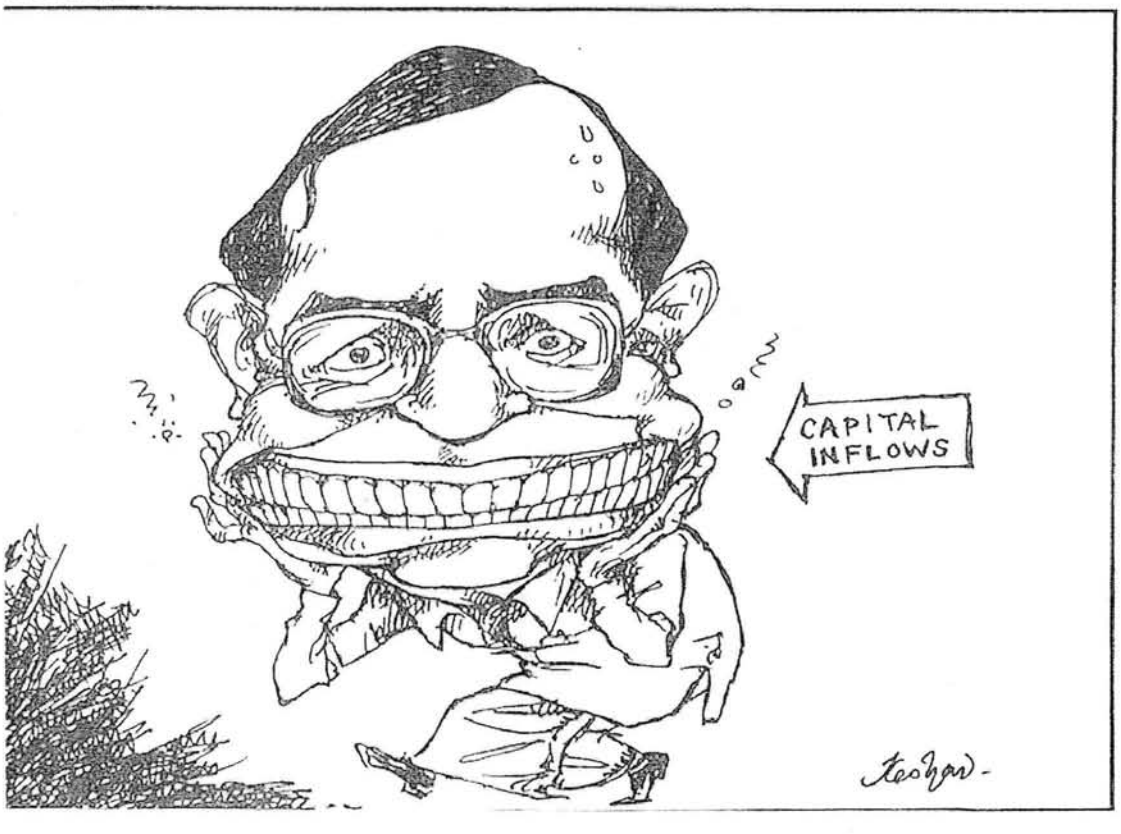


THE HINDU | BANGALORE, WEDNESDAY, SEPTEMBER 11, 2013

# Missing the woods for the greenback

## The draft policy on the use of forest land is at odds with sound conservation principles and fails to plug holes in current guidelines that work to the advantage of project promoters

Praveen Bhargav

The Supreme Court in July 2011 while delivering the Lafarge Judgment laid down guidelines on forest clearance procedures. These were to operate till a new regulatory mechanism was put in place. Two years after the judgment, the Ministry of Environment and Forests (MoEF) put up a "Draft Policy on Inspection, Verification, Monitoring and the Overall Procedure relating to grant of Forest Clearances and Identification of Forests" for public comments.

The judgment presented an important opportunity to the MoEF to revamp procedures and plug loopholes, being exploited by development project promoters from both government and the corporate sectors. However, the draft policy fails to infuse new conservation ideas based on sound science and misses out on tightening forest clearance monitoring procedures.

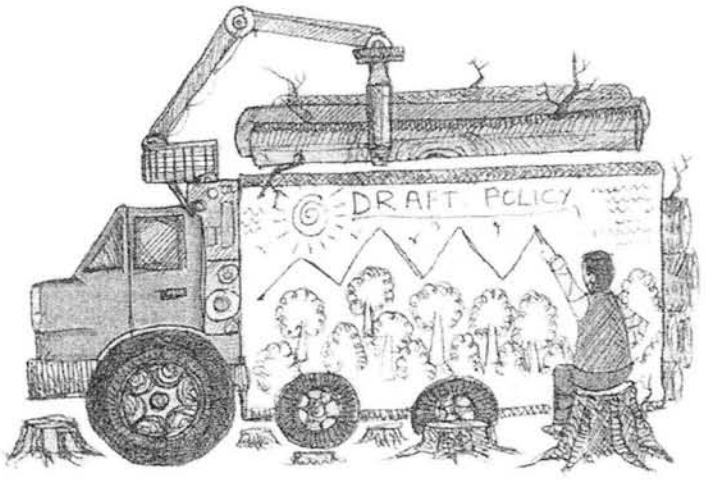



ILLUSTRATION: SATWIK GADE

### Impact of fragmentation

Breaking up large blocks of forests into smaller patches due to ill planned intrusions by development projects is one of the most serious threats to long-term forest/biodiversity conservation. Scientific research has established that such fragmentation has several devastating consequences. It disrupts landscape connectivity, creates new edges, depletes biological integrity and affects the stability of entire ecosystems. However, the draft policy misses out on ushering in a fundamental change towards a knowledge driven landscape ecosystem approach that is anchored in minimising the fragmentation of large forest blocks. Instead, it proposes to continue with the focus on compensatory afforestation which is nothing but a fig leaf to cover up for more clearances.

Even the only clause in the current policy that could have had some positive impact in reducing forest fragmentation is being cleverly bypassed. Most State governments are routinely relaxing an important condition — the identification and transfer of an equivalent area of non-forest land contiguous with existing forests in favour of the forest department before grant of Stage II forest clearance. Proposals are being cleared by imposing the simpler condition of compensatory afforestation over twice the area diverted.

Thus, an excellent opportunity to plug this procedural loophole, which would enable the creation of viable buffers around protected areas and eliminate/minimise forest fragmentation by enforcing this condition, would be lost unless the draft policy is appropriately amended. In its current form, the draft policy will continue to encourage "leakage" prone compensatory afforestation projects that everyone loves to handle. However, in terms of ecological value, they are nothing but a fig leaf to cover up for more diversion of forest land for non-forestry use.

### Procedural issues

Many development projects require both forest and non-forest land. Current guidelines insist that work must not commence on non-forest land until prior permission for the forest land is granted. This is to ensure that investments are not rendered infructuous. Due to poor enforcement of this condition, many project promoters cleverly start work on the non-forest land portions. The Forest Advisory Committee (FAC) is then presented with a fait accompli. Citing the huge investments made, they then seek, and usually receive, ex-post facto clearances. This is particularly true in cases of linear intrusions like highways, power lines, etc. Even though the Supreme Court had clearly flagged this aspect and directed that remedial measures be put in place, the draft policy fails to address this.

The Court had directed that the MoEF constitute regional empowered committees with three non-official experts in every regional office of the MoEF to facilitate in-depth scrutiny of proposals involving forest land diversions of between five and 40 hectares and all mining and encroachment cases. The draft policy while attempting to operationalise several other directions, strangely sidesteps this direction which is crucial, as many projects in the five-40 hectares category are slipping through with minimal scrutiny at the Regional Office level. Many project promoters are also splitting up projects to keep it under 40 hectares to avoid rigorous scrutiny.

### Monitoring is weak

It has been admitted in the draft policy that monitoring is the weakest link in the forest clearance process. However, the amendments appear grossly inadequate. These will be exploited by unscrupulous project promoters particularly as there is scarcely any major case where punitive action like cancellation of forest clearance has been initiated. Hardly any official has ever been prosecuted for abetting the violation of the Forest Conservation Act even though there are glaring examples of forest officers glossing over facts and furnishing false data on the basis of which projects have been cleared.

After securing permissions based on such dubious data, most project promoters commit violations which are clearly intentional knowing full well that if work — excavations/foundations/buildings/tree cutting — starts at the wrong place or along a wrong alignment or location of a tower or bridge, it is bound to get regularised. It is common knowledge that without tight preventive measures or timely detection, as is the situation now, there is little scope for rectification later. Unfortunately, the draft policy fails to plug these glaring lacunae.

What is urgently required is a brand new four-stage monitoring process that kicks in — at the time of project commencement when breaking/clearing/marking/foundation work begins to ensure conformity with the approved master plan, during all key identified milestones of the project to be mandatorily disclosed in the proposal; regular annual and bi-annual monitoring by authorities with non-official experts on the regional empowered committees, and, finally, random or surprise inspections in at least 10 per cent of cases including those where complaints of violations have been received.

### Geographical information

As regards the direction to create a geographic information system (GIS) database, the revised procedure should have specifically provided for projection and review of high resolution, real time series satellite imagery of the area proposed to be diverted at all meetings of the various committees tasked to deliberate on proposals. This would not only help in detection of violations/non-compliance but also to evaluate other crucial aspects like cumulative impacts, fragmentation of habitat, the site-specific nature of the project or otherwise, wildlife corridor values, etc.

Yet another important direction of the Supreme Court was to ensure that the forest clearance process was completed before the environment clearance process in cases where it was mandatory for projects to obtain both. The draft policy could have creatively addressed this aspect by including a detailed procedure of a formal integrated public consultation, similar to the one prescribed for environment clearance. Appropriate additions to cover forest impacts such as loss of forest land, habitat fragmentation, threats to biodiversity, endangered species, habitat niches and related issues could have also been included.

Considering all these aspects, it clearly emerges that the draft policy appears to be weak and not based on sound scientific principles. It is fervently hoped that the MoEF takes up a thorough review and carries out appropriate modifications to ensure that conservation takes precedence over clearance of forest land for non-forestry purposes.

*(Praveen Bhargav, a trustee of Wildlife First, has served on the National Board for Wildlife.)*

PHOTOS: ISHAAN KUMAR

# If the way to hell is paved with good intentions, FRA is the highway to destruction of wildlife

Praveen Bhargav

For over 16 years the supreme court has been hearing two major petitions concerning forests and wildlife. Writ petition 337/1995 filed by the Centre for Environmental Law (part of WWF) concerns protected areas (PAs) and writ petition 202/1995, is the omnibus forest petition widely known as the Godavarman case. The first landmark order in the second petition was delivered on December 12, 1996. In an unprecedented but hugely valuable effort, both the cases have been kept open under the writ of continuing mandamus.

Even as two exclusive benches of the supreme court are strenuously trying to protect forests and wildlife from threats such as mining, development projects and encroachments, there are other disturbing developments. A May 2011 status report of the ministry of tribal affairs (MoTA) shows that over 14 lakh hectares (14,000 sq. km) of forestland have been handed over to people under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA). To illustrate this better, the total forest area would be roughly equivalent to ten times the area of Delhi. The status report mentions that more than 10 lakh ownership titles have already been created over forestland.

On December 7, 2012, the Forest Survey of India's State of the Forest Report 2011, a biennial primer on forest cover, was released. The FSI report has documented that the nation has lost 67,900 hectares (679 sq km) of forest cover between 2009 and 2011 in 188 tribal districts of the country. However, the report does not provide any insights or clarifications on whether the extensive creation of rights under the FRA has indeed contributed to such a huge loss of forest cover. Shockingly, one of the most serious threats to forests has been completely ignored by the FSI.

The rug under the supreme court's feet is thus being pulled away by the actions of the central government, including ingenious interpretations of the FRA in circulars and guidelines. As a consequence, many landmark orders of the court are being rendered redundant.

To illustrate the point—an interim order of the apex court dated November 13, 2000 in WP 337/1995 prohibited the de-reservation of all PAs, followed by an order on

August 29, 2006, that granted a final opportunity to states to comply with the directions to complete the process of determination and settlement of rights within all PAs. With the enactment of the FRA, large-scale claims over forest lands even within PAs are being allowed, without taking any substantive steps to complete the settlement process.

The one redeeming provision in the otherwise contentious FRA provides for resettlement of people from scientifically identified critical wildlife habitats (CWH) within PAs. While the process of granting rights even within important wildlife habitats is rapidly progressing, not a single CWH has yet been notified. A highly flawed draft of the guidelines to create CWH is on the verge of being notified by the ministry of environment and forests. If that happens, it is very likely that not a single CWH would ever get established.

Second, an extremely important order of the supreme court dated February 14, 2000, in the Godavarman matter prohibited the removal of the dead, dying and wind-fallen trees including grass from all PAs. Subsequently, on November 25, 2005, after hearing various submissions including the recommendations of the central empowered committee, the court not only refused to revoke the ban, but again clarified that there shall be no activities involving any commercial exploitation inside PAs without prior approval of the court. However, wide-ranging rights to commercially harvest forest produce including bamboo are now being permitted under the FRA inside PAs, which is making a mockery of this landmark order.

Third, an order dated November 23, 2001, restrained the government from regularising all 'ineligible' post-1980 encroachments in forests. To circumvent this, the government changed the cut-off date for recognition of rights in the final version of the FRA from October 1980 to December 2005 even though the stated objective was to correct historical injustice to tribal people. The MoTA even went beyond the scope of the FRA and issued a circular on June 9, 2008, interpreting the phrase "primarily reside in..." to include the rights of even those not necessarily residing in forests—an open invitation to people outside to grab forest land!

Such repeated regularisation of illegally occupied forest land has already caused large-scale deforestation and fragmentation. Apart from demoralising frontline

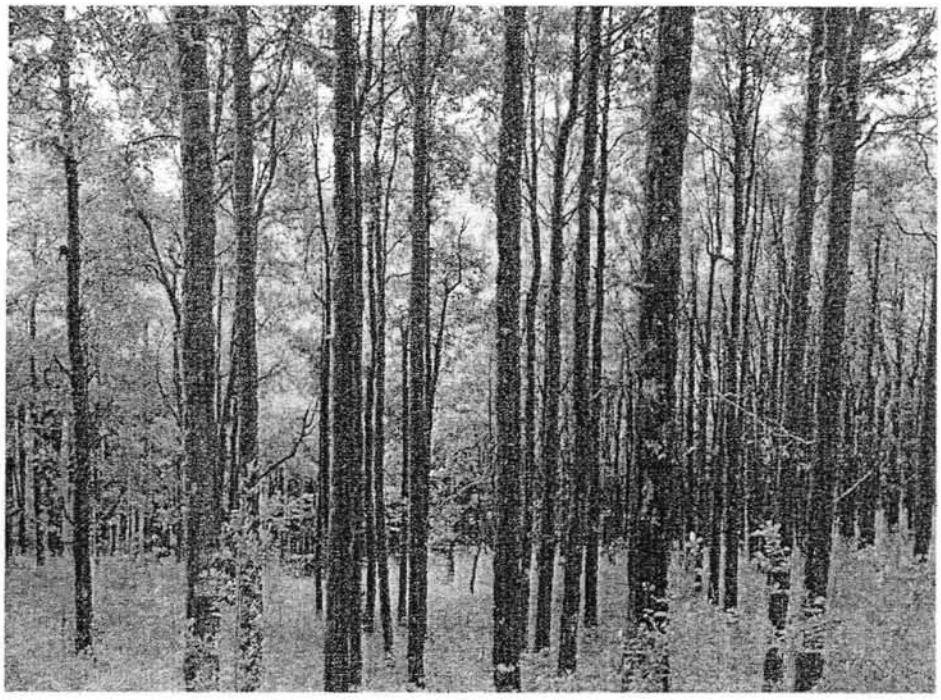
forest staff, it has also set the stage for fresh waves of encroachments. Politically, regularising forest land encroachments is an easy solution for governments as compared to implementation of equitable land reforms to empower the landless and the disenfranchised forest dwellers.

While the FRA has been challenged by wildlife organisations including Wildlife First and the matter has been pending before the supreme court since 2009, the predictions made by many conservationists that it would trigger massive fragmentation and loss of forests, commercial exploitation of forest produce and potentially irreversible human-wildlife conflict are all coming true.

In some areas like the Kawal sanctuary in Andhra Pradesh and in Bhamragad and Jalgaon areas of Maharashtra, intact forests have been cut and cleared to occupy land and stake claims. In other areas several fictitious claims over intact forest lands that were not under occupation as on December 13, 2005 (the cut-off date for eligibility under the FRA), are under active consideration.

A detailed nationwide analysis of high-resolution, time-series satellite imagery with December 2005 as the baseline will expose how several ineligible claims have been allowed under the FRA without proper scrutiny. Surely, the country would expect a specialised national level institution like the FSI with access to cutting-edge technology to not only document India's diminishing forest cover accurately but also to bring out the real truth on what has happened as a result of handing over such a large amount of 'recorded forest area' (defined by the FSI as statutorily notified forests). In the absence of such vital data on the actual impact, the report may not hold a mirror to the true state of the forests.

What is even more worrying is that much of the 14 lakh hectares that have now been parceled out in the form of inalienable land grants and community rights are in the heart of some of the best forests and fragment irreplaceable wildlife habitat. The MoTA and their hand-picked biodiversity experts, who were part of the Saxena committee constituted to review the implementation of the FRA, still press on with their utopian gamble and continue to argue that such grant of extensive rights



even within PAs will have no negative impact on wildlife. Leaning on ideological positions, they are glossing over three decades of peer-reviewed scientific research that has identified habitat fragmentation as the most serious threat to biodiversity and endangered species.

Ecological impacts apart, it is also a matter of record that after the grant, such scattered 'inalienable' land parcels in the forest interiors are promptly grabbed by miners, loggers, 'eco-tourism' resorts and other powerful elements leaving the poor tribal people in the lurch.

*A detailed nationwide analysis of high-resolution, time-series satellite imagery with December 2005 as the baseline will expose how several ineligible claims have been allowed under the FRA without proper scrutiny.*

However, all these arguments in no way negate the need to address the genuine aspirations of tribal people marooned inside PAs and large blocks of forests. They must be provided an appropriate, site-specific resettlement package and livelihood opportunities outside PAs and important corridors, based on voluntary resettlement models successfully implemented in Karnataka. This will not only deliver the much needed socio-economic services that people are aspiring for but will also ensure that further fragmentation and destruction of intact forests due to formation of new roads, bridges and pipelines are eliminated.

While illegal mining in Bellary and the Aravallis or matters concerning collection of 'net present value' indeed deserve the attention of the supreme court, there is now a real threat that the stupendous effort of the forest bench spread over one and half decades will rapidly come unstuck.

Unless the apex court urgently intervenes and reviews this unbridled grant of forestland and commercial harvest of forest produce even within PAs, the future of India's forests and wildlife will be in serious peril. ■

*Bhargav is a trustee of Wildlife First and has served on the National Board of Wildlife*