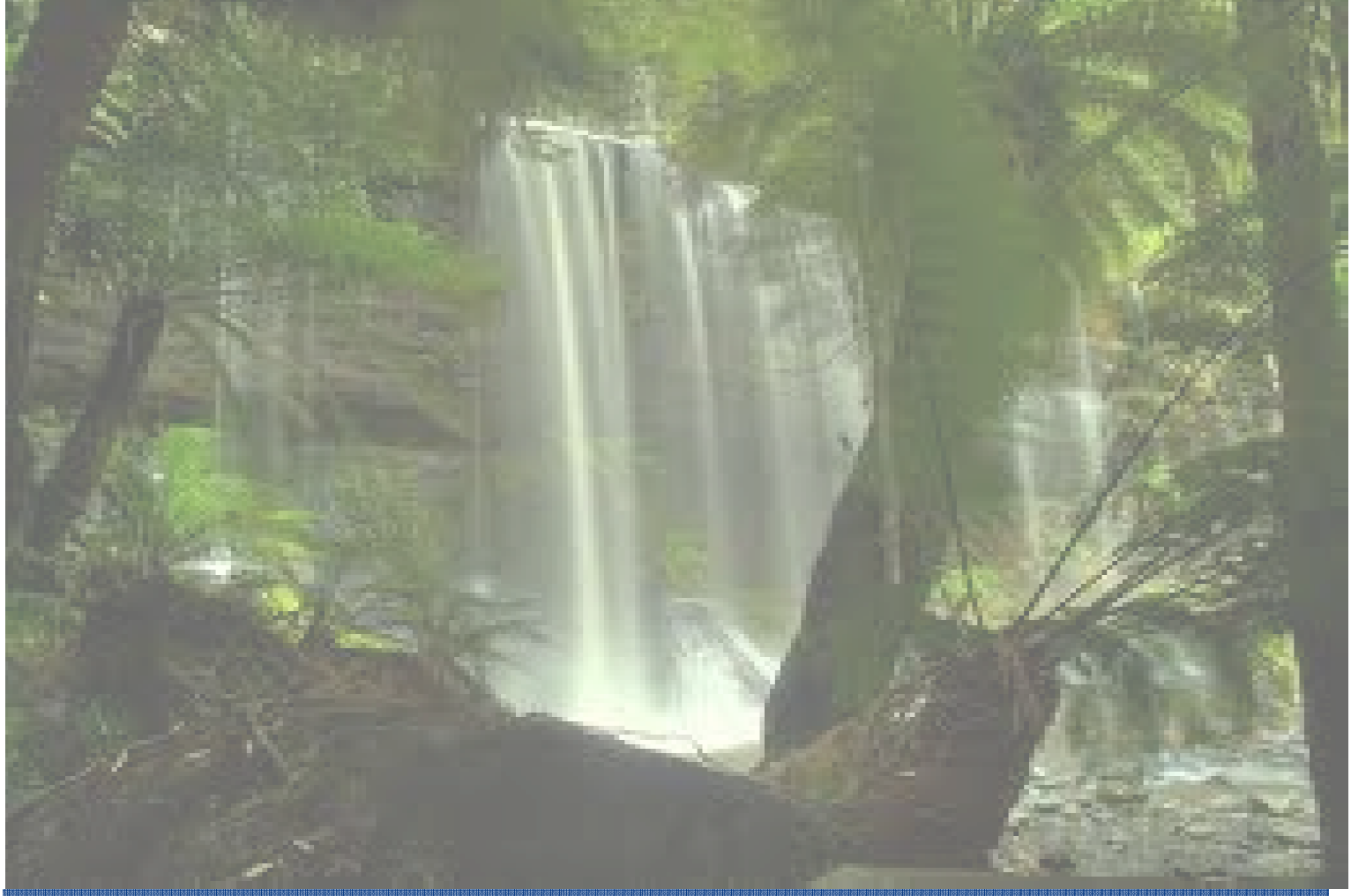

Compendium of Innovative Legal Practices: Version 1.0

Legal Preparedness for Achieving the Aichi Biodiversity Targets

Prepared by the International Development Law Organization (IDLO) for the Secretariat of the Convention of Biological Diversity (SCBD).

IDLO International Development Law Organization
Organisation Internationale de Droit du Développement

Convention on Biological Diversity

Japan Biodiversity Fund

Compendium of Innovative Legal Best Practices: Version 1.0
Legal Preparedness for Achieving the Aichi Biodiversity Targets

This document is the result of a legal research study conducted by the International Development Law Organization (IDLO).

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ACRONYMS

ABS	Access and Benefit-Sharing
CBD	Convention on Biological Diversity
CEPA	Communication, education and public awareness
CISDL	Centre for International Sustainable Development Law
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CHM	Clearing-House Mechanism
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
FAO	United Nations Food and Agriculture Organization
IDLO	International Development Law Organization
ILC	Indigenous and Local Communities
ITPGR	International Treaty on Plant Genetic Resources for Food and Agriculture
IUU Agreement	Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
MDG	Millennium Development Goals
POW	Program of Work
REDD+	Reduced emissions from deforestation and forest degradation, and the conservation, sustainable management of forests and enhancement of forest carbon stocks
SCBD	Secretariat of the Convention on Biological Diversity
SEA	Strategic environmental assessment
SEEA	System of Integrated Environmental and Economic Accounting
SIA	Sustainability impact assessment
SFM	Sustainable forest management
SMART	Specific, measurable, attainable, results-oriented and time-bound
SPC	Sustainable production and consumption
UNCCD	United Nations Convention on Combating Desertification
UNCLOS	United Nations Convention on the Law of the Sea
UNFCCC	United Nations Framework Convention on Climate Change
VPA	Voluntary Partnership Agreement
WHC	World Heritage Convention
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

1. INTRODUCTION

The loss of biodiversity and ecosystem services is a global challenge that threatens to undermine decades of development gains. Ecosystems provide essential services key for human well-being and development; preserving clean air, water and soils, reducing vulnerability to climate change, and providing food, fuel, shelter, medicines and livelihoods (UNEP). Healthy ecosystems are the foundations of prosperous global economies, as well as being critical for achieving goals related to poverty reduction, sustainable development and climate change.

Despite its importance, biodiversity is experiencing a precipitous decline[1]. Sixty percent (60%) of the world's major ecosystem goods and services that underpin livelihoods have been degraded or used unsustainably[2] . Species are increasingly at risk of extinction. Ecosystems and habitats are becoming degraded and fragmented. Humans face serious threats to their continued well-being, livelihoods and economies. Ecosystem services represent up to 89% of the "GDP of the poor"[3], and continued biodiversity loss threatens to perpetuate poverty, inequity and lack of livelihood opportunities for the most poor and vulnerable populations.

Global commitment to halt biodiversity loss and secure sustainable development of ecosystems was achieved at the 2010 Conference of the Parties of the Biodiversity Convention with the adoption of a new Strategic Plan for Biodiversity by 193 countries and the UN system as a whole. The cornerstone of the Strategic Plan are the Aichi Biodiversity Targets, 20 new time-bound goals and indicators, that make clear the link between biodiversity, economic development and good governance. Achieving the Aichi Biodiversity Targets will require countries to review and strengthen laws and institutions to enable the transformational change needed to halt biodiversity loss by 2020. Laws can act as a catalyst to prompt focused and coordinated action across society and to address underlying drivers of biodiversity loss and mainstream biodiversity values across sectors.

The **Legal Preparedness for Achieving the Aichi Biodiversity Targets Program** was launched in 2012 as a partnership between the International Development Law Organization and the CBD Secretariat is to support such cross-cutting legal reform that addresses the causes of biodiversity loss resulting from different economic sectors.[4] This **Compendium of Innovative Legal Practices, Version 1.0** is a result of research efforts during Phase 1 of the Program undertaken by legal experts to identify and examine innovative laws around the world that are helping to achieve national goals related to the Aichi Biodiversity Targets.

The Compendium provides information to domestic policymakers and other interested stakeholders on effective legal options for achieving eight Aichi Biodiversity Targets (2, 3, 4, 5, 6, 7, 14 and 17). These eight Targets are central to achieving the vision and mission of the CBD Strategic Plan for Biodiversity 2011-2020[5] and the call of the Executive Secretary of the CBD to:

- better integrate CBD programmes of work (POW) and cross-cutting initiatives;
- explore synergies within the CBD and with other conventions;
- find opportunities for mainstreaming biodiversity into other sectors with

1 Global Biodiversity Outlook 3.
2 Millenium Ecosystem Assessment 2006.
3 The Economics of Ecosystems and Biodiversity, 2008.
4 IDLO- CISDL Aichi Biodiversity Targets Project Concept Note.
5 CBD COP Decision X/2, Annex (Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets). The vision of the Plan is that: "By 2050, biodiversity is valued, conserved, restored an wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

biodiversity promoted as a solution to achieve broader societal goals.[6]

The Compendium does not purport to provide an exhaustive analysis of legal options for each Target. Rather, it provides a sampling of leading legal options from jurisdictions with a range of political and social contexts. The options documented should be contextualised, and any further legal reform will need to be integrated and involve a hybrid and flexible set of law and policy tools. In recognition of the importance of a mix of tools to achieve change, the summaries of each innovative legal practice include information on:

- What international commitments can be met by the Target?
- What government ministries might need to be involved?
- What administrative and institutional measures are useful for implementing the legal practice?
- What are the main lessons learned in legal reform and implementation?

The chapters are divided per Strategic Goal, with subsections focused on each Aichi Biodiversity Target. Within each subsection, a summary of legal aspects of the Target, and listing of innovative legal practices are provided, as well as the full text of each Summary Brief. The legal analysis and research contained in the Compendium are also available online at http://www.cisdl.org/aichilex/.

This compendium is meant to complement the CBD Secretariat's NBSAP training workshops and related capacity building efforts by providing a unique contribution to global knowledge by providing legal approaches for implementation of the Aichi Biodiversity Targets. We hope that this Compendium will empower and inspire policymakers, especially in developing countries, to take concrete legal action to achieve the Aichi Biodiversity Targets. This is intended to be a living document, updated as more innovative legal practices are documented under this on-going Program. Overall, this compendium assists policymakers and other stakeholders to comprehend the importance of national and international law to achieve the Aichi Biodiversity Targets, and provides a starting point for a contextualised analysis of good available practices and development of solutions tailored for each country.

[6] Statement by Mr Braulio Ferreira de Souza Dias on the occasion of the sixteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-16) on 30 April 2012 in Montreal, Canada.

2. STRATEGIC GOAL A–UNDERLYING DRIVERS OF BIODIVERSITY LOSS

Goal A aims to address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society. This means taking action to address underlying causes, such as production and consumption patterns, and ensuring that biodiversity concerns are mainstreamed through communication, education and public awareness (CEPA), appropriate incentive measures, and institutional change.[7] With this in mind, the following targets were chosen: **Target 2** on integration and incorporation of biodiversity values into national development and poverty reduction strategies, **Target 3** on elimination of harmful incentives, and **Target 4** on sustainable production and consumption.

TARGET 2–MAINSTREAMING BIODIVERSITY

By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes, and incorporated into national accounting, as appropriate, and reporting systems.

A) LEGAL NATURE OF TARGET 2

It is widely recognized that the biodiversity values are not widely considered in decision-making. Mainstreaming biodiversity values in development and poverty reduction strategies and planning processes will mean involving key ministries like finance, industry, tourism, agriculture and fisheries so that biodiversity is included in their decision-making processes.

Potential legal approaches to achieving Target 2 include establishing and strengthening administrative coordination mechanisms and clear institutional mandates for planning, finance and other authorities so that development and poverty reduction strategies and planning processes take into account biodiversity values. This can be done through the use of environmental impact assessments (EIA), strategic environmental assessments (SEA), sustainability impact assessments (SIA) and similar tools, which provide ways to assess impacts on biodiversity and allow for the assessment of trade-offs in decision-making.

Incorporating the value of biodiversity into national accounting and reporting systems can be done through the adoption of a legal requirement to collect and integrate relevant data so that statistics departments can create a comprehensive measure of the state of natural environments, using a framework like the UN's System of Integrated Environmental and Economic Accounting (SEEA)[8].

The Strategic Plan urges Parties to use revised and updated NBSAPs as effective instruments for the integration of biodiversity targets into national development and poverty reduction policies and strategies, national accounting, as appropriate, economic sectors and spatial planning processes, by Government and the private sector at all levels. Therefore, taking steps to achieve Aichi Target 17 can also successfully address this Target.

[7] Strategic Plan for Biodiversity 2011-2020, para 10(a).
[8] https://unstats.un.org/unsd/envaccounting/seea.asp.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 2 include:

- Japan Basic Act on Biodiversity, 2008

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Japan Basic Act on Biodiversity, 2008

(Annex 1)

Background to the Measure
The Government of Japan has a long history of working to integrate biodiversity values into policy frameworks. Becoming a signatory to the Convention on Biological Diversity in 1993, and establishing their first National Biodiversity Strategy (NBS) two years later, to be further refined again in 2002 and 2007, Japan has long identified biodiversity conservation as a key policy initiative. In 2008 the Basic Act on Biodiversity was adopted in accordance with the Basic Environment Law (Act No.91 of 1993), to clarify the legal and regulatory biodiversity policy landscape.

Prior, the Japanese legal landscape on biodiversity conservation was an amalgamation of multiple, semi-overlapping legal instruments. While there was implicit recognition of the values of biodiversity, there remained a lack of explanation as to how to operationalize and refine conservation measures effectively. By aiming to develop national, regional and local conservation policies in a highly collaborative and coordinated fashion, and ensuring ongoing evaluation, the Government of Japan aimed to integrate biodiversity values into all tiers of decision making in a clear and consistent manner.

What are transferable aspects of the innovative legal practice that assist in achieving Target 2?
Japan's Basic Act on Biodiversity was set in place to be the basis of current and future policy development aimed towards harmonious coexistence with nature. It clarifies the key principles for conservation and sustainable use of biodiversity resources, and outlines the responsibilities of government, both national and local, businesses and other stakeholder groups.

The Act establishes the formulation of a National Biodiversity Strategy, through consultations with civil society via the Central Environmental Council, which outlines fundamental principles and targets, broad policy mandates for national, regional and local government, and associated reporting and review mechanisms. Regional strategies are to be developed at the prefectural and local level to account for the unique characteristics of the localized ecosystem, under a centralized review model to reintegrate effective practices into national policy development. The Government of Japan has deeply embedded biodiversity values into national, regional, and local planning, reporting and development frameworks, resulting in a highly mainstreamed, broadly engaged policy development model.

What international commitments are met?
Convention on Biological Diversity (CBD)
UN Framework Convention on Climate Change

What ministries are involved?
In Japan, the primary ministry responsible for mainstreaming biodiversity is the Ministry of the Environment, who established a comprehensive strategic biodiversity planning mechanism to promote conservation-focused policies nationally, regional and locally.

Policy formulation, coordination and implementation responsibilities are centralized at the national level, with local governments empowered to establish localized polices based on the unique characteristics of the region. The National Biodiversity Strategy, which is developed by the Minister of the Environment in consultation with representatives from civil society through the Central Environmental Council, acts as the primary biodiversity planning tool, and outlines: (i) basic principles underscoring biodiversity conservation policy development, (ii) sustainable use and conservation targets, (iii) key policies for implementation, and (iv) other required policies to support comprehensive biodiversity conservation. Prefectures and municipalities are intended to, individually or in collaboration, develop a Regional Biodiversity Strategy which localizes conservation measures to the unique features of the region.

What administrative and institutional measures are useful for implementing the legal practice?
Building on the Basic Environment Law, the Act establishes a comprehensive strategic biodiversity planning mechanism to promote conservation-focused policies nationally, regional and locally. Policy formulation, coordination and implementation responsibilities are centralized at the national level, with local governments empowered to establish localized polices based on the unique characteristics of the region. The National Biodiversity Strategy, which is developed by the Minister of the Environment in consultation with representatives from civil society through the Central Environmental Council, acts as the primary biodiversity planning tool, and outlines: (i) basic principles underscoring biodiversity conservation policy development, (ii) sustainable use and conservation targets, (iii) key policies for implementation, and (iv) other required policies to support comprehensive biodiversity conservation. Prefectures and municipalities are intended to, individually or in collaboration, develop a Regional Biodiversity Strategy which localizes conservation measures to the unique features of the region.

What are the key lessons learned in legal reform and implementation?
Focus must be on establishing a highly participatory framework for policy development and biodiversity conservation aimed at integrating the importance of biodiversity into multiple tiers of government and comprehensively embedding these values into decision-making processes. Japan's fifth iteration of its NBSAP produced in 2012 integrated cross-sectoral indicators that refined pre-existing biodiversity goals and targets to align with the Aichi Targets on Biodiversity and developed related indicator groups for monitoring.

TARGET 3 – INCENTIVES

By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions

A) LEGAL NATURE OF TARGET 3

Substantial and widespread changes to incentives, including subsidies, are required to ensure sustainability. Incentives and subsidies for forestry, fisheries, agriculture, transport, biofuels, and fossil fuels are leading to deforestation, overfishing, land use change, and rising levels of carbon dioxide in the atmosphere. Ending or reforming incentives, including subsidies, harmful to biodiversity is thus critical, necessary, and will generate net socio-economic benefits if carried out properly.

Governments must identify negative and perverse incentives that exist due to national and sub-national laws and regulations. Subsequently, these legislated incentives must be eliminated, phased out or reformed to minimize impacts on biodiversity, and positive incentives created and applied to support the conservation and sustainable use of biodiversity. To engage the private sector and trigger changes in national consumption patterns, appropriate fiscal policies must be put in place, perverse incentives eliminated, and pricing adjusted to engage the public. Biodiversity-oriented tax reform can help ensure that firms and individuals absorb the full costs of activities harmful to biodiversity by eliminating tax incentives for those activities, and incentivise activities that benefit biodiversity.

The three main instruments for environmental fiscal reform are: taxes on natural resource extraction; user charges or fees and subsidy reform; and environmentally related taxes. Legal measures for green procurement are another example of a positive incentive that may foster the sustainable use of biodiversity, while biodiversity incentive trading schemes (BITS) can be used as a tool to promote biodiversity conservation. SEA could be used to implement effective policies and actions on incentives because it allows for a broad view of costs and benefits of decisions. The CBD work on economic, trade and incentive measures and on impact assessment is especially relevant to this target and may provide other best practices for consideration. The implementation of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) could also be a powerful incentive for the conservation and sustainable use of biodiversity based on the fair and equitable sharing of benefits arising out of the utilisation of genetic resources and traditional knowledge associated with genetic resources.

A clear link exists with the measures necessary to implement commitments under the United Nations Framework Convention on Climate Change (UNFCCC), especially in the forestry and energy sectors, and the United Nations Convention on Combating Desertification (UNCCD). There are also links to ongoing subsidy reform discussions taking place at the World Bank, UNCTAD, G8/G20 and FAO which may have some regulatory value. In undertaking reform, it will be particularly important to keep in mind relevant international trade obligations, including the World Trade Organization Agreements (eg General Agreement on Tariffs in Trade, General Agreement on Trade in Services, Agreement on Technical Barriers to Trade, Agreement on Subsidies and Countervailing Measures, Agreement on Agriculture, Agreement on Trade-Related Investment Measures, Agreement on Government Procurement).

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 3 include:

- Cameroon Law No. 94-01, 1994

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Cameroon Law No. 94-01, 1994

Contexte de la mesure
L'adoption de la loi de 1994 est apparue comme un correctif à la loi précédente . La précédente loi devenait inadaptée à la nouvelle politique internationale et à la situation économique du Cameroun. La loi forestière de 1981 marquait l'absence d'un cadre juridique pour l'intégration des activités de production forestière et de production d'un côté, et des activités agricoles de l'autre. La crise économique de 1985 a provoqué de nombreuses mutations, notamment l'ajustement structurel, la démocratisation et la

décentralisation, qui, inévitablement, ont affecté les forêts comme la politique forestière. Le but de la restructuration du cadre légal était donc de convertir le secteur forestier en un secteur crucial pour la réduction de la pauvreté et en une source majeure pour l'industrialisation et les exportations du Cameroun. Les réformes n'auraient pu progresser sans l'énergie collective et les apports décisifs d'un ensemble de partenaires.

Quels sont les engagements internationaux peuvent être satisfaits par la réalisation de la cible 3?
La mise en place des mesures incitatives de conservation de la biodiversité par le Cameroun répond à la volonté de la Convention sur la Diversité Biologique notamment en son article 11 sur les mesures incitatives. L'article 19 de la Loi répond à cet appel de la Convention par le recours à des mesures incitatives encourageant les particuliers à préserver la biodiversité animale et végétale.

Quels sont les ministères pourraient participer?
La mise en œuvre des mesures incitatives fait appel à trois principaux ministères: d'abord le ministère de l'environnement, de la protection de la nature et du développement durable (MINEPDED) qui depuis 2004 est chargé de l'élaboration, la mise en œuvre et l'évaluation de la politique du Gouvernement en matière d'environnement ; dans sa mission, il est chargé de mettre en œuvre la loi-cadre sur l'environnement qui s'occupe également des mesures incitatives en appuyant toute opération contribuant à enrayer l'érosion, à combattre la désertification, toute opération de boisement ou de reboisement , et en permettant aussi à toute personne physique ou morale entreprenant des actions de promotion de l'environnement de bénéficier d'une déduction sur le bénéfice imposable . Ensuite vient le ministère de l'élevage, des pêches et des industries animales, qui dans le cadre de sa mission, est chargé de l'élaboration, de la mise en œuvre et de l'évaluation de la Politique du Gouvernement en matière d'élevage, de pêche et de développement harmonieux des industries animales. Vient enfin le ministère des finances chargé d'élaborer la politique fiscale de l'État.

Quelles sont les mesures administratives et institutionnelles sont utiles pour la mise en œuvre de la pratique juridique?
Le ministère des forêts et de la faune, en partenariat avec d'autres ministères a mis en place des programmes dans le but d'encourager les particuliers aux reboisements, à l'élevage des animaux sauvages, des algues et des animaux aquatiques. Des nouveaux mécanismes de taxation sont mis en place pour inciter les exploitants forestiers à préserver la biodiversité. Les forêts communautaires, principales innovations de la Loi de 1994 se sont multipliées, permettant à la population locale de bénéficier des revenus de ses terres.

Quelles sont les leçons tirées de la réforme juridique et la mise en œuvre?
Des progrès sensibles ont été accomplis dans la protection de la biodiversité des forêts du Cameroun depuis le début des années 1990. La Loi de 1994 portant régime des forêts engage le Cameroun à placer 30 % de sa superficie sous protection – soit l'une des plus grandes proportions au monde. Le réseau des parcs nationaux, des réserves forestières, des sanctuaires de faune, des jardins zoologiques et botaniques et des zones de chasse communautaires, couvre environ 17,6 % de l'espace forestier national . L'IUCN estime la couverture actuelle à plus de 20%.

Pour réaliser les objectifs énoncés, la nouvelle organisation fiscale repose essentiellement sur : Le changement de l'assiette fiscale en ajoutant à la taxation exclusive (volume de bois abattu, transformé et exporté) celle de la superficie de la concession (sous forme d'une redevance forestière déterminée de façon concurrentielle et payable annuellement, quel que soit le volume de coupe). Cette mutation, faisant en sorte que l'industrie s'acquitte d'un montant substantiel pour accéder aux ressources forestières, visait à décourager la spéculation, générer un flux de recettes prévisibles pour l'État et les communautés locales, tout en facilitant l'établissement et le

recouvrement des taxes. L'introduction d'une taxe sur le bois brut entrant à l'usine, qui permette de contrôler les mouvements du bois et de pénaliser le gaspillage.

Le transfert de l'essentiel de la fiscalité de l'exportation vers les opérations d'exploitation forestière. Ce transfert devait inciter à l'aménagement forestier, à l'innovation commerciale et à l'amélioration de l'efficacité du processus de transformation.

TARGET 4 - SUSTAINABLE PRODUCTION AND CONSUMPTION

By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits

A) LEGAL NATURE OF TARGET 4

Sustainable use is the second objective of the CBD. Target 4 requires Governments, businesses and stakeholders at all levels to take steps to achieve, or to implement plans for sustainable production and consumption (SPC), and keep the impacts of use of natural resources well within safe ecological limits. This objective dovetails with the outcome of Rio+20, which recognises that urgent action on unsustainable patterns of production and consumption remains fundamental in addressing environmental sustainability and promoting conservation and sustainable use of biodiversity and ecosystems, regeneration of natural resources and the promotion of sustained, inclusive and equitable global growth.

Legal measures are necessary to regulate both production and consumption to ensure sustainability and ecological integrity. Reducing total demand and increasing efficiency will contribute to the target and can be pursued through government regulations and/or incentives, including green procurement, education, and social and corporate responsibility. The private sector will need to be involved in efforts to meet this target through legislative or regulatory measures including command-and-control regulation, corporate sustainable responsibility (CSR), and incentive and certification schemes. SEA and Environmental Impact Assessment (EIA) are useful in making decisions that keep the impacts of use of natural resources well within safe limits,ii and implementing a life-cycle approach can be especially useful in addressing sustainable production and consumption challenges in a holistic and integrated manner.

This Target also presents opportunities to engage sectors that are not traditionally associated with biological diversity, such as manufacturing and advertising, to address both the supply-side and demand-side pressures on biodiversity. The recent increase in public awareness of, and interest in, responsible consumption (as evidenced by the upsurge in certification schemes such as organic and fair-trade) can be leveraged to educate consumers about the biodiversity impacts of consumer choices and to adopt measures aimed at producers. Achieving the Target requires dialogue between sectors and stakeholders supported by planning and economic tools that integrate biodiversity issues, such as inter-ministerial committees, nationally developed guidelines, sectoral guidelines, and the promotion of ecosystem management by local authorities.

Traditional cultural practices may also inform patterns of production and consumption that are compatible with the conservation and sustainable use of biodiversity, and these should be protected and encouraged. Early action could involve each production- and consumption-related sector undertaking plans for SPC. Particularly relevant to this target are the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity, the CBD POW on the sustainable use of biodiversity, the business and biodiversity initiative,

and work on impact assessment.v The robust implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is also key to achieving this Target, especially when regulating natural resource use to keep its impacts well within ecological limits. The link to the 10-year framework of programmes on sustainable consumption and production (10YFP) adopted at Rio+20 must also be drawn out.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 4 include:

- People's Republic of China, Government Procurement Law, 2002

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

People's Republic of China, Government Procurement Law, 2002

(Annex 3)

Background to the Measure
On June 29, 2002, the Chinese Government enacted the Government Procurement Law. Article 9 stipulates that "Government procurement shall be conducted in such a manner as to facilitate achievement of the economic and social development policy goals of the State, including but not limited to environmental protection, assistance of underdeveloped or ethnic minority regions, and promotion of small and medium-sized enterprises." In accordance with this Article, the Ministry of Finance and the National Development and Reform Commission (NDRC) jointly published the "Opinion on Implementing Government Procurement of Energy Conservation Products" (ECP Opinion) in December 2004, followed by the first "Government Procurement List of Energy Conservation Products and Equipment" (ECP List). 12 such lists have been issued to present (2012).

In 2006, The Ministry of Finance and former State Environmental Protection Administration (now the Ministry of Environmental Protection) issued the "Opinion on Implementing Public Procurement of Environmental Labeled Products" (ELP Opinion), a legal instrument to encourage the government procurement of environmentally labeled products, according to which the first "Government Procurement List of Environmentally Labeled Products" (ELP List) has been announced. These documents form the legal framework for China's sustainable government procurement. Having developed over the last decade, this framework is integrated into a well-established and functioning public procurement institutional mechanism that can be described as hierarchical in nature, with a centralized multi-level system that is characterized by its top-down structure.

What are transferable aspects of the innovative legal practice?
Public procurement serves as an incentive for compliance with environmental regulations in the supply chain because of the risk of losing a contract or being excluded from the sizable government market if found not to be in compliance. China's Government Procurement Law is characterized by its top-down implementation model, which also calls for further local capacity building for local implementation. With this type of measure, implementation should be properly coordinated between all levels.

What international commitments can be met?
Convention on Biological Diversity (CBD)
Plurilateral Agreement on Government Procurement (GPA)

What ministries are involved?

Sustainable procurement practices in China are coordinated by the Ministry of Finance and Ministry of Environmental Protection. Jointly, they have established guiding principles for sustainable procurement practices including the development of guidelines for energy conservation products and equipment, and have developed the first Government Procurement List of Environmentally Labelled Products.

What administrative and institutional measures are useful for implementing the legal practice?
The general procurement framework operates from the national level, where the NDRC, Ministry of Commerce, Ministry of Finance (MOF), and Ministry of Environmental Protection (MEP) are jointly responsible for the formulation of the policy framework, including directives, laws, guidelines and new adjustment to procurement lists. The role of the provincial governments is to customize the regulations and specifications according to the local context, and administer budget allocations for public procurement. Depending on the size of the area, these functions may be divided into two separate offices, such as a procurement bureau to develop local regulations and represent local interests at the administrative level between government bodies, and public procurement centers (PPCs) to implement the actual procurement process.

What are the lessons learned in legal reform and implementation?
Implementation of environmentally conscious product lists depends heavily on local structures and institutional conditions, the political and economical environment, and staff capacity within PPCs. Targeting assistance to local-level government procurement has provided the highest impact in China.

Due to the large scale of China's Government Procurement, the market competition resulting from large-scale public procurement is strengthening public awareness of purchasing environment friendly products, thus helping to generate a market for green products. Green Public Procurement also serves as an incentive for supplier compliance given the government's buying power and the risk of exclusion from government procurement market or loss of contract in case of noncompliance.

3. STRATEGIC GOAL B – REDUCING DIRECT PRESSURES ON BIODIVERSITY

Goal B aims to reduce the direct pressures on biodiversity and promote sustainable use. These pressures include land use change, unsustainable use of biodiversity, pollution, invasive alien species and climate change. Implementation will require engaging the agricultural, forest, fisheries, tourism, energy, tourism and other sectors.[9] From a sustainable development perspective, the integration and interrelationship between different forms of natural resource use should be developed. Unsustainable use of biodiversity and ecosystems is putting severe pressure on biodiversity. Pollution prevention and invasive alien species are more discrete issues and are generally addressed under traditional environmental law principles. With this in mind, we analyze the following Targets under Goal B: **Target 5** on reducing the rate of loss of natural habitats, **Target 6** on sustainable marine harvesting, and **Target 7** on sustainable agriculture, forestry and aquaculture. A discussion of the rationale for each Target follows.

TARGET 5 – NATURAL HABITATS

By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

[9] Strategic Plan at para 14; Ortiz, ibid.

A) LEGAL ASPECTS OF TARGET 5

Habitat loss, including degradation and fragmentation, is the most important cause of biodiversity loss globally. Natural habitats in most parts of the world continue to decline in extent and integrity, although there has been significant progress to reduce this trend in some regions and habitats. Reducing the rate of habitat loss, and eventually halting it, is essential to protect biodiversity and to maintain the ecosystem services vital to human wellbeing.

Meeting Target 5 will require tackling direct pressures on natural habitats (e.g. expansion of the agricultural frontier, aquaculture, fisheries, forestry, logging, mining, oil & gas exploitation, infrastructure development, water development, human conflict, etc.), causing their degradation, fragmentation or loss, and promoting the sustainable use of ecosystems (e.g. forests, wetlands, grasslands, oceans and inland waters). In general, it is important to note that the precautionary approach and principle need to be implemented through legislation to combat the loss of natural habitats. This is especially true in the case of high-biodiversity value habitats, such as primary forests or largely undisturbed habitats, like wetlands and coral reefs, are thereby of high importance. This is because although restoration activities can restore many of the attributes of primary ecosystems, they cannot be restored completely in the short or medium term.

Reducing the rate of loss and degradation of natural habitats through land use change could be achieved through improvements in production efficiency, water use and land use planning, and enhanced mechanisms for natural resource governance combined with recognition of the global and local economic and social value of ecosystem services provided by natural habitats. In addition, the international dimension of land use changes (e.g. agricultural and energy policies, financial markets, investment policies and "land grabbing") must be addressed both through domestic regulation and through appropriate international fora like the WTO, FAO and UNDP.

Reducing the rate of loss of natural habitats can also be achieved with the contribution of ILC. As the inhabitants of many of the world's last remaining natural habitats, they play an important role in protection and conservation. Against this background, local customs, traditions and customary law that help conserve biodiversity need to be supported when drafting new legislation and regulations. Implementation of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) in domestic legislation can further the recognition and protection of customary laws and rights for access to and sustainable use and management of natural resources in traditional territories.

In the forest context, Voluntary Partnership Agreements between the EU and developing countries on forest law (FLEGT) could be an innovative practice for further consideration based on a desire to exclude illegal timber from markets and to increase the demand for sustainable wood products. The work of the UN Forum on Forests (UNFF), as well as its landmark Non-Legally Binding Instrument on All Types of Forests, must be highlighted in this context as well. Although not legally binding, the instrument provides principles with great potential to focus international cooperation and national action to reduce deforestation, prevent forest degradation, promote sustainable livelihoods and reduce poverty for all forest-dependent peoples. Last but not least, there is also a clear link between this target, Target 15 which seeks to enhance the contribution of biodiversity to carbon stocks through conservation and restoration, and UNFCCC negotiations on REDD+.

Linkages to other Targets are mainly related to the sustainable use of biological resources in specific ecosystems (see Targets 6 and 7). There is also a clear link to the UNCCD, the only legally binding international agreement linking environment and development to sustainable land management, in drylands in particular, as well as the

Ramsar Convention, the framework convention for the conservation and wise use of wetlands and their resources. Target 5 is also linked to the implementation of the Convention on Migratory Species (CMS), which is dedicated to the protection of threatened migratory species as well as their habitat. Alongside these treaties, the World Heritage Convention (WHC) addresses the protection of habitats regardless of the type of ecosystem and can thus also play an important role in achieving target 5. WHC combines the conservation of cultural sites with natural sites, and its "cultural landscape" category also includes important aspects of sustainable use and management. The CBD thematic programmes of work on forest, marine and coastal, inland water and dry and sub-humid lands biodiversity and the Convention's work on sustainable use are also particularly relevant to this target.

Last but not least, the marine environment needs special attention. Governments committed to improving ocean conservation and management through actions at the World Summit on Sustainable Development (WSSD), but national actions have not followed suit. This is reflected in the small number of marine protected areas globally (which focus mainly on coastal areas), but provides an opportunity for a focus on synergies with the implementation of Targets 6, 7 and 14.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 5 include:

- Gambia, Forest Act, 1998 and Forest Regulations, 1998
- Vietnam, Law on Biodiversity, 2008

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Gambia, Forest Act, 1998 and Forest Regulations, 1998

(Annex 5)

Background to the Measure

Over the last century, the formerly dense forests of the Gambia have been in steady decline owing to large-scale destruction of forest land through bushfires, the exploitation of forest resources, and conversion into farmland. The result is a clear drop in the quality of the national forests. The National Forest Inventory of 1998 shows that although 43 percent of the Gambia's total land area, or 460 000 ha, is classified as forest, 78 percent of this area falls into the degraded tree and shrub savannah category.

Recognizing that this decrease was at least in part the result of the State-controlled top-down forest management approach adopted by the government, which ignored the importance of collaboration with local populations, they changed their strategy during the 1990s and started to develop participatory forest management approaches. With assistance from the German Government, the Department of Forestry developed and implemented the community forestry concept in the Gambia. The goal of this approach is to promote active participation in forest management and to allocate ownership and/or exclusive user rights to stakeholders in order to gain their interest and give them an investment and stake in protecting the forest.

In 1995, the Department of Forestry adopted a Community Forest Policy (commonly referred to as The Gambia Forest Management Concept) and became one of the first administrations in Africa to introduce a framework for community forest management. This community-based approach was strengthened by the Forest Act 1998 and Regulations, which involve communities in forest management and protection by legally requiring them to participate in fire prevention and forest management activities. The country has since developed and implemented one of the most progressive institutional

frameworks, including the permanent transfer of ownership of forest resources to communities, thus creating a favourable environment for development and sustainable forest management.

What are transferable aspects of the innovative legal practice?
Community forest management with legal rights and responsibilities: Gambia Forest Act, 1998
Gambia has been able to reduce the loss of forests through a few different measures. All forests (state, local and private) are required to be inventoried and have an established management plan. Development in forested areas is addressed via a Forest Impact Assessment addressing the nature, scope, impacted areas, and as-needed potential mitigation measures for the project. A streamlined mechanism to establish localized protected forested areas emphasizes the key role of local communities, however safeguards are set in place restricting the transfer of title to ensure the land is used for its intended purpose. Lastly, local forest restoration is incentivized to encourage increased establishment of community forests by allowing for denuded land to be deemed a forest, allowing it to be claimed for reforestation through community forest management.

What international commitments can be met by achieving Target 14?
Biodiversity-related conventions and treaties: There are six associated and widely adopted biodiversity treaties that can directly impact the rate of loss of natural habitats, degradation and fragmentation. These are:

- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention), and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

Other international treaties that can have an impact on reducing natural habitat loss, degradation and fragmentation include the United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention on Combatting Desertification (UNCCD), United Nations Convention on the Law of the Sea (UNCLOS), and International Tropical Timber Agreement (ITTA).

Related regional agreements include the African Convention on the Conservation of Nature and Natural Resources, Treaty on the Conservation and Sustainable Development of the Forest Ecosystems of Central Africa, Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, Convention for the Conservation of the Biodiversity and the Protection of Wilderness Areas in Central America, Regional Convention For The Management And Conservation Of The Natural Forest Ecosystems And The Development Of Forest Plantations, Convention For The Protection And Development Of The Marine Environment Of The Wider Caribbean Region.

Achieving Target 5 can help meet commitments found in these international treaties, such as the creation of protected areas; protecting ecosystems, natural habitats and species; the adoption of measures on using biological resources to avoid or minimize adverse impacts on biodiversity; the protection and encouragement of customary use of biological resources; supporting local populations to put in place remedial action in degraded areas where biodiversity has been reduced; identifying, protecting, conserving,

preserving and rehabilitating natural heritage sites; promoting sustainable management and the conservation and enhancement of sinks and reservoirs of greenhouse gases; addressing the underlying causes of desertification; protecting and preserving the marine environment; promoting in situ conservation of wild crop relatives and wild plants for food production; and the conservation and wise use of wetlands.

What ministries might be involved?
In The Gambia, the lead institution is the Ministry of Forestry and the Environment (formerly the Forestry Department). All related fees, royalties and fines are paid to the Accountant General and 50% is marked for the National Forest Fund. The administration of the National Forestry Fund is overseen by the Ministry of Finance, the Ministry of Forests and the Environment, and the Ministry for Local Government & Lands, among other stakeholders.

What administrative and institutional measures are useful for implementing the legal practice?
In Gambia, forests are provided a range of administrative and protective measures via the Forestry Act and Regulations, 1998. First, all State, community and private forests must have measures applied by their respective managers that will encourage sustainable use, and be provided protection from fire, decimation, or wind and erosion. Second, all forests, be they state, community, or private, must be inventoried and a management plan established for a term of up to ten years. The Act also installs an environmental impact assessment procedure for farming, industrial projects or other development in forest areas which assesses the nature, scope, impacted areas, and potential mitigation measures. Lastly, the Secretary of State has the flexibility to respond to forest threats by amending the list of protected forest areas or produce to ensure conservation.

What are the lessons learned in legal reform and implementation?
In Gambia, local ownership of forests by communities empowers those communities and subsequently provides the medium for them to protect their forests. With the emphasis on establishing a localized sense of forest ownership through the establishment of local forums for policy development, coupled with a funding mechanism, local communities become an active part in development and dissemination of conservation efforts. Moreover, with local administration and conservation responsibilities applied to community heads, forest conservation becomes an active part of the community rather than an aspirational measure. A key challenge is illegal exploitation of State land where there is insufficient monitoring, and the potential for weak compliance at the local level.

Vietnam, Law on Biodiversity, 2008

(Annex 6)

Background to the Measure
Beginning with the Law on Environmental Protection in 1993, Vietnam has enacted several laws, decrees and regulations on conservation issues. But despite these different efforts and some recent positive development in national forest coverage, a coherent legal approach to biodiversity conservation was missing and biodiversity kept declining at an alarming rate.

In 2003 the Government of Vietnam mandated the Ministry of Natural Resources and Environment (MONRE) to develop a biodiversity law. MONRE began drafting the law in early 2006 and received input from other governmental entities, national and international non-governmental organizations (NGOs) as well as the donor community. In November 2008, the National Assembly ratified the law, which became effective on July 1, 2009. After India, Vietnam was the second country in Asia to adopt a comprehensive biodiversity law.

Through the adoption of a single law on biodiversity-related matters in Vietnam, the Government of Vietnam aimed to achieve the following:

1) Clarification and streamlining of the established legal framework related to biodiversity;
2) Enhancement of the legal framework to effectively manage and protect biodiversity in Vietnam in all ecosystems;
3) Legalization of international commitments on biodiversity (in particular by the Convention on Biological Diversity) in national law; and
4) Coverage of other areas of biodiversity management which did not yet appear in laws and regulations, including limestone mountains and unused land areas and areas with mixed ecosystems.

After the adoption of the law, different environmental organizations and other experts and organizations involved in the consultation process criticised the final Biodiversity Law. It was perceived to be simplistic and did not incorporate some of the main input during the drafting process. In particular, lack of detail on biodiversity corridors and pro-poor principles, both of which had been initial drivers in the creation of the Biodiversity Law, were regarded as weaknesses.

What are innovative legal options to achieve Target 5?
Vietnam harmonized its fragmented laws and regulations on biodiversity by adopting the Law on Biodiversity 2008. The measure is intended to lead to a coherent and ecosystem-wide approach to state management and planning of biodiversity, taking into account the interdependence of ecosystems. The law provides the legal basis for implementing payment for ecosystem services (PES) for all natural ecosystems (Article 74), establishes different categories of conservation areas (Articles 16-20) and the concept of zoning (Article 26), buffers (Article 32) and biodiversity corridors.

What international commitments can be met by achieving Target 5?

- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention),
- United Nations Framework Convention on Climate Change (UNFCCC),
- United Nations Convention on Combatting Desertification (UNCCD),
- United Nations Convention on the Law of the Sea (UNCLOS),
- International Tropical Timber Agreement (ITTA), and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

What ministries might be involved?
In Vietnam, the ministry with primary responsibility to implement the ecosystem approach to all habitats is the Ministry of Natural Resources and Environment. The Ministry of Agriculture and Rural Development also play a role in the implementation of specific issues. The Ministry of Finance organizes and manages the collection and payments of fines, and the management and use of proceeds from administrative sanctions in the field of environmental protection. Improving coordination between Ministries is a major remaining challenge to the Vietnam Law on Biodiversity.

What administrative and institutional measures are useful for implementing the legal practice?

In Vietnam, the Biodiversity Law strengthened the role of the Ministry of Natural Resources and Environment to guide, coordinate and supervise state planning and management of biodiversity. An essential step in the law was to clearly assign competencies and responsibilities related to biodiversity planning and management. Partly because the law was unclear on this matter, the Government issued Decree 65/2010/ND-CP Detailing and Guiding a Number of Articles of the Biosafety Law. The Decree clarifies the division of competencies between provincial Peoples's Committees, the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment. People's Committees manage conservation zones located within the areas under their management and the division of responsibility between the Ministries only happens in cases where protected areas are located within two or more provinces.

What are the lessons learned in legal reform and implementation?
In Vietnam, lessons learned from implementation relate to the nature of the law. Since the Biodiversity Law is a general framework law, it contains several provisions that call for further implementation by decree and some elements remain unregulated. This was the result of the inability to achieve a complete break-down of competencies between the Ministry of Natural Resources and Environment and the Ministry of Agriculture and Rural Development. In this case, immediate full fledged legal reform was blocked by the more established Ministry of Agriculture and Rural Development, which held jurisdiction over forests, fisheries and conservation areas. As a result, biodiversity protection in Vietnam is evolving through a process of learning by doing, with the general principles set out in the framework law and implementation occurring through a cycle of lessons learned from pilot programs feeding into the drafting of new decrees and regulations.

TARGET 6 – SUSTAINABLE AQUATIC HARVESTING

By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

A) LEGAL ASPECTS OF TARGET 6

Overexploitation of marine resources, including from illegal, unreported and unregulated (IUU) fishing, is the main pressure on marine ecosystems globally, leading to the rapid loss of biodiversity and ecosystem structure. Poorly regulated access to marine resources has largely led to overexploitation. Therefore, in order to sustainably manage fisheries, invertebrate stocks and aquatic plants, comprehensive regulations and effective enforcement measures are necessary at all levels. Better management of harvested marine resources, including through the increased use of ecosystem based approaches and the establishment of recovery plans for depleted species, is needed to reduce pressure on marine ecosystems and to ensure the sustainable use of marine resource stocks.

Addressing overexploitation also involves abolishing harmful subsidies that create overcapacity in the fishing sector, creating a link between Target 3 and Target 6. Furthermore, to address IUU fishing, enforcement rules should to be strengthened. This includes responsibly exercising existing flag-state responsibilities, in accordance with international law. To overcome the limitations of exclusive flag-state jurisdiction, States should ratify and implement the FAO IUU Agreement, the UN Convention on the Law of the Sea (UNCLOS), and the 1995 Implementation Agreement of its Provisions relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (Fish Stocks Agreement).

Domestic measures to address IUU fishing should incorporate small scale fishers as well as high seas fishing vessels through effective monitoring, control and surveillance (MCS). Moreover, to achieve effective marine management on a local level, laws and regulations should acknowledge, protect, and promote the involvement of indigenous and local communities in conservation and sustainable marine resource management.
Another important issue is to minimise or eliminate threats to marine biodiversity from by-catch , including through regulating harmful fishing methods such as drift net fishing. Similarly, fishing practices that may destroy marine habitat, such as bottom trawling and dynamite fishing, should be regulated or eliminated.

Sustainable governance of fisheries and aquatic resources requires a multi-level approach with comprehensive domestic regulations for marine areas and fishing vessels under national jurisdiction as the foundation. Ecosystem based approaches and recovery plans for depleted species, should be incorporated at all levels. The ecosystems approach includes managing species together with their associated and dependant species and taking into account the ecosystem they belong to, in order to avoid biodiversity loss through by-catch, habitat destruction, and disruption of ecological processes. To pursue this aim, an important step is the full implementation of the Fish Stocks Agreement, including its provisions on the ecosystems approach, the precautionary principle, and enforcement measures. Given that implementation needs to be undertaken in a coordinated way, legislation and regulation should take into account and build upon UNCLOS and its Fish Stocks Agreement, the FAO IUU Agreement, FAO Code of Conduct for Responsible Fisheries, FAO Compliance Agreement, and the UN General Assembly Resolution on Sustainable Fisheries.

Implementing a cross-sectoral approach by integrating fisheries management with related sectors, such as pollution from land-based sources and resource extraction from the seabed is also important in this regard. Amongst other measures, this requires establishing strong cooperation and coordination mechanisms between the relevant national agencies dealing with fisheries on the one hand and marine protection on the other. Similarly, time/area closures for the protection of nursery grounds should be implemented.

Progress towards this Target would also contribute to fisheries targets set during WSSD and reaffirmed at Rio+20 and build upon the diverse approaches and tools agreed upon: the Ecosystem Approach; the elimination of destructive fishing practices; the establishment of representative networks of marine protected areas; and time/area closures for the protection of nursery grounds. The CBD POW on marine and coastal biodiversity is the most relevant to this target, along with the sustainable use cross-cutting issue, and protected areas.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 6 include:

- Kenya Fisheries (Beach Management Units) Regulations, 2007 of the Fisheries Act, 1989 (rev'd 1991)
- New Zealand Fisheries Act (Quota Management System), 1996

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Kenya Fisheries (Beach Management Units) Regulations, 2007 of the Fisheries Act, 1989 (rev'd 1991)

(Annex 7)

Background to the Measure
Historically, fisheries in Kenya had been managed locally using traditional knowledge. Following independence, the Kenyan government took over fisheries management, implementing a top-down approach to manage natural resources with little input from local stakeholders. This led to a decline in fish stocks with some local fisheries almost collapsing. Central problems included use of illegal and/or destructive fishing gears, environmental degradation, and cross border fishing conflicts.

The Fisheries Act 1989 was marked by a lack of enforcement capacity as well as overlapping administrative competences between various authorities for fisheries, wildlife protection, and forestry. Further tensions existed between different fisheries management levels, including the government, municipalities, and traditional leaders. One of the underlying reasons was the perception that fisheries resources belonged to the government inevitably leading to the disengagement of local communities. To overcome this situation, Kenya undertook a shift towards co-management accompanied by a changing perception of ownership towards understanding natural resources as common property held in trust for present and future generations. Such inclusion of the co-management element into the system of Beach Management Units was advocated by the Lake Victoria Fisheries Organization in the mid-1990s through its regional approach.

In following this advocacy of the Lake Victoria Fisheries Organization, Kenya created a system of co-management through Beach Management Units, which aim to combine elements from all management levels in a common, participatory approach. Its essence is to create a link and a partnership between the government level and artisanal fishermen. The primary advantage is that 'it allows the knowledge and understanding of all stakeholders to be reflected in the decision-making process and their diverse capacities to be harnessed in implementation.' Through such institutionalised re-inclusion of traditional knowledge in fisheries management, Beach Management Units essentially replace the traditional usage of elders at landing sites. Such legal empowerment of local communities has been suggested as a solution to overexploitation and aims to represent an ecosystem approach to fisheries management.

What measures in the law are useful for achieving the target?
Responding to declines in fish stocks and decreasing aquatic biodiversity, Kenya has established an innovative system to co-manage freshwater and marine fisheries through representative Beach Management Units. The aim is to integrate local and national management, making use of both traditional knowledge and scientific findings. Successes in Kenya include a decrease in the use of destructive fishing gear, increased vertical and horizontal linkages of relevant institutions, significantly expanded community participation, and higher levels of compliance.

1. Fisheries co-management (government, communities) with mandate to ensure sustainable utilisation of fisheries and inclusion of traditional knowledge in fisheries management
2. Creation of Beach Management Units to engage and build capacity of members with focus on sustainable development, poverty alleviation, well-being, gender and equity

What international commitments can be met by achieving Target 5?
- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),

- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention),
- United Nations Framework Convention on Climate Change (UNFCCC),
- United Nations Convention on Combatting Desertification (UNCCD),
- United Nations Convention on the Law of the Sea (UNCLOS),
- International Tropical Timber Agreement (ITTA), and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

Which ministries are responsible?
In Kenya he primary ministries involved are those with governing responsibilities over fish stocks, natural resources and environmental protection. This includes the Ministry of the Environment, Natural Resources, Finance, Environment, and Maritime Affairs. Kenya places institutionalizes management of fish stocks at the local level through BMUs governed by the Director of Fisheries under the Ministry of Forestry and Wildlife. BMUs put their management plans into effect through by-laws, which are developed by each Unit and approved by the Director of Fisheries. Such by-laws must comply with existing legislation but may go beyond its requirements on environmental and biodiversity protection.

What are the associated administrative and institutional measures?
In Kenya BMUs have exclusive management rights over fish landing sites and consist of an assembly, an executive committee, and may have sub-committees. They are required to provide data on catches and develop co-management plans to ensure sustainable fisheries in that area. These management plans must be approved by the Director of Fisheries and may include measures such as closing areas for fishing, and restricting fishing gear and the number of fishing vessels. BMUs are expressly required to protect the aquatic environment and cooperate with authorities to that effect. BMUs possess certain law-enforcement powers with regard to gear regulations, registration of vessels, and protection of fishing grounds. Monitoring the performance of BMUs is conducted both by the Unit itself as well as by external, authorized fisheries officers in six month intervals. BMUs can receive funding from the Ministry of Fisheries Development, or generate their own income through membership fees, taxing migrant fishers, or vessel registration fees.

1. Create Beach Management Units at local level with exclusive management rights over fish landing sites and obligations to develop sustainable co-management plans
2. Designate government body (eg Ministry of Fisheries) to approve co-management plans and monitor and supervise their implementation and offer funding
3. Delegate authority for enforcement of co-management plans to Beach Management Units

What are the lessons learned from the legal reform process?
Within Kenya, the integration of traditional and formal institutionalised fisheries management through BMUs is seen as a lasting solution which has had positive impact on enforcement and compliance. The Kenyan government has observed a reduction in use of destructive fishing gear, a 40% reduction of harvesting of undersize fish, and an emerging sense of ownership of the resources by the communities. It also reports that several BMUs have established compliance committees and are carrying out independent patrols without government support. In Kuruwitu for instance, four members of the Beach Management Unit are responsible for simultaneously patrolling a small marine park established by the community.

1. The Beach Management Unit system was prompted by active advocacy by the Lake Victoria Fisheries Organisation since the 1990s.

2. Shift perception of ownership of fisheries resources to understanding natural resources as common property held in trust for current and future generations

New Zealand Fisheries Act, 1996

Background to the Measure
Historically, controls on the level of New Zealand fishing were based on an 'open-season' approach, whereby regulations were based on limiting the number of boats allowed to fish, the days and time of year they could do so, and the means by which fish were caught. By the 1980's, dwindling inshore stocks and too many boats resulted in many species of commercial fish declining below sustainable levels. There was a clear need to reduce catches to levels which would enable fish stocks to recover in size in order to provide optimum long-term sustainable yields to be taken by the most efficient means.

In addition, the development of New Zealand's deep water fisheries during the late 1970's and early 1980's provided the economic driver to introduce a more effective fishing regime. The declaration of New Zealand's 200 mile Exclusive Economic Zone (EEZ) in 1978 made it one of the largest in the world, and was primarily explored and developed through the fishing capabilities of countries such as Japan, Korea and the USSR. By the early 1980's, the level of investment in the deep water fisheries by New Zealand companies (through joint venture operations, investment in vessels, onshore plant and market development) along with the dwindling fish stocks, provided a clear need for a comprehensive management regime which would allow for further development, provide for resource conservation and maximise the economic benefits to New Zealand.

In October 1986, after two years of consultation and planning, the QMS was introduced, with widespread industry support and cooperation. The QMS represented radical new thinking, and a shift from the traditional belief that the sea was full of fish and that fish stocks could not be adversely affected by fishing.

What are transferable aspects of the innovative legal practice?
The New Zealand Quota Management System (QMS), created in 1986 offers an alternative to traditional "open season" approaches to fisheries through a system that allocates annually defined individual allowable catch limits to ensure long-term sustainable fish populations. Individual Transferable Quota (ITQ)-based systems like the QMS are used in a number of countries. However, to date no other country has used an ITQ-based management system as extensively as New Zealand, where the QMS is used to manage all significant commercial species.

What ministries are involved?
In New Zealand, the key ministries involved are those governing responsibilities over fish stocks, natural resources and environmental protection. This includes the Ministry of the Environment, Natural Resources, Finance, Environment, and Maritime Affairs.
The New Zealand QMS is a tool under the Fisheries Act 1996 and seeks to ensure the sustainability of New Zealand's fishery stocks and to provide for the economic efficiency of the seafood industry. Under the QMS, the Minister of Fisheries is responsible for ensuring that fish stocks are maintained at or above a level that can produce the Maximum Sustainable Yield.

What administrative and institutional measures are useful for implementing the legal practice?
In New Zealand, under the QMS, the Minister of Fisheries is responsible for ensuring that fish stocks are maintained at or above a level that can produce the Maximum Sustainable Yield (MSY) . This means that controls must be set so that the biomass level can support the maximum sustainable yield (BMSY) which provides the conditions to

maximise the yield of the fishery without compromising sustainability. Commercial fishing is governed by a Total Allowable Commercial Catch (TACC), set per fish stock within a Quota Management Area (QMA) by the Minister. The Total Allowable Commercial Catch (TACC) is a subset of the Total Allowable Catch (TAC), set after allowances are made for non-commercial fishing interests. An Individual Transferable Quota (ITQ) gives rise to an Allowable Catch Entitlement (ACE) each year for each ITQ owner. Owners of ITQ are entitled to a yearly ACE, which is essentially the proportion of the TACC that quota-owner is entitled to catch.

Lessons Learned in Implementation

Moving from Criminal Offences to Economic Incentives

The new catch-balance regime introduced an administrative regime to replace a criminal offence regime. It relies on financial disincentives to stop fishing in excess of quotas. The need to develop mechanisms that allow fishers to deal with either excess catch of species for which they hold quota or the unintentional catch of species for which they do not hold quota was recognised in the 1990's. However it was also recognised that a balance needed to be reached where fishers have access to mechanisms through which they can cover unintentional catch, but which do not encourage them to intentionally exceed their fishing entitlements, and, thus, prevent sustainability goals from being achieved.

In order to address these issues, a new catch-balance regime was implemented in October 2001. Under the new regime, fishers can sell or transfer their ACE to other fishers. Fishers must report their catch and are required to obtain ACE to cover any excess catch, or pay the deemed value, which is a price paid per kilogram of catch for which the fisher holds no ACE. This provided options – either a fisher could obtain ACE before they went out, obtain it after they had taken the catch or pay the deemed value to cover the catch1. The deemed value is generally set higher than the value of the catch to the fisher. This is designed to encourage fishers to obtain ACE to cover their catch rather than pay the high deemed value.

The change to the catch-balance regime represented a major shift from a criminal offence based regime to an administrative regime based on economic incentives. It is no longer an offence to catch in excess of the ACE. Rather the deemed value acts as the primary deterrent to fishers taking excess to the ACE. If a deemed value is not paid, a fisher's permit is suspended and fishing without a permit is a serious criminal offence, with fines of up to $250,000 and forfeiture of vessel and quota, and even the possibility of a prison sentence.

Respecting Indigenous Rights

The biggest change since the QMS was introduced in 1986 has been the emergence of Māori, the indigenous peoples of New Zealand, as a major industry player. Given the nature of the system, when an ITQ based system is introduced to manage a resource, the access to its use becomes restricted (by law or by economics) to individuals holding quota. This raises the potential for conflict if there are individuals who have a prior claim to the use of the resource.

The introduction of the QMS assumed that there would be no effect on Maori fishing claims, which were established in the Treaty of Waitangi. But subsequent claims and reports by the Waitangi Tribunal disputed this, leading to a significant and lengthy settlement process between Maori and the Crown.

The 1992 Settlement Act provided for the transfer to Māori of 20% of the TACC of all QMS stocks (current and future), and funding to purchase 50% of one of New Zealand's primary fishing companies, Sealord Fisheries.

Due to protracted issues around the distribution of the allocation of the fishing assets to iwi, in 2004 the Māori Fisheries Act was passed, finalising the method of allocation. The Act provides for the establishment of Te Ohu Kaimoana, a private trust established to allocate the assets transferred from the Crown to iwi through the Māori Fisheries Settlement. A number of other organisations were also established to centrally manage assets on behalf of iwi and to promote Māori fishing.

The Ministry has an ongoing obligation to provide 20% of any new QMS stocks to Te Ohu Kaimoana. Currently, about 40% of New Zealand's commercial fishing industry is made up of Māori commercial fishing settlement assets

In addition to commercial fishing, the 1992 Settlement Act obliges the New Zealand Government to recognise Māori customary non-commercial fishing rights and management practices. These Māori customary fishing interests are taken into account when calculating TACs.

Practical Challenges in Calculating Sustainable Yields
Although the concept of Maximum Sustainable Yields is theoretically and intuitively simple, in practice it is difficult to use MSY to determine the optimal total catch. Populations and quotas are determined using various methods, such as research surveys, catch monitoring, ship's logs, landed catches and computer modelling. These calculations are not always reliable. Nonetheless, considerable sums of money are spent each year on determining MSY for deepwater stocks and the methods are now generally considered to be well tried.

Given the current low levels of understanding of fish population dynamics and information regarding specific species, it is very difficult to identify the true value of BMSY or MSY for any population4. Therefore, it is necessary to use other measures as proxies for MSY. This allows for fish stock levels to fluctuate around a target based on MSY-related reference points.5 Two reference points are being used in New Zealand’s QMS: a static measure (Maximum Constant Yield); and a dynamic measure (Current Annual Yield).

Continued Impacts on Untargeted Marine Species
While the QMS has proved to be successful with regards to sustaining New Zealand commercial fish stocks, ecological issues resulting from the impact of fishing remain, particularly with respect to untargeted species.

The QMS in itself does not address these wider ecological issues. To date, these effects have generally been addressed as externalities that are considered once the primary decision (setting of catch limits) has been made. They are implemented through secondary regulations and reliance on voluntary mechanisms.

According to the ministry for Primary Industries, an increased focus on biodiversity and environmental outcomes is characteristic of recent and planned developments in New Zealand's fisheries management regimes. Initiatives to reduce commercial fishing's impacts on species such as dolphin, sea lions and sea birds have included using exclusion devices on squid fishing nets to prevent seals and sea lions getting caught, the development of a National Plan of Action to reduce seabird mortality, regulatory measures to address Hector dolphin mortality, the closure of 19 seamounts to trawling to protect for biodiversity, and collaborative work with the Department of Conservation to improve the process for establishing marine reserves.

Nonetheless, it is argued by some commentators that commercial fishing has had, and continues to have, serious environmental effects on the marine environment.

In 2008, the Ministry of Fisheries released its 'Strategy for Managing the Environmental Effects of Fishing'. The Strategy states that the key principles relevant to managing fisheries to meet environmental standards are:

a. The onus to demonstrate that the effects of fishing are within environmental standards should be on those responsible for managing the fishery.
b. Environmental impact assessment (EIA) methods should consider all effects on habitats and species and be consistent across fisheries.
c. Implementation of management measures should be verifiable and monitored.
d. Determination of management measures necessary to meet environmental standards should take into account the views and interests of tangata whenua and stakeholders.

There remains considerable debate about whether this Strategy is being effectively implemented.

TARGET 7 – SUSTAINABLE AGRICULTURE, AQUACULTURE AND FORESTRY

By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

A) LEGAL ASPECTS OF TARGET 7

Management of ecosystems for provisioning services rather than other ecosystem services implies intentionally eliminating biodiversity, which creates a risk of losing the services provided by the species and ecosystems removed in the process. Developing sustainable agriculture, aquaculture and forestry is thus a precondition for the conservation and sustainable use of biodiversity and the provision of ecosystem services more generally. The ecologically unsustainable consumption of water, use and run-off of pesticides and excess fertilizers, and the conversion of natural habitats to uniform monocultures have major negative impacts on biodiversity. These impacts occur both inside and outside of agricultural areas, and have impacts on forest, inland water and coastal ecosystems. The increasing demand for food, fibre and fuel will lead to increasing losses of biodiversity and ecosystem services if issues related to sustainable management are not addressed. The focus on the national level must be on developing a broad, integrated, multi-sector strategy.

Sustainable management can also deliver benefits to production systems in terms of services such as soil fertility, erosion control, enhanced pollination and reduced pest outbreaks, as well as contributing to the well-being and sustainable livelihoods of local communities engaged in the management of local natural resources. The transition from a conventional management systems to those based on organic sustainable principles requires a shift from capital and chemical intensive production to knowledge intensive production. This must be supported by institutional structures aimed at facilitating access to information. The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), for example, seeks to establish a global system whereby plant genetic materials can be accessed and exchanged.

SFM criteria have been adopted by the forest sector and there are many efforts by governments, ILC, NGOs and the private sector to promote good agricultural, aquaculture and forestry practices and to apply law and governance mechanisms. Existing sectoral criteria could be built upon pending the development of a more common legal approach guided by inter alia, the Ecosystem Approach, the object of which is to ensure that governance mechanisms balance the use of natural resources with their conservation, and the Malawi Principles.iv Agreements such as the Santiago

Declaration are valuable starting points for a more common approach. Similarly, the use of certification and labelling systems or standardsvi, such as forest certification schemesvii as well as the requirement that private industry and government partners adopt Environmental Management Systemsviii could be used to strengthen legal certainty.

The customary use of biodiversity for agriculture, aquaculture and forestry by ILC may offer lessons of wider applicability and could be enhanced by increasingly delegating governance and management responsibility to the local level. Such delegation could be included in National Biodiversity Strategies and Action Plans (NBSAP) and would ensure that traditional knowledge and practices are maintained while also catering to a broader national plan of action.

The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity could serve as a framework for developing further sustainability criteria. They attempt to assist all stakeholders in ensuring that the uses of the various components of biodiversity do not lead to the long-term decline of biological diversity. The application of the Ecosystem Approach would also assist with the implementation of this target. The CBD's POWs on agricultural, forest, inland water, marine and coastal, dry and sub-humid lands biodiversity, and work on sustainable use are particularly relevant to this target.

A potential link exists between this Target and the implementation of other Rio Conventions, notably regarding agriculture and forestry and their contributions to climate change adaptation/mitigation (e.g. REDD+) and land degradation/desertification.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 7 include:

- Bolivia Forest Law, 1996

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Bolivia Forest Law 1996

(Annex 8)

Background of the Measure
Bolivia has 59 million ha of forests that cover more than 54% of the country, including significant areas within the Amazon Basin. For decades, unsustainable harvesting of high-value species like mahogany led to a decline in their stocks. Under the old regime, concessions could be granted for up to 20 years but most forestry contracts lasted between one and five years and provided few incentives to invest in more sustainable methods. The requirement that concession-holders implement forest management plans was poorly enforced and the system was skewed towards powerful producers that marginalized the rights of peasants and indigenous populations.

Bolivia attempted to rationalize the management of national forest resources in 1992 with an "Ecological Pause" that prohibited new timber concessions for five years. However, there was not enough political will to implement the rules and the effort was hamstrung by corruption and apathy. There was a resurgence of political will in 1994 and a major forestry reform initiative was launched supported by the BOLFOR (Bolivian Sustainable Forest Management) project funded by USAID. This was initiated shortly after FSC laid out its international guidelines, and key actors in the creation of the FSC actively participated in designing Bolivia's law. Extensive consultations led to legal reforms in 1996, including the Forest Law and its Regulations, and modifications to the

Constitution, including an amendment giving indigenous communities the exclusive right to their lands and territories.

Many stakeholders took part in the dialogue on forestry issues, including private companies, environmental NGOs, indigenous groups, the central government, woodcutters, farmers and municipal governments. International assistance agencies provided technical information and advice. The Bolivian president helped speed up the process at crucial junctures. The Forestry Law was just one of a number of new laws affecting management of forest resources, such as by institutionalizing greater democratic participation and control over resources by municipal governments and indigenous peoples. These laws both helped to strengthen the multi-stakeholder nature of the forestry reform process and ultimately formed part of the forestry regime itself. Bolivia now has over 2 million ha of certified timber concessions.

What are the transferable aspects of the innovative legal practice?
New forestry institutions introduced a series of checks and balances between numerous actors, the most powerful being the forestry superintendence, a politically independent central regulatory agency. Some power also rests with the Ministry of Sustainable Development and Planning, and municipal governments are given control over monitoring, administration and technical advice. Laws and regulations play a key role in determining whether sustainable forestry practices are adopted by actors in the industry and which practices are implemented in particular.

What international commitments can be met by achieving Target 7?

- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention),
- United Nations Framework Convention on Climate Change,
- United Nations Convention to Combat Desertification, and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

What ministries may be engaged?
The primary administrative responsibilities fall to the semi-autonomous administrative agency, the Superintendencia Forestal, or Forest Superintendency, under the Ministry of Environment and Waters. Other ministries impacted are the Ministry of Rural Development and Land and the Ministry of Economic Development as both have overlapping responsibilities around the use of economic incentives for rural developmental.

What administrative and institutional measures are useful for implementing the legal practice?
The Law created a semi-autonomous administrative agency, the Superintendencia Forestal, or Forest Superintendency (SIF), to oversee Bolivia's forestry regime, including the allocation and monitoring of concessions and enforcement of legal obligations. The Superintendency grants concessions through a public bidding process. It has the power to conduct inspections to ensure compliance with the law and with Forest Management Plans, and can call upon the National Police and armed forces to ensure compliance. Concessions are also subject to independent forest audits every five years. It offers greater stability in oversight, demonstrated by the fact that there were two Superintendents and 13 Ministers of Sustainable Development in the ten years following the adoption of the law.

What are the lessons learned in legal reform and implementation?
Longer and more secure land tenure creates a stable and secure environment for producers, encouraging them to invest in sustainable harvesting rather than seeking to harvest valuable species as quickly as possible. Forest managers' perceptions have shifted so that the sustainability impacts of their operations may influence the way they operate more than economic considerations. The independence of the Forestry Superintendency also creates a level of stability in forest regulation and law enforcement that enables and encourages the long-term planning required for certification. Its ability to exercise a reasonable level of control over most timber production helps ensure that the Law's standards are observed and respected.

4. STRATEGIC GOAL D – ENHANCING THE BENEFITS TO ALL FROM BIODIVERSITY AND ECOSYSTEM SERVICES

The Targets contained under Strategic Goal D aim to enhance the benefits to all from biodiversity and ecosystem services. Because the Targets as a whole reflect an ecosystem services approach,[10] we propose that **Target 14** be chosen to reflect the key role of ecosystems in providing benefits necessary for human well-being and the role that the ecosystem approach can play in meeting other Targets.

TARGET 14 – ECOSYSTEMS

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

A) LEGAL ASPECTS OF TARGET 14

Biodiversity underpins ecosystem functioning and the provision of services essential for human well-being, thus, safeguarding, maintaining and restoring biodiversity is a cost-effective way to provide services supporting food security, human health, the provision of clean air and water. Some ecosystems and services are particularly essential for human wellbeing, especially for the lives and livelihoods of women, ILC, including the poor and vulnerable. Accordingly, priority should be given to legal measures for safeguarding or restoring such ecosystems, and that ensuring that people, especially women, ILC and the poor and vulnerable, have adequate and secure access to these services. Sound distribution and recognition of property rights, including traditional and customary rights, can contribute to ensuring adequate and equitable access to ecosystem services.

Ecosystems which provide essential services and that contribute to local livelihoods should be identified through participatory processes at local, national and global levels and in accordance with Article 10 of the CBD on Sustainable Use. Information on valuation of ecosystem services should then be integrated into development plans to ensure that these ecosystems receive the necessary legal protection and investments. Maintenance and restoration of ecosystems can also provide a cost effective way to mitigate and adapt to climate change, meaning that addressing the threat of climate change through the implementation of the UNFCCC opens up opportunities for biodiversity conservation and sustainable use. This justifies looking at the tight link between the Rio Conventions on this issue, as well as Ramsar and other biodiversity-related Conventions. Actions related to this Target could also help meet the MDG.

10 Ibid.

The potential to achieve Target 14 remains viable, but will require significant legal preparedness to decipher the interrelationship between international instruments and domestic measures supporting sustainable ecosystem management. First, access to the use of ecosystems that provide essential services must be regulated, guaranteeing both safeguards for protection and incentives for restoration. Identification and ongoing management of designated ecosystems amongst the Parties, depending upon the ecosystems type and characteristics, must be done in a consultative, cooperative and comprehensive fashion, or under designated regimes. Measures that promote the protection, safeguarding and restoration of designated ecosystems should be established and will likely require coordination of domestic regimes governing forestry, fisheries, agriculture, mining, water, land use planning, property tenure and access, among others.

Second, economic use of ecologically-derived resources that causes a harmful or negative impact on the ecosystem (eg mining, agriculture, fisheries) must be regulated with a view to safeguarding ecosystem services and providing robust protection for the needs of women, ILC and the poor and vulnerable, while ensuring reciprocal payment for access. Due to the frequent marginalization of indigenous groups, a particular focus should be placed establishing frameworks supporting consultation and prior informed consent.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 14 include:

- Costa Rica, Forest Law No. 7575, 1996
- India, Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 and Rules, 2008

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Costa Rica, Forest Law No. 7575, 1996

(Annex 9)

Background to the Measure
Costa Rica experienced significant periods of increasingly severe deforestation in the half century prior to the enactment of the Forest Law No. 7575 of 1996. Due primarily to favourable land titling laws that encouraged conversion of forests into arable land and pasture, by the 1980's Costa Rica had one of the highest rates of deforestation globally. The agricultural and cattle producing sectors were provided preferential incentives in contrast to the forest sector in terms of broader market access, and use of cattle as collateral for loans. The forest sector had limited market access, was provided no loans for forest projects and had to deal with complex harvesting permit procedures.

Starting in the 1970's the Costa Rican government incrementally realised the socio-economic importance of forests, and reformed their domestic forest regime to establish financial incentives for preservation, remove pre-existing incentive programs harmful to biodiversity, and build environmental conservation and protection laws. Forest Law No. 4475 of 1969 created a positive tax incentive program for reforestation allowing reforestation efforts to be tax deductible, but the initial focus was to insulate industrial forest companies from tax liability and provided additional concessions restricting imports of forested products, thus encouraging increased deforestation.

Reforestation Act No. 6184 of 1977 was the first law to make reforestation a key national priority by earmarking 2% of commercial funds/loans for reforestation, capping

interest rates on these loans at 8%, and allowing trees to be leveraged as collateral. Forest Law No. 7032 of 1986 and Forest Law No. 7174 of 1990 created additional fiscal incentives for restoration and reforestation efforts. A certificate program was established providing landowners with tradable certificates which could be sold or applied against government taxes or fees. In 1992, two key instruments were introduced. Firstly, Forest Bond Certificates for Forest Management (Certificado de Abono Forestal para Manejo de Bosque; CAFMA) made direct subsidies for reforestation directly available. Secondly, Forest Protection Certificates (Certificado para la Protección del Bosque; CPB) supported forest conservation efforts over timber production, and afforded the enrolled parcels of land protection from exploitation, beyond ecotourism.

What are transferable aspects of the innovative legal practice?

Responding to a substantial reduction in overall forest cover, Costa Rica established a novel program to protect forested areas by paying individual land owners for the benefits provided by their forest ecosystem. Forest Law No. 7575 established a payment for ecosystem services (PES) program, the Programa de Pago por Servicios Ambientales (PPSA) for four services: (1) carbon mitigation, (2) hydrological services, (3) safeguarding of diversity; and (4) preservation of natural beauty. The Forest Conservation Certificate (Certificado para la Conservación del Bosque; CCB) program provided the legal basis to contract property owners to provide ecosystem services derived from the land. The existing financial incentive system for forest management was altered to provide direct payments to small landowners of natural forests and plantations for ecosystem services rendered to Costa Rican society, and the broader global community. The National Forest Financing Fund (Fondo Nacional de Financiamiento Forestal; FONAFIFO) was established to govern the PES program and collaborate with governmental and nongovernmental organizations (NGOs) involved.

What international commitments can be met by achieving Target 14?

- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention),
- United Nations Framework Convention on Climate Change,
- United Nations Convention to Combat Desertification,
  and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

What ministries might be involved?

As the PES program interlinks various domestic regimes, it also impacts multiple domestic ministries. The Ministry of Environment and Energy, and the Ministry of Agriculture play a formidable role in policy development, implementation and enforcement in regards to forest resource use. While the Ministry of Finance plays a secondary role coordinating polices in relation to the national backing framework and domestic banking institutions.

What administrative and institutional measures are useful for implementing the legal practice?

FONAFIFO was established as a semi-autonomous agency empowered to implement the PES program. It acts as the primary coordinating and financial body for the PES program and is responsible for monitoring, evaluating and administration. Representatives from the Ministry of Environment and Energy, Ministry of Agriculture, National Banking

System, and private forestry sector make up a governing board that provides operational governance.

What are the lessons learned in legal reform and implementation?
Requests for participation in the program have exceeded financial resources, demonstrating strong popularity. It has also created additional jobs, particularly for disadvantaged communities, and supported poverty eradication efforts with payments in some cases representing a tenth of the household income. By sparking national market demand for environmental services through legislation and allowing price to be established publicly, forest conservation efforts were put at the forefront of public debate. By also building on the pre-existing incentive program for forest conservation, Costa Rica was able to create a national PES program relatively quickly. Yet, even with a history of incentive-based programs, Costa Rica's implementation experience is not perfect. Having imported unhelpful components from the pre-existing system, a systemic lack of quantifiable data showing a positive trend on forest conservation, and a lack of long-term sustainable financing, the program's shortcomings are being progressively exposed and addressed.

India, Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 and Rules, 2008

(Annex 10)

Background of the Measure
The enactment of the FRA in 2006 emerges from the longstanding issues of insecurity of land tenure, access rights and lack of recognition of community conservation initiatives in forest management, lack of recognition of traditional governance and resource ownership in tribal areas and threats to community lands and forests from development projects arising primarily from the inadequacy of the forest reservation process under the Indian Forest Act, 1927. Establishing reserve, protected and village forests under the Indian Forest Act, 1927 requires that a process be followed to recognize the rights of people over the land wherein reserve, protected forests are to be declared. The Indian Forest Act establishes an elaborate procedure for settlement of rights when a reserve forest is intended to be constituted. The settlement procedures require the forest officer called the Forest Settlement Officer (FSO) to consider the claims of local inhabitants to certain usage rights, but leave ample discretion for him to relocate, revise or discontinue such practices.

The drafting of the FRA emerged due to the non-recognition of rights (tenurial or usufructuary) of forest dependent communities during the forest reservation process, and the struggle for implementation of the Joint Forest Management (JFM) Orders issued by the Ministry of Environment and Forests (MoEF) in 1990. In order to resolve implementation difficulties and issues with JFM Orders, the MoEF issued guidelines that essentially provided for regularization of pre-1980 encroachments of forest land by giving land titles to settlers. On 12 December 1996, the Supreme Court of India expanded the scope of the term 'forest' (interpreting the Forest Conservation Act of 1980), in T.N. Godavarman Thirumulkpad v Union of India. It held that no forest, National Park or Sanctuary can be de-reserved without the approval of the Supreme Court. This includes not only forests as mentioned in government records, but all areas that are forests in the dictionary meaning of the term, irrespective of the nature of ownership and classification thereof.

On 3 May 2002, MoEF issued a letter to the governments of all states and union territories in India on the removal of encroachments from forest land in a time bound manner by 30th September, 2002, explaining that such encroachments "…cause great harm to forest conservation (and)…are also seriously threatening the continuity of the Wildlife corridors between various National Parks and Sanctuaries." The MoEF, by a

notification dated 17th September, 2002, authorized the formation of a Central Empowered Committee (CEC) to monitor the implementation of the Court's orders and place reports of non-compliance before it, including in respect of encroachments, removals etc. In 2004, due to an intense and consistent struggle by Mass Tribal Organizations for reconciliation of tribal rights and conservation objectives, the MoEF withdrew its 2002 Order leading the Prime Minister's Office on 19th January 2005 to instruct the Ministry of Tribal Affairs (MoTA) to draft the Forest Rights Bill, which was notified as an Act in January 2006.

What are transferable aspects of the innovative legal practice?
The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) creates forest rights that can contribute to achieving Aichi Target 14. The Act provides for the recognition, vesting and securing of individual and community tenure rights to all forest dwelling Scheduled Tribes and Traditional Forest Dwellers on all forest lands.

By recognizing the diversity of use, access, and conservation practices and traditional knowledge of forest communities that significantly contribute to the conservation of forest ecosystems and biodiversity, local community institutions are empowered to better deal with external threats to community resources and to chart out their own management systems. Further, by stipulating specific rights of primitive tribal groups (PTGs) and pre-agricultural communities, the Act provides legitimacy and statutory backing to community efforts aimed at regeneration and conservation as per their traditional knowledge.

What international commitments can be met by achieving Target 14?

- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention),
- United Nations Framework Convention on Climate Change,
- United Nations Convention to Combat Desertification,
  and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

What ministries might be involved?
Primary responsibilities for policy development and implemtation fall to the Ministry of Environment & Forests as the coordinating insitution for manamagment of forest resources. However, the Ministry of Tribal Affiars also plays a siignificant role in coordinating and collaborating with tribal groups over the operationalization of the 13 forest rights vested for "forest dwelling scheduled tribes" and "other traditional forest dwellers."

What administrative and institutional measures are useful for implementing the legal practice?
The FRA also places a responsibility and authority on the communities who have been granted forest rights to manage the community forest resource (CFR) sustainably, conserve biodiversity and maintain ecological balance. The rights under FRA can be secured though a due process of recognition under the FRA. A three step procedure is established for recognizing the rights of the eligible persons. First, the Gram Panchayat (representative elected body) convenes the Gram Sabha (village assembly), which selects amongst itself to constitute a Forest Rights Committee that receives the claims

for individual and community forest rights. Second, the Gram Sabha makes a recommendation through a resolution endorsing the community forest rights amongst others. After the final decision is taken, a document is issued by the government delineating the right that can be exercised over the forest land by the forest rights holder. The individual entitlement to land is to the extent of land under actual possession and habitation not exceeding four hectares. No such limitation is prescribed for community forest rights. The land that is vested under this Act cannot be sold or transferred but can only be inherited. Further, it requires that all recognition of individual rights of habitation and occupation should be in the name of both the spouses, in relevant cases, thereby ensuring equal rights to tribal women and their empowerment.

What are the lessons learned in legal reform and implementation?
The incorporation of community duties under FRA marks a major institutional reform by changing the existing balance of power between the forest bureaucracies and right holding communities. It statutorily empowers holders of forest rights and their Gram Sabha to protect wildlife, forests and biodiversity as well as their habitats. FRA is the first legislation in India that involves the village assembly in the exercise of delineation of forest rights and heralds the democratization and decentralisation of forest governance in the country.

The linkages of community forest rights and sustainable use for livelihood needs by way of duties would result in reclaiming forest commons that were usurped by the forest bureaucracy during the forest reservation process without following due process of law. These reclaimed forest commons would thus be helpful in fulfilling subsistence needs of forest dependent Scheduled Tribes, the vulnerable and the poor.

Finally, the procedure for recognising and vesting of forest rights under the FRA and Rules involves delineation of these rights by forest rights committee selected by the Gram Sabha. The mandated one-third involvement of women in this process of recognition underlines empowerment of women and also the crucial role they play in conserving biological diversity and ecosystems.

5. STRATEGIC GOAL E – ENHANCING IMPLEMENTATION THROUGH PARTICIPATORY PLANNING, KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING

Goal E aims to enhance implementation through participatory planning, knowledge management and capacity building. Because of the central role of NBSAP in the implementation of the CBD and Strategic Plan, and consequently the achievement of the other Targets, we analyze **Target 17**.

TARGET 17 – NBSAPS

By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

A) LEGAL ASPECTS OF TARGET 17

National planning processes must become more effective in mainstreaming biodiversity and in highlighting its relevance for social and economic agendas. NBSAPs are central to translating the Strategic Plan to national circumstances and integrating biodiversity across all sectors of government and society. They are also central to achieve the CBD objectives and support the achievement of commitments made at global summits aimed at enhancing sustainable development and reducing poverty. The 2015 target date

implies that NBSAPs will guide efforts to meet the other Targets as a tool for mainstreaming biodiversity across government and society. Article 6 of the CBD forms the legal basis to Target 17 as it obliges Parties to develop NBSAPs or adapt existing strategies for the conservation and sustainable use of biological diversity, in accordance with national conditions and capabilities.

Target 17 constitutes a reform agenda that must look at the comprehensive implementation of the CBD, which includes all Programmes of Work and work on cross-cutting issues on biodiversity conservation, sustainable use and utilisation of genetic resources. Target 17 is flexible in that it can be used to incorporate pressing reforms like adopting ecosystem approaches towards biodiversity conservation and sustainable use based on ecological science.

Adopting the ecosystem approach as the basis for an updated NBSAP alongside the mainstreaming of biodiversity through cross-cutting initiatives and exploring synergies with other instruments could play critical role in reducing biodiversity loss. Such an approach provides the basis for further integration in the implementation of environmental treaties such as Ramsar, CITES, CMS, WHC and the ITPGR. In other words, updated NBSAPs can mainstream biodiversity through initiatives that emphasise the interdependence between the ecosystem goods and services and human wellbeing on one hand, and addressing the effects of different economic sectors on biodiversity using a science based approach.

However, if a workable NBSAP is supposed to put in place measures that are specific, measurable, attainable, results oriented and time-bound (SMART), establishing accountability in conservation and sustainable use.
There should therefore be a legal obligation put in place to implement an NBSAP as a policy instrument and clear guidance given to regulators regarding timelines and mandatory elements.

Determining what actions are needed to implement an effective policy instrument will be central to achieving the remaining Targets and needs quick action due to the early target date NBSAPs are the key instrument for translating the Convention and COP decisions into national action. For this reason it will be essential that Parties have developed, adopted and commenced implementing as a policy instrument an updated NBSAP which is in line with the goals and targets set out in this Strategic Plan by 2015.

COP has adopted consolidated guidance for the development, updating and revision of NBSAPs which suggests that they should rapidly catalyze a number of strategic actions in countries including: Integration of biodiversity in broader national strategies, which creates a link to Target 2; CEPA; ensuring availability of information and knowledge for action, including through national Clearing-House Mechanism (CHM) nodes; ensuring availability of appropriate tools for implementation; providing capacity building and facilitating access to financial resources; and ensuring monitoring, reporting and review, including identification and use of indicators as appropriate.

Requiring an effective and participatory updated NBSAP gives rise to questions of how to ensure that the NBSAP is effective, and how to create a participatory NBSAP. The planning process should involve dialogue with, and full and effective participation of, all sectors of society, including ILC, and include all levels of government. Participatory stakeholder involvement throughout the design, planning and implementation of an NBSAP is essential to ensure that the plans will be effective. The revised NBSAP should not be a static planning document. Rather, it should be a dynamic process that allows individual Parties to identify their needs, priorities and opportunities for biodiversity in light of broader national goals. Mainstreaming biodiversity in government, business, health, agriculture and among ILC will help developing countries to tackle the problem of

over-emphasis on the role of government and simultaneously will combat bureaucracy, corruption and support transparency and fair distribution of benefits.

B) INNOVATIVE LEGAL PRACTICES

Innovative legal practices to achieve Aichi Biodiversity Target 17 include:

- Japan Basic Act on Biodiversity, 2008
- South Africa National Environmental Management Biodiversity Act, 2004

Summaries of each innovative legal practice are provided below, with full Legal Briefs available as annexes.

Japan, Basic Act on Biodiversity, Act No. 58 of 2008

(Annex 11)

Background to the Measure
The Government of Japan has over 15 years of experience in developing national strategies on biodiversity. Japan became a signatory to the Convention on Biological Diversity in 1993 and adopted its first National Biodiversity Strategy in 1995. That strategy was reviewed twice, in 2002 and 2007. By then, the conservation of nature had evolved into a governmental priority in Japan, identified as one of the three pillars of its 2007 Sustainable Society Strategy, which called for the conservation of biodiversity and a re-orientation of socio-economic activities in harmony with nature.

It is in this context that the government adopted the Basic Act on Biodiversity in 2008. In line with the principles of the country's Basic Environment Law (Act No.91 of 1993), the Basic Act on Biodiversity aimed to clarify the fundamental principles for the conservation and sustainable use of biodiversity, and guide the development of related policies in a comprehensive, coordinated and participatory manner. Notably, the Act requires the national government to formulate a National Biodiversity Strategy, and encourages the development of regional biodiversity strategies at the prefectural and municipal levels.

What are transferable aspects of the innovative legal practice that assist to acheive Target 17?
Japan's Basic Act on Biodiversity was enacted to clarify the fundamental principles for the conservation and sustainable use of biodiversity, as well as the responsibilities of the national government, local governments, businesses, citizens, and other private bodies. It is intended to guide the review of existing laws, and serve as a basis for future policies for the development of a society in harmony with nature. The Act requires the national government to formulate a National Biodiversity Strategy (NBS), in consultation with civil society through the Central Environmental Council, which includes basic principles and targets; comprehensive policies to be implemented by the government; as well as all other necessary matters for the promotion of the conservation and sustainable use of biodiversity. Further, prefectures and municipalities are encouraged to formulate regional biodiversity strategies to respond to the unique environmental conditions of each localized ecosystem. By reviewing the NBS iteratively and consistently working to incorporate successful practices from the prefectural/municipal levels into the national strategy, the Government of Japan has set in place an effective, highly participatory, and continually refined strategic environmental planning framework.

What international commitments can be met by achieving Target 17?
- Convention on Biological Diversity (CBD),
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- Convention on the Conservation of Migratory Species of Wild Animals (CMS),

- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention), and
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

What ministries might be involved?
In Japan, the Ministry of Environment has primary responsibility for development, refinement, updating and implementation of NBSAP.

What administrative and institutional measures are useful for implementing the legal practice?
Japan developed an effective and frequently reviewed strategic planning mechanism fourmulated by the Ministry of the Environment in conjunction with civil society as represented through the Central Environmental Council . Beyond annual progress reporting and refinement, the NBS benefits from the experience and incorporation of prefectural and municipal strategic plans. In 2002, Japan refined their monitoring process to incorporate quarterly review cycles. This pre-existing institutional experience has allowed Japan to produce five versions of their NBS, with the most recent version set for revision in 2015 based on the midterm review results on the Aichi Targets. By leveraging a continuous refinement model based on national, prefectural and municipal knowledge transfer, Japan has developed a highly responsive strategic environmental planning model.

What are the lessons learned in legal reform and implementation?
Japan, based on a long history of strategic biodiversity planning, have refined their monitoring process to incorporate quarterly review cycles. This pre-existing institutional experience has allowed Japan to produce five versions of their NBS, with the most recent version set for revision in 2015 based on the midterm review results on the Aichi Targets. By leveraging a continuous refinement model based on national, prefectural and municipal knowledge transfer, Japan has developed a highly responsive strategic environmental planning model. In 2010, in accordance with the Basic Act on Biodiversity, cabinet adopted the fourth NBS. The Strategy established an ambitious long-term perspective on biodiversity conservation and sustainable use with its 100 year "Centennial" plan, in addition to adopting short- and mid-term targets (for 2020 and 2050, respectively). By adopting a long-term perspective in their strategic environmental planning but focusing attention on short-term implementation and review, Japan has been able to establish an effective interplay between long-term conservation goals and short-term planning and implementation. This approach has allowed for enhanced knowledge transfer between national, prefectural and local governments and environment councils, and iterative refinements to strategies at all levels based on exemplars.

South Africa, National Environmental Management: Biodiversity Act, 2004

(Annex 12)

Background to the Measure
The democratic election of 1994 was a catalyst for a series of changes to South Africa's legislative, policy and institutional framework for biodiversity conservation. The first ten years of democracy saw an overhaul of founding principles, policies and legislation to achieve social justice, equitable access to resources and economic sustainability. In 1995, the South African Government initiated a national consultative process to develop a policy and strategy for biodiversity conservation that would reflect the interests and aspirations of all South Africans. This culminated in 1997 with the White Paper on the Conservation and Sustainable Use of Biological Diversity and the ratification of the CBD.

The White Paper set out a number of goals, strategies and priorities for conservation, sustainable use and equitable benefit sharing, and set the scene for the development of appropriate legal instruments, including NEMBA in 2004.

What are transferable aspects of the innovative legal practice that assist in achieving Target 17?
South Africa's NBSAP was developed in response to its CBD obligations through an intensely participatory process led by the Department of Environmental Affairs with the financial support of the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP). The NBSAP sets out five strategic objectives over 15 years. Each strategic objective identified a number of outcomes combined with indicators for five year targets and activities to achieve these targets according to its priorities with support from partners and the DEAT. The first strategic objective is an enabling policy and legislative framework that integrates biodiversity management objectives into the economy. To integrate biodiversity into socio-economic development, biodiversity concerns were integrated into the South Africa National Treasury Budgeting Process, National Strategy for Sustainable Development, National Climate Change Response Strategy, Mining Sector-MBF, National Action Plan and the National Spatial Development Perspective. NEMBA was adopted in 2004 and entered into force on 1 January 2006. It is the main legal platform for biodiversity conservation in South Africa, providing for the management and conservation of South Africa's biodiversity within the framework of NEMA.

What ministries should be involved?
In South Africa, The Department of Environmental Affairs has overall responsibility for the implementation of NEMBA. The Minister is responsible for developing, implementing and reviewing the NBF, can amend it, and must publish it in the Gazette.

What administrative and institutional measures are useful for implementing the legal practice?
South Africa's Department of Environmental Affairs is tasked to prepare and adopt a NBF within three years of the coming into effect of the Act. It also requires the Minister to monitor implementation of the NBF and review it at least every five years. The NBF must be published by notice in the Gazette along with any future amendments by the Minister. Section 39 of the Act defines the content of the NBF. It mandates that the NBF: provide for an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders and the public.

What are the lessons learned in legal reform and implementation?
In South Africa, provincial conservation authorities and municipalities lack skills and resources to tackle biodiversity management mandates – and it is at these levels that many critical decisions are taken affecting biodiversity. In particular, provincial authorities have a limited emphasis on monitoring and limited capacity for monitoring in relation to achieving targets set out in the NBSAP and NBF. Lead agents have lacked capacity and human resources to implement the NBSAP and NBF fully. Many of the priorities have been tackled, but not in a systematic way, with priority actions being allocated, costed and resourced.

6. CONCLUSION

Achieving the Aichi Biodiversity Targets by the mandated timelines will require ambitious efforts by the global community, involving a transformational shift in behaviour, attitudes and action across economic sectors and all levels of society. Citizens, communities, private actors, civil society and governments from local, sub-national, national, regional and international levels all have a role to play in this transformational change. The innovative legal practices described in this Compendium show that laws have been assisting to coordinate this action and focus it towards the common goal of moving towards economies that operate within ecological limits, while contributing to goals of poverty reduction, sustainable development and economic prosperity. The innovative legal practices in this Compendium provide a start to the dialogue, and it is up to countries to take concrete action to design tailored legal strategies aligned with their unique context to achieve national goals related to the Aichi Biodiversity Targets.

ANNEXES OF LEGAL BRIEFS

ANNEX 1: Legal Brief
Target 2 Mainstreaming Biodiversity
Japan Basic Act on Biodiversity, 2008

Author: Mr. Freedom-Kai Phillips, Centre for International Sustainable Development Law

KEY MESSAGES

- Biodiversity values can be integrated into policy-making frameworks by establishing national and regional biodiversity strategies in consultation with civil society.
- Incorporation of on-going reporting of cross-sectoral biodiversity indicators and iterative reviews into multi-level strategic biodiversity planning efforts address the core mainstreaming and reporting components of Aichi Target 2.
- Focus legislation on establishing and refining national and regional biodiversity strategies based on science-based socio-economic valuations of biodiversity, and constant refinement of cross-sectoral indicators.
- Establish highly participatory forums for debate and discussion around biodiversity policy planning with clear responsibilities for national and local government, civil society and key stakeholders to engage biodiversity challenges at all levels of planning.

INTRODUCTION

Japan's Basic Act on Biodiversity was set in place to be the basis of current and future policy development aimed towards harmonious coexistence with nature. It clarifies the key principles for conservation and sustainable use of biodiversity resources, and outlines the responsibilities of government, both national and local, businesses and other stakeholder groups.

The Act establishes the formulation of a National Biodiversity Strategy, through consultations with civil society via the Central Environmental Council, which outlines fundamental principles and targets, broad policy mandates for national, regional and local government, and associated reporting and review mechanisms. Regional strategies are to be developed at the prefectural and local level to account for the unique characteristics of the localized ecosystem, under a centralized review model to reintegrate effective practices into national policy development. The Government of Japan has deeply embedded biodiversity values into national, regional, and local planning, reporting and development frameworks, resulting in a highly mainstreamed broadly engaged policy development model.

BACKGROUND

The Government of Japan has a long history of working to integrate biodiversity values into policy frameworks. Becoming a signatory to the Convention on Biological Diversity in 1993, and establishing their first National Biodiversity Strategy (NBS) two years later, to be further refined again in 2002 and 2007, Japan has long identified biodiversity conservation as a key policy initiative. In 2008 the Basic Act on Biodiversity was adopted in accordance with the Basic Environment Law (Act No.91 of 1993),[11] to clarify the legal and regulatory biodiversity policy landscape.

[11] Basic Environment Law (Act No. 91 of 1993), available: http://www.env.go.jp/en/laws/policy/basic/index.html [Basic Environment Law 1993]

Prior, the Japanese legal landscape, as it pertained to biodiversity conservation, was an amalgamation of multiple, semi-overlapping legal instruments. While there was implicit recognition of the values of biodiversity, there remained a lack of explanation as to how to operationalize and refine conservation measures effectively. By aiming to develop national, regional and local conservation policies in a highly collaborative and coordinated fashion, and ensuring ongoing evaluation, the Government of Japan aimed to integrate biodiversity values into all tiers of decision making in a clear and consistent manner.

ELEMENTS OF THE LEGAL MEASURE

Integration of Cross-sectoral Biodiversity Values into Policy Making and Land Use

The Basic Act on Biodiversity explicitly identifies a broad array of values, dependencies and socio-economic benefits arising from biodiversity conservation as underlying influences in policy-making. Beyond simply subsistence,[12] cultural,[13] and market dependencies are identified as being at risk due to overexploitation.[14] Recognizing the responsibility inherent in preserving the common property of future generations,[15] the Act aims to clarify the fundamental guiding principles underscoring conservation and sustainable use of biodiversity.[16] The fundamental principles established ensure: conservation measures are constructed with respect to the unique conditions of regional environment,[17] use of biodiversity resources is done in a minimally impactful fashion, [18] a science-based and ever-evolving approach to policy evaluation is utilized,[19] conservation measures are aimed at long-term regeneration of ecosystems, [20] and with awareness to the preventative role biodiversity conservation plays in relation to global warming.[21] Finally, "appropriate use" of national land/resources is endorsed to minimize destructive impacts to the ecosystem,[22] and technical research into the effective utilization of biodiversity is promoted to encourage the "rational use" of biological resources.[23]

Coordinated National, Prefectural and Municipal Biodiversity Strategy Development

Building on the Basic Environment Law, the Act establishes a comprehensive strategic biodiversity planning mechanism to promote conservation-focused policies nationally, regional and locally.[24] Policy formulation, coordination and implementation responsibilities are centralized at the national level,[25] with local governments empowered to establish localized polices based on the unique characteristics of the region.[26] The National Biodiversity Strategy, which is developed by the Minister of the Environment in consultation with representatives from civil society through the Central Environmental Council,[27] acts as the primary biodiversity planning tool,[28] and outlines: (i) basic principles underscoring biodiversity conservation policy development, (ii) sustainable use

12 *Supra,* Basic Act on Biodiversity at *Chapeau* para. 2.
13 *Ibid.*
14 *Ibid, at Chapeau* para. 4.
15 *Ibid, at Chapeau para. 5.*
16 *Ibid,* at *Chapeau* para. 6; Art.1.
17 *Ibid.* Art. 3(1).
18 *Ibid.* Art 3(2).
19 *Ibid.* Art. 3(3).
20 *Ibid.* Art. 3(4).
21 *Ibid.* Art. 3(5).
22 *Ibid,* Art.17.
23 *Ibid,* Art.18.
24 *Ibid,* at Art.1.
25 *Ibid,* at Art.4.
26 *Ibid,* at Art.5.
27 *Ibid.* Art. 11(4); Basic Environment Law 1993 at Art. 41.
28 *Ibid,* at Art.11(1).

and conservation targets, (iii) key policies for implementation, and (iv) other required policies to support comprehensive biodiversity conservation.[29] Prefectures and municipalities are intended to, individually or in collaboration, develop a Regional Biodiversity Strategy which localizes conservation measures to the unique features of the region.[30]

Integration of Biodiversity into Development and National Reporting

Through the incorporation of both a biodiversity-focused Environmental Impact Assessment (EIA) and a multi-level annual biodiversity strategy review mechanism, the Act integrates various tiers of biodiversity reporting. Firstly, projects that have an impact on biodiversity are to be assessed for their impact in the early stages to ensure the implications and available mitigation measures are given proper consideration.[31] Secondly, a strategic review is conducted annually which evaluates the *current state of* biodiversity policies, [32] assessing key targets and identifying policy focal points for the following year. [33] National and regional targets as established in their respective biodiversity strategies are enhanced and refined annually to improve the applicability of the data to policy makers.

LESSONS LEARNED IN IMPLEMENTATION

Successes

Broad Participation of Stakeholders in Biodiversity Policy Development

By taking a broad participatory approach to policy development, biodiversity conservation is integrated into multiple levels of government and embedded into numerous decision-making frameworks. The common but differentiated policy responsibilities shared by national, prefectural and local governments have necessitated the development of a highly contextual understanding of biodiversity drivers and dependencies at each respective region. Leveraging the pre-existing Central Environmental Council,[34] made up of various civil society experts (medial, academia, NGO/Citizens etc…) as a centralized body for national, regional and local debate and policy development, allows for integration of biodiversity considerations into all levels of decision society.

Integration of Cross-sectoral Biodiversity Indicators

Over the last decade, cross-sectoral biodiversity indicators have gained increased incorporation into Japan's national reporting and account mechanisms, to track resource flows and progress on established biodiversity goals. As early as 2002, the Government of Japan made a concerted effort to establish a national biodiversity monitoring framework, initially made up of 1000 national monitoring sites,[35] in support of the annual progress reporting requirements established.[36] A decade along, Japan has identified and integrated a variety of cross-sectoral indicators into national biodiversity monitoring to provide stakeholders with the requisite insight needed to support effect decision

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29 *Ibid,* at Art.11(2)(i-iv).
30 *Ibid,* at Art.13(1-2).
31 *Ibid,* at Art. 25.
32 *Ibid.* Art. 10(1).
33 *Ibid.* Art. 10(2).
34 *Supra,* Basic Environment Law 1993 at Art. 41.
35 Japan, *National Biodiversity Strategy of Japan,* 2nd Edition *(2002): Outline* (Ministry of the Environment: Government of Japan, 2002) at 9, available at: http://www.biodic.go.jp/cbd/outline/rev-unedited.pdf. [NBSAP 2002]
36 *Ibid,* NBSAP 2002 at 12.

making.[37] The fifth iteration of Japan's NBSAP produced in 2012 has refined pre-existing biodiversity goals and indicators to align with the Aichi Targets on Biodiversity and developed related indicator groups for monitoring.[38]

Scientific and Socio-economic Valuation of Biodiversity

In order to effectively conserve biodiversity, it is important that natural capital is appropriately accounted, assessed and valued. The Japanese Government has developed an integrated national surveying and coordination mechanism for scientific evaluation of biodiversity impacts, drivers and dependencies,[39] as a prerequisite to further socioeconomic valuation.[40] Further, by mandating the use of Environmental Impact Assessments (EIAs) to evaluate the impact of development on biodiversity, pre-emptive mitigation efforts are able to be employed, while gaining an increased understanding of the socio-economic value of biodiversity. Lastly, over half the country's 47 prefectures have developed and implemented independent tax programs aimed at forest conservation and environmental awareness, establishing localized biodiversity valuation schemes.[41]

Remaining challenges

Certainly progress has been made, by the Japanese, in the integration of biodiversity values into socio-economic assessment and impact reporting mechanisms, but gaps remain in the depth and breadth of the valuation and impact assessment practices used. While the qualitative benefits derived from biodiversity conservation are identified well in the Act, in policy and practice their remains a need for a comprehensive outline of the explicit quantitative or monetary values of biodiversity. A multi-prong methodology which assesses the value of natural capital, and focuses on valuing (1) provisional or direct values, (2) regulatory or dependant values, and (3) supportive or indirect values associated with biodiversity in a comprehensive fashion, would allow for an accurately evaluation of the socio-economic benefit transfer from biodiversity.[42]

Secondly, while a requirement for a biodiversity-focused EIA is in place for development projects, EIA tools have been observed broadly to often be minimal in scope and applied tardily, leaving recommendations underutilized.[43] Employment of a Strategic Environmental Assessment (SEA) as a complementary mechanism would allow for a more comprehensive evaluation of the environmental consequences of proposed plans, policies and programs. Having both SEA and EIAs working in concert provides policy makers with a more holistic picture of the biodiversity impacts, allowing for more informed valuation, practices and policy developments.[44]

CONCLUSION

The Basic Act on Biodiversity (2008) addresses a range of actions necessary to achieve Aichi Target 2, including:

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[37] Japan, The *National Biodiversity Strategy of Japan (2012-2020): Roadmap towards the Establishment of an Enriching Society in Harmony with Nature* (Ministry of the Environment: Government of Japan, 09-28-2012) at 107-109. [NBSAP 2012]

[38] *Ibid,* NBSAP 2012 at 115-126.

[39] *Ibid,* NBSAP 2012 at 107-108.

[40] *Ibid,* NBSAP 2012 at 109.

[41] Patrick ten Brink *et al.* "Recognizing the Value of Biodiversity: New Approaches to Policy Assessment" in Patrick ten Brink ed. *The Economics of Ecosystem and Biodiversity in National and International Policy Making* (London: Earthscan, 2011) at 152 [Brink]; Food and Agricultural Organization of the United Nations, "Japan Forestry Outlook Study (2010)" Asia-Pacific Forestry Sector Outlook Study II Working Paper Series, working paper No. APFSOS II/WP/2010/30 at 15, available at: http://www.fao.org/docrep/014/am625e/am625e00.pdf.

[42] *Ibid,* Brink at 142-143.

[43] *Ibid,* Brink at 152.

[44] *Ibid.*

- Mainstreaming biodiversity values into national, prefectural and local planning processes.
- Takes a broad approach to valuation of biodiversity.
- Integrates biodiversity into national and regional development strategies, and project impact assessments.
- Integrates biodiversity metrics into national and regional monitoring and reporting systems.

Building on nearly two decades of strategic biodiversity policy-making, Japan has broadly integrated biodiversity values into national, prefectural and local planning, assessment and reporting mechanisms in support of Aichi Target 2. While gaps in valuation and assessment remain, by actively participating in the recently created Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),[45] Japan intends to strengthen the linkage of science in policy decisions to effectively incorporate socioeconomic valuations.[46] By continuing to refine the integration of cross-sectoral biodiversity metrics into national and regional valuation, accounting and reporting systems, and effectively incorporating this data into strategic biodiversity planning, Japan will remain a strong example of pragmatic mainstreaming of biodiversity into policy-making frameworks.

[45] Food and Agricultural Organization of the United Nations, Res 14/2011 Intergovernmental Science-Policy Platform on Biodiversity and Eco-system Services, in *Report on the Congress of FAO, Thirty-seventh Session* Rome 25 June – 2 July 2011, at 33, available at: http://www.fao.org/docrep/meeting/023/mb767e.pdf.

[46] *Supra,* NBSAP 2012 at 109.

ANNEX 2: Legal Brief
Target 3 Incentives
Cameroon Law No. 94-01, 1994

Author: Mr. Guy Jules Kounga, Centre for International Sustainable Development Law

MESSAGES CLES:

- Le gouvernement du Cameroun a entamé le processus de décentralisation forestière pour impliquer toutes les couches sociales dans la gestion durable des forêts;
- Le ministère des forêts et de la faune, en partenariat avec d'autres ministères a mis en place des programmes dans le but d'encourager les particuliers aux reboisements, à l'élevage des animaux sauvages, des algues et des animaux aquatiques;
- Des nouveaux mécanismes de taxation sont mis en place pour inciter les exploitants forestiers à préserver la biodiversité;
- Les forêts communautaires, principales innovations de la Loi de 1994 se sont multipliées, permettant à la population locale de bénéficier des revenus de ses terres;
- La mise en œuvre de la loi de 1994 a abouti à une augmentation considérable des aires protégées.

CONTEXTE

1.1 Contexte social et politique

Face à la nette dégradation de ses ressources forestières, la faible implication des populations rurales dans la gestion des écosystèmes forestiers[47] et l'adoption de la Convention sur la diversité biologique, le Cameroun a procédé en 1993 à la mise sur pied d'une nouvelle politique forestière et en 1994 à l'adoption d'une nouvelle loi sur les forêts, la faune et la pêche : la Loi N°94-01 du 20 Janvier 1994 portant régime des forêts, de la faune et de la pêche. Élaborée sous l'influence des bailleurs de fonds, de la Banque Mondiale en particulier, la loi de 1994 est née dans un contexte marqué par la crise économique, la prise de conscience des effets de la déforestation sur les changements climatiques. La période d'adoption de la loi est aussi marquée par l'introduction du multipartisme et la liberté d'association dans le paysage socio-politique camerounais. Cette loi laisse augurer d'une meilleure gestion des forêts camerounaises[48].

[47] Politique Forestière du Cameroun : Document de politique générale, Ministère de l'Environnement et des forêts, 30 juin 1993.

[48] *Aperçu de la Situation de l'exploitation forestière au Cameroun*, un Rapport de l'Observatoire Mondial des Forêts Cameroun, World Resources Institute, 2000.

1.2 Processus de la réforme légale

L'adoption de la loi de 1994 est apparue comme un correctif à la loi précédente[49]. La précédente loi devenait inadaptée à la nouvelle politique internationale et à la situation économique du Cameroun. La loi forestière de 1981 marquait l'absence d'un cadre juridique pour l'intégration des activités de production forestière et de production d'un côté, et des activités agricoles de l'autre. La crise économique de 1985 a provoqué de nombreuses mutations, notamment l'ajustement structurel, la démocratisation et la décentralisation, qui, inévitablement, ont affecté les forêts comme la politique forestière. Le but de la restructuration du cadre légal était donc de convertir le secteur forestier en un secteur crucial pour la réduction de la pauvreté et en une source majeure pour l'industrialisation et les exportations du Cameroun. Les réformes n'auraient pu progresser sans l'énergie collective et les apports décisifs d'un ensemble de partenaires[50].

ATTEINTE DE L'OBJECTIF D'AICHI SUR LA BIODIVERSITE

2.1 Élément de l'objectif atteint

La loi de 1994 contribue à l'atteinte de l'objectif 3 (incitations) sur ses deux volets: les incitations positives et les incitations négatives. La principale mesure incitative positive de la loi a trait à la participation des particuliers dans les programmes/projets de reboisements, d'élevage des animaux sauvages, algues et animaux aquatiques; une autre mesure incitative positive concerne le transfert des compétences aux entités décentralisées. En ce qui concerne les mesures incitatives négatives, la loi met en place de nouvelles taxes dans le but de décourager l'exploitation forestières.

2.2 Base légale de la mesure

L'article 19 de la loi, relative aux mesures incitatives énonce que "*Des mesures incitatives peuvent, en tant que de besoin, être prises en vue d'encourager les reboisements, l'élevage des animaux sauvages, des algues et des animaux aquatiques par des particuliers*". Sur la base de cette disposition, des programmes d'élevage d'animaux sauvages ont été mis sur pied par le ministère de l'élevage.

2.3 Indicateurs de réussite

Deux indicateurs permettent de démontrer la réussite de la mise en place de l'objectif 3 : le projet d'appui aux élevages non conventionnels (PAENOC) qui va en droite ligne avec l'article 19 de la loi sur les mesures incitatives. On peut également citer comme indicateur le nombre croissant des forêts communautaires et communales qui accentue le processus de décentralisation forestière au Cameroun. On a au total 34 forêts communales d'une superficie de 827 285 ha, 314 forêts communautaires d'une superficie de 1 015 536ha dans toute l'étendue du territoire camerounais selon les statistiques du mois de juin 2011[51].

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[49] Loi N°81-13 du 27 novembre 1981 portant régime des forêts, de la faune et de la pêche

[50] Le Fonds Monétaire International, la Banque Mondiale, la Communautés des bailleurs de fonds (e.g. France, Canada) et les organisations internationales (telles que WRI, Global Witness (GW), et Resource Extraction Monitoring (REM), Global Forest Watch (GFW), Le WWF (Fonds mondial pour la nature), Wildlife Conservation Society ...)

[51] Il s'agit des données rassemblées par une équipe composée du World Resources Institute (WRI), du Ministère des forêts et de la Faune et d'autres partenaires tels que le Centre Technique de la forêt communautaire et GIZ-ProPSFE,

3.1 Une nouvelle approche légale

Grâce à l'adoption de la nouvelle loi, le Cameroun s'est engagé dans un processus de conservation durable des forêts sur plusieurs approches: la création des forêts communautaires et des forêts communales, la rétrocession de recettes fiscales aux communes. Principale innovation de la loi de 1994, le concept de foresterie communautaire était inconnu au Cameroun avant 1994. La loi l'a introduit pour associer les communautés à la gestion durable des forêts et à la conservation de la diversité biologique, tout en réduisant la pauvreté des populations rurales et en améliorant la gouvernance dans le secteur forestier. La « forêt communautaire » camerounaise réfère précisément à une forêt placée sous la responsabilité d'une communauté et à sa diligence, parce que cette dernière y exerce des droits coutumiers. Il est important de noter que la forêt communautaire, à l'instar de la concession forestière, comporte le droit de gérer la forêt, mais ne transfère pas de droit foncier.

La Loi de 1994 sur les forêts permet à une commune de créer son propre domaine privé au sein du domaine forestier permanent, à la condition de définir un plan d'aménagement en accord avec l'administration forestière. À l'instar des forêts communautaires, les forêts communales ont été encouragées par les bailleurs de fonds étrangers.

Une autre approche qui est la conséquence de la précédente consiste en la rétrocession de recettes fiscales aux communes et communautés locales. La redistribution d'une partie des recettes forestières constitue un moyen de faire profiter les collectivités locales et les communautés de leurs forêts, et de les amener à les considérer comme un actif productif qu'il convient de préserver. La Loi de finances de juillet 1998 a demandé que 50 % des recettes générées par la redevance forestière annuelle soient rétrocédés aux communes et communautés locales, à raison de 40 % pour les communes et 10 % pour les communautés.

3.2 Engagements internationaux accomplis

La mise en place des mesures incitatives de conservation de la biodiversité par le Cameroun répond à la volonté de la Convention sur la Diversité Biologique notamment en son article 11[52] sur les mesures incitatives. L'article 19 de la Loi répond à cet appel de la Convention par le recours à des mesures incitatives encourageant les particuliers à préserver la biodiversité animale et végétale.

3.3 Compétences ministérielles

La mise en œuvre des mesures incitatives fait appel à trois principaux ministères: d'abord le ministère de l'environnement, de la protection de la nature et du développement durable (MINEPDED) qui depuis 2004 est chargé de l'élaboration, la mise en œuvre et l'évaluation de la politique du Gouvernement en matière d'environnement ; dans sa mission, il est chargé de mettre en œuvre la loi-cadre sur l'environnement[53] qui s'occupe également des mesures incitatives[54] en appuyant toute opération contribuant à enrayer l'érosion, à combattre la désertification, toute opération de boisement ou de reboisement[55], et en permettant aussi à toute personne physique ou morale entreprenant des actions de promotion de l'environnement de bénéficier d'une

[52] Cet article dispose que "Chaque partie contractante adopte, dans la mesures du possible et selon qu'il conviendra, des mesures économiquement et socialement rationnelles incitant à conserver et à utiliser durablement les éléments constitutifs de la diversité biologique".
[53] Loi N°96/12 du 5 août 1996 portant Loi Cadre relative à la gestion de l'environnement
[54] Voir articles 75 et 76 de la Loi cadre
[55] Article 75.

déduction sur le bénéfice imposable[56]. Ensuite vient le ministère de l'élevage, des pêches et des industries animales, qui dans le cadre de sa mission, est chargé de l'élaboration, de la mise en œuvre et de l'évaluation de la Politique du Gouvernement en matière d'élevage, de pêche et de développement harmonieux des industries animales. Vient enfin le ministère des finances chargé d'élaborer la politique fiscale de l'État.

LEÇONS CLES APPRISES

Leçons apprises dans la mise en œuvre

L'augmentation considérable des aires protégées.

Des progrès sensibles ont été accomplis dans la protection de la biodiversité des forêts du Cameroun depuis le début des années 1990. La Loi de 1994 portant régime des forêts engage le Cameroun à placer 30 % de sa superficie sous protection – soit l'une des plus grandes proportions au monde. Le réseau des parcs nationaux, des réserves forestières, des sanctuaires de faune, des jardins zoologiques et botaniques et des zones de chasse communautaires, couvre environ 17,6 % de l'espace forestier national[57]. L'IUCN estime la couverture actuelle à plus de 20%.

La création de nouveaux mécanismes de taxations pour protéger la forêt.

Pour réaliser les objectifs énoncés, la nouvelle organisation fiscale repose essentiellement sur : Le changement de l'assiette fiscale en ajoutant à la taxation exclusive (volume de bois abattu, transformé et exporté) celle de la superficie de la concession (sous forme d'une redevance forestière déterminée de façon concurrentielle et payable annuellement, quel que soit le volume de coupe). Cette mutation, faisant en sorte que l'industrie s'acquitte d'un montant substantiel pour accéder aux ressources forestières, visait à décourager la spéculation, générer un flux de recettes prévisibles pour l'État et les communautés locales, tout en facilitant l'établissement et le recouvrement des taxes. L'introduction d'une taxe sur le bois brut entrant à l'usine, qui permette de contrôler les mouvements du bois et de pénaliser le gaspillage.

Le transfert de l'essentiel de la fiscalité de l'exportation vers les opérations d'exploitation forestière. Ce transfert devait inciter à l'aménagement forestier, à l'innovation commerciale et à l'amélioration de l'efficacité du processus de transformation.

L'utilisation durable des forêts par les populations.

Le principal objectif des réformes du secteur forestier au Cameroun était qu'il puisse bénéficier plus largement aux populations comme à l'environnement, en substituant à des arrangements aléatoires et opaques, un système d'accès aux ressources forestières plus rationnel, transparent et durable.

CE QUI RESTE A FAIRE

Répondre aux besoins des populations autochtones

Des mesures spéciales sont nécessaires pour permettre aux populations autochtones de participer aux réformes forestières et d'en tirer profit. Le Plan de Développement des Peuples autochtones (PDPA) du gouvernement vise à diminuer les risques qui découlaient du Programme sectoriel Forêts-Environnement de 2003 pour les populations autochtones, parmi lesquels la perte de contrôle sur les territoires qu'elles utilisent traditionnellement pour leur subsistance, la disparition des dimensions sociale et

[56] Article 76 alinéa 2.
[57] Giuseppe Topa, Alain Karsenty, Carole Megevand, Laurent Debroux, *Forêts Tropicales Humides du Cameroun: Une Décennie de Réformes*, Banque Mondiale, 2010.

culturelle liées à ces terres, une marginalisation accrue, une plus grande dépendance vis-à-vis des autres groupes, l'exclusion du système d'administration forestière décentralisée, un accès limité aux services publics et une capacité tout aussi limitée à défendre leurs droits légaux.

Renforcer la décentralisation

Il est important de mentionner que la loi de 1994 est née dans un contexte où la décentralisation est encore méconnue de la gestion administrative du Cameroun. Avec la Constitution révisée de 1996 et les lois sur la décentralisation en 2004[58], il est urgent que la loi de 1994 intègre les mécanismes de la décentralisation.

[58] Loi N°2004-17 du 22 juillet 2004 d'orientation de la décentralisation, Loi N°2004-18 du 22 juillet 2004 fixant les règles applicables aux communes, Loi N°2004-19 du 22 juillet 2004 fixant les règles applicables aux régions

ANNEX 3: Legal Brief
Target 4 Sustainable Production and Consumption
People's Republic of China, Government Procurement Law, 2002

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Centre for International Sustainable Development Law

KEY MESSAGES:

- Due to the size of China's government procurement, the market impact of such large-scale public purchasing can generate a market driver for the adoption of green products and strengthen public awareness of purchasing environment friendly products.
- Public procurement serves as an incentive for compliance with environmental regulations in the supply chain because of the risk of losing a contract or being excluded from the sizable government market if found not to be in compliance.
- The Government Procurement Law is characterized by its top-down implementation model, which also calls for further local capacity building for local implementation. With this type of measure, implementation should be properly coordinated between all levels.
- The approach of Government Procurement Lists (e.g. Energy Conservation Product List, Environmentally Labeled Product List) is an innovative measure that can help meet Target 4 but market competition is important to ensure.

INTRODUCTION

There is great potential for developing sustainable public procurement policy in China given the huge size of the Chinese government procurement market ($140 Billion US in 2010),[59] and the unprecedented political and legal environment for such developments. Unlike demand-control tools that aim to implement green energy and sustainable development policies, the market competition created by large-scale sustainable public procurement can strengthen public awareness of environment friendly products, thus helping to create a larger market for them. Sustainable procurement can also create a new and more effective kind of regulation through supplier compliance of individual contract that requires green product and service through out the whole supply chain. Despite the advantages, problems arise in implementation at the local level when government enforcement capacity is weak or impeded by political lobbying.

BACKGROUND

On June 29, 2002, the Chinese Government enacted the Government Procurement Law.[60] Article 9 stipulates that "Government procurement shall be conducted in such a manner as to facilitate achievement of the economic and social development policy goals of the State, including but not limited to environmental protection, assistance of underdeveloped or ethnic minority regions, and promotion of small and medium-sized enterprises." In accordance with this Article, the Ministry of Finance and the National Development and Reform Commission (NDRC) jointly published the "Opinion on

[59] According to the information issued by the Chinese government in the GPA platform under the WTO, online: http://gpa.mofcom.gov.cn/channel/country/china_jbjs.shtml.

[60] The Government Procurement Law of the People's Republic of China, 29 June 2002, Order of the President No.68, online: http://www.gov.cn/english/laws/2005-10/08/content_75023.htm.

Implementing Government Procurement of Energy Conservation Products" (ECP Opinion) in December 2004, followed by the first "Government Procurement List of Energy Conservation Products and Equipment" (ECP List). 12 such lists have been issued to present (2012).[61]

In 2006, The Ministry of Finance and former State Environmental Protection Administration (now the Ministry of Environmental Protection) issued the "Opinion on Implementing Public Procurement of Environmental Labeled Products" (ELP Opinion),[62] a legal instrument to encourage the government procurement of environmentally labeled products, according to which the first "Government Procurement List of Environmentally Labeled Products" (ELP List) has been announced. These documents form the legal framework for China's sustainable government procurement. Having developed over the last decade, this framework is integrated into a well-established and functioning public procurement institutional mechanism that can be described as hierarchical in nature, with a centralized multi-level system that is characterized by its top-down structure.[63]

ELEMENTS OF THE LEGAL MEASURE

Institutional and Regulatory Design

The general procurement framework operates from the national level, where the NDRC, Ministry of Commerce, Ministry of Finance (MOF), and Ministry of Environmental Protection (MEP) are jointly responsible for the formulation of the policy framework, including directives, laws, guidelines and new adjustment to procurement lists. The role of the provincial governments is to customize the regulations and specifications according to the local context, and administer budget allocations for public procurement. Depending on the size of the area, these functions may be divided into two separate offices, such as a procurement bureau to develop local regulations and represent local interests at the administrative level between government bodies, and public procurement centers (PPCs) to implement the actual procurement process.[64]

ECP list and ELP list

According to the ECP Opinion, government purchasers must accord preferential consideration to energy efficient products in their procurement, and gradually phase out those products of low energy efficiency. There is a clear requirement on purchasers to adequately consider product energy efficiency in evaluation criteria that must be provided in the bid documentation and a higher score should be given to products with higher energy efficiency.[65]

By the ECP Opinion, categories of products that fall under the scope of government procurement are determined and published in the form of an ECP List which is duly

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[61] The Law on Energy Conservation also requires public entities give preferential treatment in their procurement to those products and equipment that are on the government procurement list of energy conservation products and equipment (referred to hereafter as ECP List) when purchasing energy-consuming products or equipment. See also, International Energy Agency, "Energy Efficiency: Energy Efficient Products for Government Procurement – Publication of Official Listing", Policies and Measures Database (2012). Online: http://www.iea.org/textbase/pm/Default.aspx?mode=pm&id=2515&action=detail.

[62] Opinions of Implementation of Public Procurement for Environmental Labeling Products: Green procurement list. Online: http://public-procurement.emcc.cn/English%20Document/Case%20Study/Chinese%20Case%20study/ccase1.pdf.

[63] China Environmental United (Beijing) Certification Center Co. Ltd, "Introduction of China Environmental labeling". Online: http://www.neaspec.org/documents/eco_may_2012/Day1-Overview%20of%20Eco-labeling-China.pdf.

[64] Yuhua Qiao and Conghu Wang, "China's Green Public Procurement Program: Issues and Challenges in its Implementation" (2011) Journal of Environmental Projection. Online: http://www.ippa.org/IPPC4/Proceedings/07GreenProcurement/Paper7-6.pdf.

[65] See in "remaining challenge" part, this legal requirement has not been applied properly in practice.

updated, expanded and published. The categories are jointly selected by MOF and NDRC from the certified products by the state-approved ECP certification agency considering the circumstances, such as the government procurement reform process, and technology and market maturity for ECPs. This compulsory ECP List is a qualified supplier/product list. Those not included in this list will not have opportunity to enter the government procurement market.[66] Notwithstanding, this list is open to modification and adjusted regularly.[67]

According to the ELP Opinion, MOF and MEP co-determine the scope of preferential procurement by category from among the environmentally labeled products certified by government-recognized certification agencies in the form of the ELP List, after taking into consideration the level of market maturity, the progress of government procurement reform, and the degree of technological development of each product. This list has also been adjusted regularly and in 2012, the Government issued the 10th version of the list. The ELP Opinion requires all level government agencies to give preferential consideration to environmentally labeled products in their procurement with fiscal funds. Special preference is given to those products which are covered by both ELP and ECP Lists in government public procurement.

A Working Plan for Energy Conservation and Emission Reduction issued in June 2007[68] provides a compulsory requirement for procurement of highly energy efficient products, water efficient products and environmentally labeled products for offices (e.g. air conditioners, computers, printers, monitors, and copy machines), lighting products and water utilities. The compulsory requirement is confined to energy and water efficient products and does not apply to all environmentally labeled products yet.

Supplier Compliance Mechanism and Remedies

Government procurement is an effective incentive for supplier compliance and in the supply chain given the government's buying power and the risks brought about by noncompliance (exclusion from government procurement market, loss of contract). On the other hand, aggrieved suppliers have access to a bid protest system. If public entities or the successful suppliers fail to comply with these green procurement requirements, the disadvantaged supplier may file a complaint for redress. This is effectively a private enforcement mechanism which would implement the green policy through contract law.

LESSONS LEARNED

China has made significant efforts to orient government public procurement in a way that helps address the underlying causes of biodiversity loss. In general, the Government Procurement Law framework has improved public awareness of sustainable consumption and fostered innovation to achieve productivity increases to ensure sustainable consumption of resources and ease the burden on the environment. The legal framework also supports the implementation of an ecosystem-based procurement at central and sub-central level. Moreover, it enhances the synergies and complementarities between Government procurement, sustainable production and consumption and Chinese environmental policies on resource efficiency, sustainable use of natural resources, protection of biodiversity and habitats, and provision of ecosystem services.

[66] Cao Fuguo, Yan Yuying and Zhou Fen, Towards Sustainable Public Procurement In China: Policy And Regulatory Framework, Current Developments and the Case for A Consolidated Green Public Procurement Code, 2009, Page 11. Online: http://www.ippa.org/IPPC4/Proceedings/07GreenProcurement/Paper7-7.pdf

[67] The 12th list has been announced jointly by the MoF and NDRC in 2012 in a "Circular on the adjustment of ECPs list ".

[68] Online: http://english.mep.gov.cn/News_service/infocus/201210/t20121017_239101.htm.

Successes

The implementation of product lists depends heavily on local structures and institutional conditions, the political and economical environment, and staff capacity within PPCs. However, the targeted assistance to local-level government procurement provided by the product lists is a good start for introducing and implementing public procurement in China. More than US $104 Billion of public funds has been saved since the Government Procurement Law took effect 10 years ago. During this time, the scale of China's government procurement increased over 10-fold, from 100.9 billion yuan in 2002 to 1.13 trillion yuan in 2011 (approx. US $12.1B to $177.5B).[69]

Due to the large scale of China's Government Procurement, the market competition resulting from large-scale public procurement is strengthening public awareness of purchasing environment friendly products, thus helping to generate a market for green products. Green Public Procurement also serves as an incentive for supplier compliance given the government's buying power and the risk of exclusion from government procurement market or loss of contract in case of noncompliance.

Remaining challenges

First, the means to implement sustainable procurement is limited to the ECP List and ELP List, and the implementing effect of the systems themselves is doubtable. It has been found that the relative weight of the criteria for energy efficiency is low and that many accreditations are based on purchase cost. This to a great extent counteracts the advantages that a high efficiency product enjoys since in many cases products with lower efficiency are more cost competitive. Furthermore, considering the simplicity of applying the legal requirement, in many cases, listed products have all been given the same score.

Second, the compulsory procurement list process has too strong an exclusionary effect and has a problem of legitimacy under Chinese law on government procurement and accreditation.[70] The fact that a product is not included in the list precludes suppliers from furnishing purchasers despite other sources of evidence on the energy-efficient attributes of a product. The compulsory list also excludes the authority of other certification agencies, which causes another issue under both attestation law and procurement law.

Third, the parallel legal framework for Chinese public procurement (both centralized and decentralized) may present some problems for wider application of the green procurement lists. The law establishes a central procurement agency but confines the scope of its procurement business to that defined by a Centralized Purchasing Catalogue (CP Catalogue) for procurement for general purpose use. It has devolved many decision-making powers to procurement centers at provincial and local level.

Fourth, the existing procurement function is weak and uncertain, which reduces the possibility for the whole procurement chain to consider sustainability factors. Finally, the conflict between sustainable procurement and other objectives also brings difficulties to the implementation of this legal measure, setting challenges for administrative capability and professionalism.[71]

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69 人民日・, "政府采・法・布10年我国政府采・・・6600・・金", www.news.cn (2 July 2012). Online: http://news.xinhuanet.com/legal/2012-07/02/c_123359958.htm.

70 "Circular on compulsory ECP list" (2007). Online: http://www.gov.cn/zwgk/2007-08/06/content_707549.htm

71 Cao Fuguo, Yan Yuying and Zhou Fen, Towards Sustainable Public Procurement In China: Policy And Regulatory Framework, *supra*.

Conclusion

China's approach of developing product lists for Government public procurement has proven to be an innovative measure to reorient the market toward the design and production of environmentally friendly products. Promotion of use of standardized labeling can also encourage consumer awareness and foster sustainable production and consumption. However, this newly-built system of government public procurement is not flawless. The application of the legal requirement for both lists still needs further improvement. The top-down institutional choice also requires a better capacity building of implementation at provincial and local level. The equality of market competition between suppliers must also be taken into greater consideration in the ECPs and ELPs accreditation process.

ANNEX 4: Legal Brief
Target 5 Natural Habitats
Gambia, Forest Act 1998 and Forest Regulations 1998

Authors: Mr. Guy Jules Kounga, Centre for International Sustainable Development Law and Mr. Freedom-Kai Phillips, Centre for International Sustainable Development Law

KEY MESSAGES:

- Leverage a community-based forest management model to ensure local communities benefit from sound forest management.
- Focus on establishing clear mechanisms for delineation of responsibilities, community participation, enforcement and on-going administration and monitoring of forest resources.
- Establish incentives for investment in reforestation and regeneration efforts at the national, regional and local levels.
- Ensure a compliance mechanism is established that focuses on safeguarding forest resources and curbing repeat offenses.

INTRODUCTION

The main objective of the Forest Act 1998[72] is to provide for the maintenance and development of the forest resources of The Gambia with a view to enhancing the contribution of forestry to socio-economic development. Aimed at addressing the loss of natural forests, the Act provides for a minimum forest cover of thirty percent, institutes a Forestry Fund to promote national and local protection and sustainable forestry management, and outlines clear responsibilities for inventory and long-term management of forest resources. By focusing on empowering local communities, the Act incentivizes proper forest management and regeneration efforts and allows for the benefits of sound forest management to be realized by those most impacted.

BACKGROUND

Over the last century, the formerly dense forests of the Gambia have been in steady decline owing to large-scale destruction of forest land through bushfires, the exploitation of forest resources, and conversion into farmland. The result is a clear drop in the quality of the national forests. The National Forest Inventory of 1998 shows that although 43 percent of the Gambia's total land area, or 460 000 ha, is classified as forest, 78 percent of this area falls into the degraded tree and shrub savannah category.[73]

Recognizing that this decrease was at least in part the result of the State-controlled top-down forest management approach adopted by the government, which ignored the importance of collaboration with local populations, the changed their strategy during the 1990s and started to develop participatory forest management approaches. With assistance from the German Government, the Department of Forestry developed and implemented the community forestry concept in the Gambia. The goal of this approach is to promote active participation in forest management and to allocate ownership and/or exclusive user rights to stakeholders in order to gain their interest and give them an investment and stake in protecting the forest.

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[72] Republic of Gambia, Forest Act 1998: An Act to provide for the maintenance and development of the forest resources of The Gambia with a view to enhancing the contribution of Forestry to the socio-economic development of The Gambia and for matters connected therewith, available: http://faolex.fao.org/docs/texts/gam19052.doc [Forest Act 1998]

[73] A. Dampha and K. Camara, FAO Forest Policy and Institutions working paper N° 8: Empowering communities through forestry: Community-based enterprise development in the Gambia, (FAO: Rome. 2005) at 2, online: http://www.fao.org/docrep/008/j6209e/j6209e00.htm [Dampha and Camara]

In 1995, the Department of Forestry adopted a Community Forest Policy (commonly referred to as The Gambia Forest Management Concept) and became one of the first administrations in Africa to introduce a framework for community forest management.[74] This community-based approach was strengthened by the Forest Act 1998 and Regulations,[75] which involve communities in forest management and protection by legally requiring them to participate in fire prevention and forest management activities. The country has since developed and implemented one of the most progressive institutional frameworks, including the permanent transfer of ownership of forest resources to communities, thus creating a favourable environment for development and sustainable forest management.

ELEMENTS OF THE LEGAL MEASURE

Establishes Forest Management Regime

The Forest Act begins classifies forested areas into categories for administration. The first category is State forest, which includes forest parks and forest reserves. The second category is Community Forests. The third is Private forest, which includes private natural forest and private plantations.[76] The Act then establishes a national minimum forest target of thirty percent, based on all categories.[77] To prevent destruction, encourage the improvement and promote the sustainable use of forests, the Act establishes that all forests are managed by a responsible authority,[78] and that a multi-sectoral working group provides policy proposals for forest conservation to the Cabinet for consideration.[79] The responsible authority, be it state, local or private, is required to comply with applicable inventories, planning and regeneration standards to ensure the sustainable use of forests,[80] in accordance with monitoring and evaluation mechanisms set in place by the Director.[81]

Administration, Monitoring and Protection of Forests

Forests are provided a range of administrative and protective measures via the Act and Regulations. First, all forests must have measures applied that will encourage sustainable use,[82] and be provided protection from fire,[83] decimation,[84] or wind and erosion.[85] Second, all forests, be they state,[86] community,[87] or private,[88] must be inventoried and a management plan established for a term of up to ten years. The Act also installs an environmental impact assessment procedure for farming, industrial projects or other development in forest areas which assesses the nature, scope, impacted areas, and potential mitigation measures.[89] Lastly, the Secretary of State has

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74 Lamin Jammeh, "Participatory forest management in the Gambia" Department of Forestry: Empowering communities through participatory forestry in the Gambia, (Dept. of Forestry, The Government of Gambia: Banjul, Gambia, 2008) at 2, online: http://iasc2008.glos.ac.uk/conference%20papers/papers/J/Jammeh_214901.pdf.

75 Republic of Gambia, *Forest Regulations, 1998*, available: http://faolex.fao.org/docs/texts/gam50110.doc [Forest Regulations]

76 Forest Act 1998 at s.9(1)(a-c).

77 Ibid, at s.10.

78 Ibid, at s.11.

79 Ibid, at s.13.

80 Ibid, at s. 12(2).

81 Ibid, at s.17.

82 Forest Act 1998 at s.12.

83 Ibid at s.85, Forest Regulations at s.15-17.

84 Forest Regulations at s.13(2).

85 Forest Act 1998 at s. 77.

86 Ibid at s.91, s.96; Forest Regulations at s.7-8.

87 Ibid at s.94, s.97; Forest Regulations at s.11.

88 Forest Act 1998 at s.95, 76(3-4); Forest Regulations at s.12.

89 Forest Act 1998 at s.81.

the flexibility to respond to forest threats by amending the list of protected forest areas or produce to ensure conservation.[90]

Creation of National and Local Forestry Funds

A National Forestry Fund (NFF) was established to promote the conservation and sustainable use of forest resources[91] based on proceeds from the sale of timber/forest produce, fund-financed forest project returns, community contributions, grants and government programs.[92] The NFF is administered by the Department of Forestry, however for transparency an annual audit is administered by the National Forest Fund Committee, an independent body made up of representatives of the Ministries of Finance and Department of Forestry, local governments, forest committees and NGOs.[93] The Act also provides for the creation of Community Forestry Funds (CFF),[94] administered by the community forest committee,[95] to stimulate conservation and community forest development.[96]

Compliance Mechanism Integration

A compliance mechanism is implemented to protect state forest parks,[97] community parks,[98] forest reserves[99] and private natural forests[100] from destruction, degradation and encroachment. The penalty for a first offense is a fine equivalent to the fees and royalties of the forest produce in question,[101] with future offenses facing double the fine and a maximum of 3 years imprisonment. Furthermore, any forestry committee which does not implement a management plan, fails to prevent the destruction of a community forest, authorizes or allows forest clearing or building in the community forest, or does not administer the CFF in good faith is also liable to equivalent criminal sanctions and the potential to lose control of the designated area.[102]

Empowerment to Create Community Forests

Any community or group of communities may apply to establish Community Forests from forest reserves or any non-forest land where forest growth would be beneficial.[103] While the community forest committee must maintain compliance with applicable inventories, planning and regeneration standards,[104] they gain the right to retain eighty-five percent of all proceeds from forest produce extracted from the area under their authority.[105] Because any land which is allowed to regenerate and reaches an acceptable area density is deemed a forest,[106] the Act also provides a measure to incentivize investment in forest regeneration efforts. Finally, to ensure the land is used for its intended purpose, once a Community Forest is established, it is impossible for the community to abandon, sell or transfer the land in any way without the prior consent of the Secretary of State.[107]

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90 Ibid, at s.88.
91 Ibid, at.30.
92 Ibid, at s.32(1)(a-f).
93 Ibid, at s.33.
94 Ibid, at 36.
95 Ibid, at 59.
96 Ibid, at s.37.
97 Ibid, at s.109.
98 Ibid, at s. 112.
99 Ibid, at s.116.
100 Ibid, at s.118.
101 Ibid, at s.109 (schedule III).
102 Ibid, at s.117.
103 Ibid. at s.58-60.
104 Ibid, at s.59(2).
105 Ibid, at s.36(a).
106 Ibid, at s.5; "acceptable area density" means over one hundred trees her hectare with a diameter of 20 cm at chest height
107 Ibid, at s.54.

LESSONS LEARNED IN IMPLEMENTATION

a) Successes

Local Ownership and Protection

With the emphasis in the Act towards localized ownership, the newfound sense of ownership has created a very strong relationship between communities and their forests. As administrative and protective measures, such as the responsibility for safeguarding land against brush fires, are applied to local community heads,[108] communities have a medium to see the forest not only as a source of revenue but also as an integral part of their livelihood and their future. Moving forward, as forest resources require a long gestation period before harvest, high community input of labour and time should be recognized. Participation in community forestry should be measured by evaluating the communities' management of the resources over time. Finally, the management of the community forest should not be tied to short-term monetary or material compensation but rather to the development of genuine sense of ownership.

Community-Based Approach to Increase Forest Cover

By implementing forward-looking forest management practices aimed at local empowerment and community forestry,[109] the Gambian Government has managed to achieve a net forest cover increase of 8.5 % over the last two decades (increasing from 442,449 hectares in1990 to 480,042 ha in 2010).[110] With over 350 villages country-wide now participating in community forestry management, administering 12% of the country's forest,[111] Gambia is leveraging local leadership and administration to effectively put in place conservation and sustainable use measures. The Gambian approach to community forestry empowers community actors as the primary guardians of forests and other natural resources, and the primary beneficiaries of sound and sustainable management. Furthermore, by providing in the Act a mechanism for land to be deemed a forest, and subsequently eligible for a community forestry application, reforestation and regeneration efforts are strongly incentivized. With communities as the primary guardians of forests and other natural resources globally, yet often lacking the requisite resources to fund restoration efforts, innovative incentive models are of particular value.

Consciousness and Awareness of the Rural Population

Experience in participatory forest management in the Gambia has shown that once local communities have recognized the value of forests, they will develop a vested interest in their protection as permanent sources of income and/or livelihoods.[112] The implementation of community forestry over the past twenty years has thus made the people aware of the socio-economic and environmental consequences of deforestation and forest degradation. An additional benefit of a community based model is innovative civic-focused programs, such as soft-loan programs administered by Forest Committees during the rainy season for purchase of family food or to cover school fees.[113] The

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108 Supra, Forest Regulations at s.16-17.

109 Convention on Biological Diversity, Ecosystem Goods and Services in Development Planning: A Good Practice Guide (CBD Secretariat: Montreal, Canada, 2010) at 28.

110 Food and Agriculture Organization, Global Forest Resource Assessment 2010: Country Reports Gambia FRA2010/074 (Rome: FAO, 2010) at 10, available: http://www.fao.org/docrep/013/al510E/al510e.pdf; World Future Council, Future Policy Awards 2011 (WFC: Hamburg Germany, 2010) at 13, available: http://www.worldfuturecouncil.org/fileadmin/user_upload/PDF/2011_Future_Policy_Award_Brochure_En.pdf

111 Ibid.

112 Ibid, at 10.

113 Jato S. Sillah,"Key Sectoral Analysis: Forestry (Mitigation)"in the Capacity Development for Policy Makers to Address Climate Change Project available:

political will shown by the government in giving communities the right to own forests has solidified the new confidence rural people have in the program as a whole.

b) Remaining Challenges

The adoption of the Forestry Act has sustained the efforts of the Department of Forestry identify and implement strong forest management practices. With a legal mechanism established to promote community participation in effective forest management, community forest committees are becoming empowered to actualize the benefits of forest conservation measures in an inclusive fashion.[114] While demonstrating their commitment to decentralized management of forest resources, clearly defining land ownership responsibilities, and implementing a micro-project planning, challenges remain in relation to enforcement of the Act and access to forest resources.

A key challenge is illegal exploitation of State land which creates an unfair competitive environment. There are event examples of the community forest name being exploited to initiate the incorporation of products into the market.[115] This instance demonstrates the unfair competitive environments community forest products face in the market. However, it also illustrates to pressing need to enhance enforcement measures. Weak enforcement methods at the local level systemically jeopardise the community forest initiative, and ultimately undermine the goals of forest conservation and sustainable use.[116]

Beyond enforcement, ensuring that communities have access to forest products at a predictable rate is integral to empowering the creation of small-scale enterprise.[117] While many obstacles to access to forest resources have been removed via the Act, new policies must continue to be forward thinking. Policy makers must remain aware that community forestry in many nations is a new concept, and various needs from local education on conservation measures to technical training to access the legal framework is needed to continue the progress already established.

CONCLUSION

The Forest Act of 1998 and its subsequent regulations address a range of actions necessary to achieve Aichi Target 5, such as: implementing sound forest management practices, e.g. establishment of inventory, management and compliance mechanisms; establishing a national minimal forest cover target; implementing an Environmental Impact Assessment procedure for forests; leveraging a community-based forestry management model to facilitate the reduction of forest degradation; instituting a fund to support national, regional and local conservation measures; and incentivizing regeneration efforts.

By establishing a community-focused forestry management system, The Gambia has been able to significantly reduce the rate of reforestation, while empowering local communities to benefit from sustainable forest management. Nearly two decades after the adoption of the first policy, the Gambia has developed a successful blueprint for integrating community actors into forestry management efforts. Nonetheless, challenges of access, enforcement and technical understanding still slow the process of implementation. Continued efforts will be needed to optimize enforcement measures and technical training to ensure that community forestry management can continue to be successful.

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http://www.undpcc.org/docs/National%20issues%20papers/Forestry%20(mitigation)/gambia_national_issues_forestry.pdf

[114] Supra, Dampha and Camara, at iii.
[115] Ibid, at 59.
[116] Ibid.
[117] Ibid.

ANNEX 5: Legal Brief
Target 5 Natural Habitats
Vietnam, Law on Biodiversity, 2008

Authors: Mr. Phan Tuan Hung, International Development Law Organization and Ms. Katharina Rogalla von Bieberstein, Centre for International Sustainable Development Law

KEY MESSAGES:

- The adoption of a framework law on biodiversity can be helpful for countries where biodiversity conservation and sustainable use is not addressed holistically, and this has lead to unclear or overlapping responsibilities as well as incoherence in the planning and management process.

- Active engagement and early participation of stakeholders in the legal drafting and consultation process is important to ensure both quality and feasibility.

- Capacity enhancement and recognition of authority is needed, for the leading agency in particular, to implement and monitor the Law on Biodiversity. An increase in competencies granted by law should coincide with additional financial and technical capacity.

- Due to the general nature of framework legislation, a timeline should be established on implementing decrees, creating inter-ministerial consultation processes, and undertaking civil society dialogue to successfully address major biodiversity-related issues across all natural ecosystems and sectors.

- Framework laws can be useful for raising awareness of biodiversity issues in citizens and government, and attracting international donor assistance to implement components thereof.

INTRODUCTION

The Biodiversity Law of Vietnam is the framework legislation for biodiversity protection and governs all biodiversity-related issues (ecosystems, species and genetic resources) in Vietnam. Vietnam's Law on Protection of the Environment[118], adopted in 1993 and revised in 2005, only has one general provision on biodiversity (Article 30 Law on Protection of the Environment). The Biodiversity Law, adopted in 2008, therefore aimed to comply with international commitments in particular with respect to the Convention on Biological Diversity (CBD): In line with Vietnam's CBD commitments one of the main tenets was thus to harmoniously combine conservation with rational exploitation and use of biodiversity; and conservation and rational exploitation and use of biodiversity with hunger eradication and poverty alleviation (Article 4(2) Biodiversity Law).[119]

BACKGROUND

[118] Socialist Republic of Vietnam, National Assembly, No. 52-2005-QH11 Law on Protection of the Environment, available at: http://www.dpi.hochiminhcity.gov.vn/invest/html/Law-on-Environment.html.

[119] Armelie Guignier, "Conserving Biodiversity and Sustaining Livelihoods in the Ba Be and Na Hang Complex- A legal perspective", Milestone Report 9.2, European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement No. 211392, Vietnam June 2011, pg. 16, available at: http://cdn.livediverse.eu/wp-content/uploads/2009/07/M-9.2-Vietnam.pdf [Guignier]; Phan Tuan Hung, Pham Xuan Phuong & et. al., "Legal Preparedness for REDD+ in Vietnam: Country Study" (IDLO, Rome: November 2011), available at: http://www.idlo.int/Publications/LegalPreparednessREDDVietNam.pdf [IDLO Country Study Vietnam]; VN moves to protect biodiversity (April 9, 2009), Look At Vietnam, Vietnam News – Update 24/7, available at: http://www.lookatvietnam.com/2009/04/vn-moves-to-protect-biodiversity.html. [Look at Vietnam].

Beginning with the Law on Environmental Protection in 1993, Vietnam has enacted several laws, decrees and regulations on conservation issues.[120] But despite these different efforts and some recent positive development in national forest coverage, a coherent legal approach to biodiversity conservation was missing and biodiversity kept declining at an alarming rate.

In 2003 the Government of Vietnam mandated the Ministry of Natural Resources and Environment (MONRE) to develop a biodiversity law. MONRE began drafting the law in early 2006 and received input from other governmental entities, national and international non-governmental organizations (NGOs) as well as the donor community. In November 2008, the National Assembly ratified the law, which became effective on July 1, 2009.[121] After India, Vietnam was the second country in Asia to adopt a comprehensive biodiversity law.[122]

Through the adoption of a single law on biodiversity-related matters in Vietnam, the Government of Vietnam aimed to achieve the following:

1) Clarification and streamlining of the established legal framework related to biodiversity;
2) Enhancement of the legal framework to effectively manage and protect biodiversity in Vietnam in all ecosystems;
3) Legalization of international commitments on biodiversity (in particular by the Convention on Biological Diversity) in national law;[123] and
4) Coverage of other areas of biodiversity management which did not yet appear in laws and regulations, including limestone mountains and unused land areas and areas with mixed ecosystems.

After the adoption of the law, different environmental organizations and other experts and organizations involved in the consultation process criticised the final Biodiversity Law. It was perceived to be simplistic and did not incorporate some of the main input during the drafting process. In particular, lack of detail on biodiversity corridors and pro-poor principles, both of which had been initial drivers in the creation of the Biodiversity Law, were regarded as weaknesses.[124] An earlier draft version of the Law took into account protective measures needed to support the livelihoods of people who depend on access to natural resources and biodiversity, important when a lot of Vietnam's biodiversity exists in less developed and poverty-stricken areas of the country and around national parks. The idea was to improve the living standards of those living near protected areas, to remove incentives to illegally exploit animals and plants from those areas, and to positively incentivize sustainable use.[125]

The law was simplified in the final days of the drafting process. The Government decided to only provide a framework for biodiversity protection and to provide necessary details and further guidance through the issue of governmental decrees and regulations. The decision was made because a complete breakdown of competencies between ministries in one law proved to be impossible. In particular the Law on Forest Protection and Development as well as the Law on Fishery, both administered by the Ministry of Agriculture and Rural Development (MARD), already had a longstanding history in implementation and MARD also managed all established conservation areas. In addition,

120 John Copeland Nagle, "The Effectiveness of Biodiversity Law", Journal of Land Use and Environmental Law (2009), Notre Dame Legal Studies Paper No. 09-45, Vol. 24:2, pg. 230, available at: http://ssrn.com/abstract=150400. [Nagle 2009]
121 Jake Brunner (IUCN), "Preparation of Vietnam's Biodiversity Law: A review", draft (August 19, 2009), unpublished. [Brunner, BL Preparation Review 2009]
122 Ibid.
123 Ibid.
124 First-ever Biodiversity Law to include pro-poor conservation strategies, Ha Noi, 16 September 2008, UNDP press release, available at: http://www.un.org.vn/en/home/646.html?task=view.
125 UNDP press release, "First-ever Biodiversity Law to include pro-poor conservation strategies", Ha Noi (16 September 2008), available at: http://www.un.org.vn/en/home/646.html?task=view.

several "master plans" related to biodiversity (eg forest protection and development, inland water and sea conservation areas) were in place, the classification of conservation areas was already stipulated in different laws and regulations, and endangered species lists varied among laws.[126]

ELEMENTS OF THE LEGAL MEASURE

The Biodiversity Law, adopted in 2008, aimed to comply with international commitments in particular with respect to the Convention on Biological Diversity (CBD): In line with Vietnam's CBD commitments one of the main tenets was thus to harmoniously combine conservation with rational exploitation and use of biodiversity; and conservation and rational exploitation and use of biodiversity with hunger eradication and poverty alleviation (Article 4(2) Biodiversity Law).[127]

The Biodiversity Law established unified state management of biodiversity (Article 6(1)), as prior to 2008 biodiversity management was carried out through different laws, such as the Law on Environmental Protection, the Law on Forest Protection and Development and the Law on Fishery.[128] According to Article 6 of the Biodiversity Law, MONRE shall take responsibility within the Government for performing the state management of biodiversity (Article 6(2)). But also other ministries and ministerial-level agencies as well as the People's Committees shall perform the state management of biodiversity as assigned or decentralized by the government (Article 6(3) and (4)).[129]

Regarding Biodiversity Conservation Planning (Chapter II of the Biodiversity Law) the prime responsibility for organizing the formulation of a National Master Plan on Biodiversity Conservation as well as guiding its implementation is also assigned to MONRE, in cooperation with ministries and ministerial-level agencies (section 1, Articles 10, 11). In addition, the Biodiversity Law holds guiding principles as well as procedural requirements on biodiversity conservation planning of provinces and centrally-run cities (section 2, Articles 12-15).

The Biodiversity Law is the first Vietnamese law that provides a legal basis for the establishment and management of national and provincial conservation areas as well as for implementing payment for ecosystem services (PES) (Article 74) for all natural ecosystems. Moreover, it establishes different categories of conservation areas and their criteria (Articles 16-20), introduces the concept of zoning (strictly protected zones, ecological restoration zones and service administrative zone depending of the level of activities allowed, Article 26), buffers (Article 32) and corridors. Prior to the adoption of

[126] Compare Article 78 (Implementation detailing and guidance) of the Biodiversity Law; 4th Country Report: Vietnam's Implementation of the Biodiversity Convention (draft) (Ha Noi, 2008), pg. 28, available at: http://www.cbd.int/doc/world/vn/vn-nr-04-en.pdf. Compare also Vietnam: National Report on the Implementation of the Ramsar Convention on Wetlands, National Reports to be submitted to the 11th Meeting of the Conference of the Contracting Parties, Romania, June 2012, available at: http://www.ramsar.org/pdf/cop11/nr/cop11-nr-vietnam.pdf [Vietnam Ramsar Implementation Report 2012], pg. 11.

[127] Armelie Guignier, "Conserving Biodiversity and Sustaining Livelihoods in the Ba Be and Na Hang Complex- A legal perspective", Milestone Report 9.2, European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement No. 211392, Vietnam June 2011, pg. 16, available at: cdn.livediverse.eu/wp-content/uploads/2009/07/M-9.2-Vietnam.pdf [Guignier]; Phan Tuan Hung, Pham Xuan Phuong & et. al., "Legal Preparedness for REDD+ in Vietnam: Country Study" (IDLO, Rome: November 2011), available at: http://www.idlo.int/Publications/LegalPreparednessREDDVietNAm.pdf [IDLO Country Study Vietnam]; VN moves to protect biodiversity (April 9, 2009), Look At Vietnam, Vietnam News – Update 24/7, available at: http://www.lookatvietnam.com/2009/04/vn-moves-to-protect-biodiversity.html. [Look at Vietnam].

[128] Biodiversity Law Takes Effect July 2009, Crop Biotech Update (27 March 2009) available at: http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=3928.

[129] The Law and Policy of Sustainable Development Research Center (LPSD), "Project's Report: Review on Biodiversity Related Legislation and Responsibility of Ministries/ Line Ministries for Implementation", sponsored by the Japan International Cooperation Agency (JICA), Vietnam Office and with Technical Support from the Biodiversity Conservation Agency, Hanoi 2010. [LPSD, Demarcation between Ministries, 2010]

the Biodiversity Law different classification systems of natural conservation areas were stipulated in different laws, including the law on Forest Protection and Development, and the specific criteria attached to each category were only defined by regulations.[130] As a framework law several provisions contain principles or general rules and Article 78 calls for additional implementation guidance from the government.

LESSONS LEARNED IN IMPLEMENTATION

To date two decrees have been issued to implement the Biodiversity Law:

1. Decree No 65/2010/ND-CP dated 11 June 2010 on Detailing and Guiding a Number of Articles of the Biodiversity Law[131];

2. Decree No 69/2010/ND-CP dated 21 June 2010 on Biosafety.[132]

Furthermore, MONRE is currently developing two government decrees on: (1) Sanctioning Administrative Violations to Biodiversity and (2) Management of Species in the Endangered Species Lists. The Ministry is also preparing two Regulations to submit to the Prime Minster for approval: (1) Regulation of Natural Conservation Areas Management and (2) Prevention and Control of Invasive Species to 2012.[133]

The 2010 Decree on Detailing and Guiding a Number of Articles of the Biodiversity Law details and guides the implementation of provisions regarding biodiversity conservation planning, conservation zones, conservation and sustainable development of organisms and conservation and sustainable development of genetic resources (Article 1). Most importantly, the Decree further clarifies the breakdown of competences between provincial People's Committees, MARD and MONRE. Provincial-level People's Committees shall manage conservation zones "located within the localities under their management". The allocation of responsibility between MARD and MONRE only happens in cases where protected areas are located within 2 or more provinces: MARD will have responsibility for establishing and managing projects taking place in special-use forests or sea areas located in 2 or more provinces. MONRE is in charge of the creation and management of projects taking place in wetlands, limestone mountains and unused land areas and areas with mixed ecosystems located in 2 or more provinces.[134]

However, even after the adoption of the Decree on Detailing and Guiding a Number of Articles of the Biodiversity Law the delegation of responsibilities in particular between MONRE and MARD remains at least partly unclear.[135]

The Decree on Detailing and Guiding a Number of Articles of the Biodiversity Law also stipulates that MONRE shall particular set up an intersectoral appraisal council that shall take responsibility for the contents and feasibility of a National Master Plan on Biodiversity Conservation. The intersectoral appraisal council is composed of 9 members,

[130] IDLO Country Study Vietnam; Guignier, pg. 17, 18; Vu Thu Hanh, Patricia Moore & Lucy Emerton, "Review of Laws and Policies Related to Payment for Ecosystem Services in Viet Nam" (date unknown), IUCN publication, available at: http://cmsdata.iucn.org/downloads/080310_pes_vn_legal_review_only_legal_sections_final.pdf.

[131] Socialist Republic of Vietnam, the Government, Decree No. 65/2010/ND-CP of June 11, 2010, Detailing and Guiding a Number of Articles of the Biodiversity Law, available at: http://kenfoxlaw.com/resources/legal-documents/governmental-decrees/2459-vbpl.html.

[132] The liabrary of laws, available in Vietnamese at: http://thuvienphapluat.vn/archive/Nghi-dinh-69-2010-ND-CP-an-toan-sinh-hoc-sinh-vat-bien-doi-gen-mau-v-vb107700.aspx

[133] Ministry of Natural Resources and Environment "National Report on Biodiversity in Vietnam", 2011.

[134] Guignier, pg. 17. The draft of the first Decree mentioned is currently available online for public comment: http://bit.ly/voR4JN.

[135] LPSD, Demarcation between Ministries, 2010; Vietnam Ramsar Implementation Report 2012, pg. 11; Preservation of Biodiversity in Forest Ecosystems in Viet Nam, GIZ Vietnam, Management of Natural Resources (2010), available at: http://www.giz-mnr.org.vn/index.php?option=com_content&task=view&id=217&Itemid=78.

including the chairman being a leader of MONRE, and members being department-level representatives of the Ministries of Planning and Investment; MONRE; MARD; Science and Technology; Culture, Sports and Tourism; and Health, and a number of biodiversity specialists (Article 3(2)).

To support further implementation guidance and the development of further decrees and regulations different projects and programs were initiated with the support of different stakeholders:

1. **UNDP Project: Removing Barriers Hindering Protected Area Management Effectiveness in Viet Nam.** Executing Agency: MONRE, Implementing Agency: Vietnam Environment Administration. Co-implementing agencies include MARD and National Parks, Duration: 2010-2015. The objective is to secure a sustainably financed protected area system to conserve globally significant biodiversity (Article 73 Biodiversity Law. Finances for biodiversity conservation and sustainable development) and barriers have been identified with respect to the institutional, policy and legal framework of protected areas in Vietnam.[136]
2. **Project for the Support to the development of a Plan on implementing the Law on Biodiversity from 2009 to 2014**. Law and Policy of Sustainable Development Research Center (LPSD), sponsored by the Japan International Cooperation Agency (JICA) in Vietnam.[137]
3. IUCN Vietnam, Marine and Coastal Resources Programme – **Supporting the government target of establishing 15 Marine Protected Areas by 2015** according to the procedure set out in the Biodiversity Law (chapter 2, section 1: Conservation Areas).[138]
4. **Establishment of a biodiversity corridor in three central provinces of Quang Nam, Quang Tri and Thua Thien-Hue**. The Vietnam Environment Administration officially launched the largest ever biodiversity conservation project on January 12, 2012, aiming to establish a biodiversity corridor in three central provinces. Based on the experience in the implementation of the project the Agency aims to draft an implementing decree to the Biodiversity Law on biodiversity corridors.[139]
5. **Project: Preservation of Biodiversity in Forest Ecosystems in Viet Nam**. Cooperation Federal Republic of Germany & Socialist Republic of Vietnam, overall duration 08/2010 – 07/2020: The project provides institutional and policy advice to the central government as well as directly to the protected areas (pilot areas) and their provincial government. Innovations implemented in the pilot areas will

[136] UNDP Vietnam, Project Details, "Removing Barriers Hindering Protected Area Management Effectiveness in Viet Nam", http://www.undp.org.vn/detail/what-we-do/project-details/?contentId=3799&languageId=1. Compare also Guignier, pg. 17 and Vietnam Ramsar Implementation Report 2012, pg. 10.

[137] Law and Policy of Sustainable Development Research Center (LPSD), "National Workshop on Implementation of Law on Biodiversity", http://l-psd.org/eng/?detail:69:NATIONAL-WORKSHOP-ON-IMPLEMENTATION-OF-LAW-ON-BIODIVERSITY.html and Development Projects, "The Support to the development of Plan on implementing Law on Biodiversity from 2009 to 2014", http://l-psd.org/eng/?detail:89:The-Support-to-the-development-of-Plan-on-implementing-Law-on-Biodiversity-from-2009-to-2014.html (both accessed 28/09/12).

[138] Compare IUCN, Fact sheet (date unknown), online: http://cmsdata.iucn.org/downloads/iucn_fact_sheet_20112008.pdf.

[139] Vietnamnet, "Biodiversity corridor to benefit central provinces", Environment, 14 January 2012, http://english.vietnamnet.vn/en/environment/17675/biodiversity-corridor-to-benefit-central-provinces.html. Compare also Law and Policy of Sustainable Development (LPSD), "Developing Draft of Biodiversity Corridor", LPSD news, (2008), http://l-psd.org/eng/?detail:51:developing-Draft-of-Biodiversity-Corridor.html; Law and Policy of Sustainable Development (LPSD), "Project of Core Environment Program - Biodiversity Corridor Initiative phase 1", Development Projects, 20072008, http://l-psd.org/eng/?detail:83:Project--of-Core-Environment-Program---Biodiversity-Corridor-Initiative-phase-1.html.

serve as references for institutional and policy advisories, thereby contributing to new regulations that can generate change in the entire system.[140]

CONCLUSION

The Biodiversity Law of 2008 provides a leading example of a framework biodiversity law that incorporates an approach to biodiversity protection that recognizes the interdependence of ecosystems. Ambitions for the Law of Biodiversity to include specific provisions on pro-poor principles and corridor conservation were not met due to political exigencies during the drafting process. However, the framework law has been successful in raising awareness amongst both the public and government officials of biodiversity-related issues and the need for a coordinated approach to protect the rich biodiversity in Vietnam. Upon the passing of the Law, Vietnam has successfully attracted the interest of international development and technical assistance agencies to partner for programs to assist in implementing the Law. Further, the Government of Vietnam itself has launched several ambitious projects that will provide lessons to inform the drafting of implementing decrees and regulations, especially to further clarify the division of competencies between MONRE and MARD. Ultimately, biodiversity protection in Vietnam is evolving through a process of "learning by doing" with the general principles set out in the framework law and implementation occurring through a cycle of lessons learned from pilot programs feeding into the drafting of new decrees and regulations.

[140] Cooperation Federal Republic of Germany & Socialist Republic of Vietnam, News and Events, Protection of Natural Resources, Preservation of Biodiversity in Forest Ecosystems in Viet Nam http://www.giz-mnr.org.vn/index.php?option=com_content&task=view&id=217&Itemid=78 (accessed on 28/09/12). Compare also the recent stakeholder consultation workshop: http://www.giz-mnr.org.vn/index.php?option=com_content&task=view&id=269&Itemid=9 and Vietnam Ramsar Implementation Report 2012, pg. 10.

ANNEX 6: LEGAL BRIEF
Target 6 Sustainable Aquatic Harvesting
Kenya, Fisheries (Beach Management Units) Regulations, 2007

Authors: Ms. Zipporah Nyambura, International Development Law Organization, and Ms. Aline Jaeckel, Centre for International Sustainable Development Law/University of New South Wales

KEY MESSAGES:

- Co-management of fisheries by local communities and the government can be institutionalised through local fisheries management committees, such as Beach Management Units.
- Co-management is based on the empowerment of local communities as stewards of aquatic resources to manage fisheries on behalf of present and future generations
- Beach Management Units, through the adoption of co-management plans and by-laws, address several matters relevant to Aichi Target 6, including legal measures to prevent overfishing
- Successes in Kenya include a decrease in the use of destructive fishing gear, increased vertical and horizontal linkages of relevant institutions, significantly expanded community participation, and higher levels of compliance
- Further capacity-building is necessary to fully utilize the co-management system, account for social and economic factors hampering success, and achieve a significantly improved situation for aquatic biodiversity
- With the main focus in Kenya being on inland fisheries, further adjustments are necessary to adapt the co-management system to coastal fisheries

INTRODUCTION

Responding to declines in fish stocks and decreasing aquatic biodiversity, Kenya has established an innovative system to co-manage freshwater and marine fisheries through representative Beach Management Units. The aim is to integrate local and national management, making use of both traditional knowledge and scientific findings. Beach Management Units (BMUs) bring together everyone involved in fisheries on a local level (fishermen, boat owners, boat crew, traders, processors, boat builders and repairers, net repairers and others[141]) and constitute the link between local fishing communities and the government, thus, facilitating co-management of fisheries.

BACKGROUND

Historically, fisheries in Kenya had been managed locally using traditional knowledge.[142] Following independence, the Kenyan government took over fisheries management and implemented a top-down approach to manage natural resources with little input from local stakeholders.[143] This led to a decline in fish stocks with some local fisheries almost

[141] Fisheries (Beach Management Units) Regulations, 2007, Section 10.
[142] Vincent O Ogwang, Timothy Odende and Roseline Okwach (Department of Fisheries), National Beach Management Unit Guidelines (January 2006), at p 5.
[143] Cinner et al., "Toward institutions for community-based management of inshore marine resources in the Western Indian Ocean" (2009) 33(3) *Marine Policy* 489-496 at 490.

collapsing.[144] Central problems included use of illegal and/or destructive fishing gear, environmental degradation, and cross border fishing conflicts.[145]

The Fisheries Act 1989 was marked by a lack of enforcement capacity as well as overlapping administrative competences between various authorities for fisheries, wildlife protection, and forestry.[146] Further tensions existed between different fisheries management levels, including the government, municipalities, and traditional leaders. One of the underlying reasons for its shortcomings was the perception that fisheries resources belonged to the government, leading to the disengagement of local communities.[147]

To overcome this situation, Kenya undertook a shift towards co-management accompanied by a new perception of ownership of natural resources as common property held in trust for present and future generations. Using co-management as a central element of fisheries management was advocated by the Lake Victoria Fisheries Organization in the mid-1990s through its regional approach.[148] Following this advice, Kenya created a system of co-management through BMUs, which aim to combine elements from all management levels in a common, participatory approach.[149] Its essence is to create a link and a partnership between the government level and artisanal fishermen.[150] The main advantage is that BMUs allow the knowledge and understanding of all stakeholders to be reflected in decision-making and their diverse capacities harnessed for implementation.[151] Through the institutionalised inclusion of traditional knowledge in fisheries management, BMUs essentially replace the traditional role of elders at landing sites.[152] The legal empowerment of local communities has been suggested as a solution to overexploitation and aims to implement an ecosystem approach to fisheries management resulting in sustainable use of fisheries resources.[153]

ELEMENTS OF THE LEGAL MEASURE

The Fisheries (Beach Management Units) Regulations define the objectives of co-management Beach Management Units as the following[154]:

(a) strengthen the management of fish-landing stations, fishery resources and the aquatic environment;

(b) support the sustainable development of the fisheries sector;

(c) help alleviate poverty and improve the health, welfare and livelihoods of the members through improved planning and resource management, good governance, democratic participation and self-reliance;

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144 Ogwang, Odende and Okwach, supra at p 1.
145 Ministry of Fisheries Development, online: http://www.fisheries.go.ke/index.php?option=com_content&task=view&id=51&Itemid=76.
146 Evanson Chege Kamau, Andrew Wamukota and Nyawira Muthiga, "Promotion and Management of Marine Fisheries in Kenya" in Gerd Winter (ed) *Towards Sustainable Fisheries Law: A Comparative Analysis* (IUCN, 2009) 83-138 at p 83.
147 Ministry of Fisheries Development, online: http://www.fisheries.go.ke/index.php?option=com_content&task=view&id=51&Itemid=76.
148 Obote Ochieng, "Comparative capitalism and sustainable development: Stakeholder capitalism and co-management in the Kenyan fisheries sub sector" at p 73.
149 Gert Winter, "Towards a Legal Clinic for Fisheries Management" in in Gerd Winter (ed) *Towards Sustainable Fisheries Law: A Comparative Analysis* (IUCN, 2009) 299-338 at p 305.
150 Kamau, Wamukota, and Muthiga, supra at p 119.
151 Ogwang, Odende and Okwach, supra at Section 3.3.
152 Kamau, Wamukota, and Muthiga, supra at p 199.
153 Kenyan Ministry of Fisheries Development, online: http://www.fisheries.go.ke/index.php?option=com_content&task=view&id=51&Itemid=2
154 Fisheries (Beach Management Units) Regulations, 2007, Section 3(3).

(d) recognise the various roles played by different sections of the community, including women, in the fisheries sector;

(e) ensure the achievement of high quality standards with regard to fish and fishery products;

(f) build capacity of the members for the effective management of fisheries in collaboration with other stakeholders; and

(g) prevent or reduce conflicts in the fisheries sector.

Institutional and Regulatory Design

Under the Regulations, BMUs have exclusive management rights over fish landing sites and consist of an assembly, an executive committee, and may have sub-committees.[155] They are required to provide data on catches[156] and develop co-management plans to ensure sustainable fisheries in that area. These management plans must be approved by the Director of Fisheries and may include measures such as closing areas for fishing, and restricting fishing gear and the number of fishing vessels.[157] BMUs are expressly required to protect the aquatic environment and cooperate with authorities to that effect.[158] BMUs put their management plans into effect through by-laws, which are developed by each Unit and approved by the Director of Fisheries. Such by-laws must comply with existing legislation but may go beyond its requirements on environmental and biodiversity protection.[159]

BMUs possess certain law-enforcement powers with regard to gear regulations, registration of vessels, and protection of fishing grounds. Monitoring the performance of BMUs is conducted both by the Unit itself[160] as well as by external, authorized fisheries officers in six month intervals.[161] BMUs can receive funding from the Ministry of Fisheries Development, or generate their own income through membership fees, taxing migrant fishers, or vessel registration fees.[162]

In parting with the previous top-down approach in Kenyan fisheries law, the Regulations create both vertical and horizontal institutional linkages. Nonetheless, the overall responsibility of monitoring and supervising BMUs is still vested with the Ministry of Fisheries Development.[163]

Environmental Stewardship

In this new approach stakeholders become the stewards of aquatic resources and are, thus, actively involved in decision making, implementation, and monitoring processes.[164] Such a system of co-management is a paradigmatic shift of ownership and fisheries resource management in Kenya.[165] The Government Guidelines explicitly recognise that:

> The fisheries resources of Kenya and the waters within which they are found are a common property shared in utilization by the people of Kenya. These resources are held in trust by the government on behalf of the present and future generation as is

[155] Ibid at Section 4.
[156] Ibid at Section 6(2).
[157] Ibid at Section 7(4).
[158] Ibid at Section 8(1).
[159] Ibid at Section 8(2).
[160] Ibid at Section 26(d).
[161] Ogwang, Odende and Okwach, supra at p 23.
[162] Fisheries (Beach Management Units) Regulations, 2007, Section 28.
[163] Cinner et al., supra at p 491.
[164] Ministry of Fisheries Development, online: http://www.fisheries.go.ke/index.php?option=com_content&task=view&id=51&Itemid=76.
[165] Ochieng, supra at p 73.

enshrined in the county's constitution. The economic and livelihood gain of the resource to the fishing community cannot be overemphasized and as such their participation in the management, as owners of the resource, is paramount.[166]

LESSONS LEARNED IN IMPLEMENTATION

Successes

The regional promotion of BMUs has been successful, with Lake Victoria alone (shared between Kenya, Uganda and Tanzania) having 1,087 registered Beach Management Units.[167]

Within Kenya, the integration of traditional and formal institutionalised fisheries management through BMUs is seen as a lasting solution[168] which has had positive impact on enforcement and compliance.[169] The Kenyan government has observed a reduction in use of destructive fishing gear, a 40% reduction of harvesting of undersize fish, and an emerging sense of ownership of the resources by the communities.[170] It also reports that several BMUs have established compliance committees and are carrying out independent patrols without government support.[171] In Kuruwitu for instance, four members of the Beach Management Unit are responsible for simultaneously patrolling a small marine park established by the community.[172]

Furthermore, Kenya's new Constitution promotes increased authority at local levels. Moreover, it introduces a bill of rights[173] including the universal right to a clean and healthy environment.[174]

Remaining challenges

Local communities have been found to fill some gaps in the regulatory design outside the legal framework. First offences are often dealt with by warnings or within a community, even though there is no legal requirement to do so.[175] Actual enforcement capacity lies primarily with the provincial administration, although there are cases of members apprehending someone who is violating the rules.[176] However, insufficient capacities, skills, and experience have hampered many Beach Management Units from effectively managing marine resources.[177] Thus, capacity building is required to fully implement the co-management system.

In the coastal context, problems exist with access to beaches through the beach buffer zone, between the high water mark and privately developed land. This zone has often been "illegally possessed or encroached on by private developers", denying public access

[166] Ogwang, Odende and Okwach, supra at Section 3.
[167] Lake Victoria Fisheries Organization, online: http://www.Lake Victoria Fisheries Organization.org/index.php?option=com_content&view=article&id=53&Itemid=59.
[168] Kamau, Wamukota, and Muthiga, "Promotion and Management of Marine Fisheries in Kenya", supra at p 84.
[169] Ochieng, supra at p 73-74.
[170] Ministry of Fisheries Development, online: http://www.fisheries.go.ke/index.php?option=com_content&task=view&id=51&Itemid=76.
[171] Ibid.
[172] Cinner et al., supra at p 491.
[173] UNDP, *Towards Transformational Change, 2011 Annual Report on Kenya*, online: www.ke.undp.org/index.php/downloads/download/31
[174] The Constitution of Kenya, 2010, Article 42, online: http://www.kenyalaw.org/klr/fileadmin/pdfdownloads/Constitution_of_Kenya__2010.pdf
[175] Cinner et al., supra at p 494.
[176] Cinner et al., supra at 491.
[177] Stephen J Oluoch, D Obura and A Hussein, "The Capacity of Fisherfolk to Implement Beach Management Units in Diani-Chale", in Jan Hoorweg and NyawiraMuthiga (eds), *Advances in Coastal Ecology: People, Processes and Ecosystems in Kenya* (2009) 20 African Studies Collection (African Studies Centre Leiden), pp 99-108, at 106, available at https://openaccess.leidenuniv.nl/bitstream/handle/1887/14005/ASC-070744769-134-01.pdf?sequence=2 (last accessed 4 October 2012).

to the beach and its Beach Management Units.[178] As Musa *et al* highlight, "this conflict, coupled with corruption has compounded the problem of non compliance and inadequate enforcement of the laws."[179] Therefore, rights over coastal land need to be addressed together with the management of marine resources.[180] A new land policy in Kenya may bring potentially positive changes and so is a welcome first step.[181]

Further challenges for Beach Management Units include: Poor infrastructure and market access for fisheries produce[182]; conflicts over access to fisheries resources between small or artisanal fishers and large-scale operators[183]; low rates of women participation especially in executive positions of BMUs[184]; and social and health problems in fisheries communities, including HIV/AIDS and waterborne diseases, which are compounded by a lack of adequate health facilities for fisheries communities[185]. Moreover, Hara and Nielsen highlight the influence of the macroeconomic situation of African countries. They conclude that poverty often generates a focus on short-term economic gain for local fisheries communities, which can impede the success of co-management.[186] Thus, fisheries management cannot be separated from economic development issues.[187] Similarly, the success of co-management is hampered by BMUs struggling to secure loans and adequate funding[188] and by the Fisheries Department being unable to properly supervise, administer, and regulate Beach Management Units due to inadequate levels of funding and delays in funds disbursement.[189]

Identifying several challenges for sustainable fisheries management by Beach Management Units at Lake Victoria, Ogwang *et al* highlight illegal fishing methods and enforcement of the closure of nursery grounds.[190] Moreover, they list pollution and environmental degradation as major problems, ranging from deforestation, siltation, low standards of hygiene and sanitation at the landing sites, to effluent from factories and urban areas, and chemical run-off from agriculture.[191] Having made their assessment in 2008, Ogwang *et al* envisaged improvements in compliance and awareness from co-management structures.[192]

CONCLUSION

The Fisheries (Beach Management Units) Regulations address a range of actions necessary to achieve Aichi Target 6, including:

[178] Fatuma Musa *et al*, *Building Capacity for Coastal Communities to Manage Marine Resources in Kenya* (Outcome of Coastal Community Workshops organised by IUCN, the Coastal Oceans Research and Development-Indian Ocean (CORDIO), and the East African Wild Life Society (EAWLS) in 2007/2008), available at http://cmsdata.iucn.org/downloads/bmus2.pdf (last accessed 4 October 2012).
[179] Ibid.
[180] Kate Lee, *Kenya: Community-based marine area holds some important lessons for policy makers* (International Institute for Environment and Development, 14 November 2011), available at http://www.iied.org/kenya-community-based-marine-area-holds-some-important-lessons-for-policy-makers (last accessed 4 October 2012).
[181] Ibid.
[182] Interviews with Nancy Gitonga (Currently Fisheries Consultant, Fish Africa, Kenya; Former Director of the Department of Fisheries, Ministry of Fisheries Development) on 13 and 25 September 2012, Susan Imende (Assistant Director, Department of Fisheries, Ministry of Fisheries Development) on 13 September 2012, and Timothy Odende (Principal District Fisheries Officer, Busia District) on 10 and 13 September 2012.
[183] Ibid.
[184] Ibid.
[185] Ibid.; See also Ogwang, Nyeko and Mbilinyi, supra at p 53.
[186] Mafaniso Hara, Jesper Raakjaer Nielsen, 'Experience with Fisheries Co-management in Africa', in Douglas Clyde Wilson, Jesper Raakjaer Nielsen and Poul Degnbol (eds), *The Fisheries Co-management Experience: Accomplishments, Challenges, and Prospects* (2010, Springer) pp 81-98, at pp 87-88.
[187] Ibid at p 88.
[188] Interviews with Nancy Gitonga (Currently Fisheries Consultant, Fish Africa, Kenya; Former Director of the Department of Fisheries, Ministry of Fisheries Development) on 13 and 25 September 2012, Susan Imende (Assistant Director, Department of Fisheries, Ministry of Fisheries Development) on 13 September 2012, and Timothy Odende (Principal District Fisheries Officer, Busia District) on 10 and 13 September 2012.
[189] Ibid.
[190] Ogwang, Nyeko and Mbilinyi, supra at p 53.
[191] Ibid at p 54.
[192] Ibid at p 53.

- The protection and promotion of involvement of local communities and traditional knowledge
- Legal measures to prevent overfishing
- Regulation of destructive fishing techniques
- Implementing recovery plans and temporary closures of certain areas for fishing
- Increasing coordination between various governance levels

However, the central element of the Fisheries (Beach Management Units) Regulations is co-management, making the extent of the measures and the success in implementing them essentially dependent on the rigour of local BMUs. While implementation issues remain, the Regulations create a system enabling the incorporation of traditional knowledge into fisheries management, and sense of ownership for the long-term sustainability of fisheries.

ANNEX 7: LEGAL BRIEF
Target 6 Sustainable Aquatic Harvesting
New Zealand, Fisheries Act (Quota Management System), 1996

Author: Mr. Mark Christensen, IUCN Environmental Law Commission

KEY MESSAGES:

- Quota Management Systems can promote sustainable fish harvesting aligned with Aichi Target 6, compared to traditional "open season" approaches.
- Fish stocks can be maintained at sustainable levels by annually setting maximum catch levels by species and harvest area, and allocating quotas through individual transferable shares.
- Applying administrative levies for excess harvests can act as an effective deterrent, compared to criminal offence approaches.
- Quota Management Systems must account for indigenous rights, particularly related to prior claims for resource harvesting.
- Practical challenges remain in calculating sustainable yield levels and allocating quotas.
- Effects of fisheries on seabirds and marine life and habitats remain to be addressed.

INTRODUCTION

The New Zealand Quota Management System (QMS), created in 1986 and administered under the *Fisheries Act* 1996, contributes to achieving Aichi Target 6 by offering an alternative to traditional "open season" approaches to fisheries through a system that allocates annually defined individual allowable catch limits to ensure long-term sustainable fish populations. New Zealand currently has 100 species or species groups subject to the QMS, each managed independently to ensure sustainable utilisation of that fish stock.

Individual Transferable Quota (ITQ)-based systems like the QMS are used in a number of countries.[193] However, to date no other country has used an ITQ-based management system as extensively as New Zealand, where the QMS is used to manage all significant commercial species. Many lessons learned can be drawn from the essential elements of the QMS created in 1986, and the revisions and enhancements to the mechanisms and administrative procedures of the QMS made since.

BACKGROUND

Historically, controls on the level of New Zealand fishing were based on an 'open-season' approach, whereby regulations were based on limiting the number of boats allowed to fish, the days and time of year they could do so, and the means by which fish were caught. By the 1980's, dwindling inshore stocks and too many boats resulted in many species of

Box 1: Important Acronyms:

QMS:	Quota Management System
MSY:	Maximum Sustained Yield
BMSY:	Biomass Maximum Sustained Yield
TAC:	Total Allowable Catch
TACC:	Total Allowable Commercial Catch
QMA:	Quota Management Area
ITQ:	Individual Transferable Quota
ACE:	Annual Catch Entitlement

[193] Including Australia, the U.S.A. and Iceland.

commercial fish declining below sustainable levels. There was a clear need to reduce catches to levels which would enable fish stocks to recover in size in order to provide optimum long-term sustainable yields to be taken by the most efficient means.

In addition, the development of New Zealand's deep water fisheries during the late 1970's and early 1980's provided the economic driver to introduce a more effective fishing regime. The declaration of New Zealand's 200 mile Exclusive Economic Zone (EEZ) in 1978 made it one of the largest in the world, and was primarily explored and developed through the fishing capabilities of countries such as Japan, Korea and the USSR. By the early 1980's, the level of investment in the deep water fisheries by New Zealand companies (through joint venture operations, investment in vessels, onshore plant and market development) along with the dwindling fish stocks, provided a clear need for a comprehensive management regime which would allow for further development, provide for resource conservation and maximise the economic benefits to New Zealand.

In October 1986, after two years of consultation and planning, the QMS was introduced, with widespread industry support and cooperation. The QMS represented radical new thinking, and a shift from the traditional belief that the sea was full of fish and that fish stocks could not be adversely affected by fishing. Importantly, the Fisheries Act and the QMS is not seen by the government as a 'biodiversity' law in itself, even though it is the primary mechanism for fisheries management and sustainable use. Thus, the QMS, as one tool of the Fisheries Act needs to be considered alongside other mechanisms available in the Fisheries Act[194], and other legislation which deal more specifically with environmental considerations.[195]

ELEMENTS OF THE LEGAL MEASURE

The QMS is a tool under the Fisheries Act 1996 and seeks to ensure the sustainability of New Zealand's fishery stocks and to provide for the economic efficiency of the seafood industry[196]. The purpose of the Fisheries Act 1996 is to provide for the utilisation of fisheries resources while ensuring sustainability.[197] Ensuring sustainability in this context means (a) maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and (b) avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment.[198]

The QMS introduced a system based on Individual Transferable Quota (ITQ). ITQ-based systems are used to ensure sustainable utilisation of fisheries resources through direct control of harvest levels for each species in a nominated geographical area. Each fish species in the QMS is subdivided into separate fish stocks that are defined by Quota Management Areas (QMAs).

To ensure sustainable utilisation, regulators must understand the biological characteristics of the fish stock concerned, and must determine the spatial scale that species are managed at (and how adjustments are made to these areas), the process for setting sustainable harvest levels, and the allocation of catch between the different fishing sectors. Each of these issues is central to the system and strongly influences its success in ensuring fish stock sustainability.

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194 Such as the making of regulations – eg the *Fisheries (Benthic Protection Areas) Regulations 2007*, the *Fisheries (Commercial Fisheries) Regulations 2001*, the *Fisheries (Seabird Scaring Devices Minimum Standard and Procedures) Notice 2007*, the *Seabird Scaring Devices Circular 2010*, and the sustainability mechanisms available when setting of a Total Allowable Catch under the *Fisheries Act 1996*, s. 11.

195 Such as the *Marine Mammals Protection Act 1978*, the *Wildlife Act 1953* and the *Marine Reserves Act 1971*.

196 Online: http://www.fish.govt.nz/en-NZ/commercial/Quota+Management+System.

197 *Fisheries Act 1996*, s. 8(1).

198 *Ibid*, s. 8(2).

Step 1: Allocating Quota

When the QMS was introduced, the allocation of quota was determined by the Ministry of Fisheries on the basis of: (a) catch history over a defined period; (b) the commitment of commercial operators; and (c) their dependence on the fishing industry. Since 2004, for any new species which are declared to be subject to the QMS, there are two bases for allocation of quota[199]:

a. For tuna and highly migratory species inside New Zealand waters, and for certain listed fish stocks brought into the QMS before 1 October 2009, on the basis of a provisional catch history; and,

b. For all other stocks, 80% are allocated to the Crown and 20% are allocated to Te Ohu Kai Mouna Trustee Limited[200]. The shares allocated to the Crown are then subject to an open tender process.

Step 2: Ensuring Sustainable Harvesting by Setting Maximum Sustainable Yields (MSY)

Under the QMS, the Minister of Fisheries is responsible for ensuring that fish stocks are maintained at or above a level that can produce the Maximum Sustainable Yield (MSY)[201]. This means that controls must be set so that the biomass level can support the maximum sustainable yield (BMSY) which provides the conditions to maximise the yield of the fishery without compromising sustainability.

Step 3: Setting Total Allowable Catch (TAC) Levels per Species and Area

Under the Fisheries Act, the Minister of Fisheries is required to establish sustainable catch levels for each fish stock[202]. For each stock, a Total Allowable Catch (TAC) is set, usually with reference to maintaining the biomass at or above a level which can produce a maximum sustainable yield. The MSY thus forms the basis of the TAC set by the Minister. The Minister is required to set the TAC at a level which ensures that the fish stock will remain at a stock size that is able to sustain the MSY or will allow the stock to move back towards sustainability. If numbers fall too low, the TAC should be reduced. Before harvest levels can be identified, the Quota Management Areas (QMA) for each species must be selected. Each QMA is species-specific, and most correspond to one or more of the 10 Fisheries Management Areas which form New Zealand's EEZ.

Step 4: Setting Total Allowable Commercial Catch (TACC)

Further, for commercial fishing, a Total Allowable Commercial Catch (TACC) is set per fish stock within a QMA by the Minister. The TACC is a subset of the TAC, set after allowances are made for non-commercial fishing interests. Most deep water fisheries are now considered to be fully developed requiring clear TACCs for fish stocks to set at or about the MSY levels. Most of the inshore fisheries are now considered to be in a healthy state, with stocks recovering to levels at or near to those which are able to produce the MSY.

Step 5 Allocating Allowable Catch Entitlement (ACE)

The ITQ gives rise to an Allowable Catch Entitlement (ACE) each year for each ITQ owner. Owners of ITQ are entitled to a yearly ACE, which is essentially the proportion of the TACC that quota-owner is entitled to catch. The ACE was introduced in 2001 and is

[199] Ibid, s. 29A
[200] Ibid, s. 29B. This is a requirement of the settlement of Maori Fishing claims.
[201] Ibid, s. 13; *Fisheries Act 1983*, s. 28D (amendment).
[202] *Fisheries Act 1996*, Part 3

assigned to quota holders based on the share of total quota they hold (expressed in shares) and the TACC. Once the TACC has been set, the kilogram equivalent is calculated and transferred to the quota owner as ACE[203]. This determines the tonnage of fish that the quota owner is able to catch within the next fishing year. The ACE may be bought and sold, and fluctuates depending on whether the TACC is increased or decreased based on the health of the fishery.

The introduction of ACE was not a radical departure from the existing system, however, it allowed for clear separation between the right to harvest a specific amount in a particular year and the ownership of the resource in the future, as a person can hold ITQ in perpetuity and sell or trade their ACE for a particular year.

Special Considerations:

a) Monitoring and enforcement

A very strict reporting and documentation procedure is set out within the Act, which requires commercial fishers to progressively count their catches against their quota[204]. The Ministry has developed a system which tracks the flow of fish from the fisher to the purchaser, and then reconciles this information with the fishers' quota and catch entitlement. This includes a requirement that all commercial catch must be landed to a licensed fish receiver (with limited exception such as wharf sales), who must submit reports to the Ministry for Primary Industries. All dealers in fish (eg supermarkets), must purchase fish from a licensed fish receiver, and they must keep records of all purchases. This system requires detailed documentation, and reporting from fishers and commercial buyers of fish. Quota management reports are required to be completed monthly by all commercial fishers, and Catch and Effort Landing Returns are required to be completed at the end of each trip, detailing the location, species and quantities. This allows for the balancing of catch against ACE and the application of deemed values (interim and annual).

b) Restricting Foreign Ownership

When the QMS was first introduced in 1986, only New Zealanders or New Zealand-owned companies could own fishing quota and foreign ownership of shares in New Zealand quota-owning companies was strictly limited. However quota holders could lease foreign vessels to catch their allowance on their behalf. With the introduction of the 1996 *Fisheries Act*, some exemptions are now possible which gives some foreign companies the right to own both quota and ACE. However, in order to obtain quota and ACE, overseas companies must get the approval of the Ministers of Primary Industry and Finance and the Overseas Investment Commission. They will only get this approval if it can be demonstrated that New Zealand will benefit from the exchange.[205] If New Zealand ceases to benefit from any exemption granted, ownership of, or interest in, quota and ACE can be taken away from foreign companies without any compensation being offered.[206]

c) Facilitating Quota Trading

The efficiency benefits associated with trade within ITQ-based systems are well identified[207]. However, in practice, the quota trading process is complicated. In the 1996 *Fisheries Act* itself there are nearly fifty sections dedicated to quota trading and its

[203] Ibid, s.67
[204] Ibid, s. 76
[205] Ibid, ss. 56 – 57.
[206] Ibid, s. 58.
[207] S. Kerr, R.G. Newell, and J.N. Sanchirico, "Evaluating the New Zealand Individual Transferable Quota Market for Fisheries Management", Motu Economic and Public Policy Research Trust, March 2003.

surrounding issues.[208] Under the QMS, individuals holding quota are free to sell it as they wish. No pre-trade approval is required and there is no limit on the number of times that the quota can be sold, however all trades that occur must be registered before the buyer is able to use the quota. The quota is divisible so that quota owners can trade parts of their quota. To facilitate effective trades both centralised quota trading exchanges and brokers have been used.

LESSONS LEARNED

Moving from Criminal Offences to Economic Incentives

The new catch-balance regime introduced an administrative regime to replace a criminal offence regime. It relies on financial disincentives to stop fishing in excess of quotas. The need to develop mechanisms that allow fishers to deal with either excess catch of species for which they hold quota or the unintentional catch of species for which they do not hold quota was recognised in the 1990's. However it was also recognised that a balance needed to be reached where fishers have access to mechanisms through which they can cover unintentional catch, but which do not encourage them to intentionally exceed their fishing entitlements, and, thus, prevent sustainability goals from being achieved.

In order to address these issues, a new catch-balance regime was implemented in October 2001. Under the new regime, fishers can sell or transfer their ACE to other fishers. Fishers must report their catch and are required to obtain ACE to cover any excess catch, or pay the deemed value, which is a price paid per kilogram of catch for which the fisher holds no ACE. This provided options – either a fisher could obtain ACE before they went out, obtain it after they had taken the catch or pay the deemed value to cover the catch[209]. The deemed value is generally set higher than the value of the catch to the fisher. This is designed to encourage fishers to obtain ACE to cover their catch rather than pay the high deemed value.

The change to the catch-balance regime represented a major shift from a criminal offence based regime to an administrative regime based on economic incentives. It is no longer an offence to catch in excess of the ACE. Rather the deemed value acts as the primary deterrent to fishers taking excess to the ACE. If a deemed value is not paid, a fisher's permit is suspended and fishing without a permit is a serious criminal offence, with fines of up to $250,000 and forfeiture of vessel and quota, and even the possibility of a prison sentence.

Respecting Indigenous Rights

The biggest change since the QMS was introduced in 1986 has been the emergence of Māori, the indigenous peoples of New Zealand, as a major industry player. Given the nature of the system, when an ITQ based system is introduced to manage a resource, the access to its use becomes restricted (by law or by economics) to individuals holding quota. This raises the potential for conflict if there are individuals who have a prior claim to the use of the resource.

The introduction of the QMS assumed that there would be no effect on Maori fishing claims, which were established in the Treaty of Waitangi. But subsequent claims and reports by the Waitangi Tribunal disputed this, leading to a significant and lengthy settlement process between Maori and the Crown that resulted in the Treaty of Waitangi (Fisheries Claim) Settlement Act 1992. The 1992 Settlement Act provided for the

[208] *Fisheries Act 1996*, ss. 124-173.
[209] Ibid, s. 76

transfer to Māori of 20% of the TACC of all QMS stocks (current and future), and funding to purchase 50% of one of New Zealand's primary fishing companies, Sealord Fisheries.

Due to protracted issues around the distribution of the allocation of the fishing assets to Māori groups (iwi), in 2004 the Māori Fisheries Act was passed, finalising the method of allocation. The Act provides for the establishment of Te Ohu Kaimoana, a private trust established to allocate the assets transferred from the Crown to iwi through the Māori Fisheries Settlement. A number of other organisations were also established to centrally manage assets on behalf of iwi and to promote Māori fishing.

The Ministry has an ongoing obligation to provide 20% of any new QMS stocks to Te Ohu Kaimoana. Currently, about 40% of New Zealand's commercial fishing industry is made up of Māori commercial fishing settlement assets. In addition to commercial fishing, the 1992 Settlement Act obliges the New Zealand Government to recognise Māori customary non-commercial fishing rights and management practices. These Māori customary fishing interests are taken into account when calculating TACs[210].

Practical Challenges in Calculating Sustainable Yields

Although the concept of Maximum Sustainable Yields is theoretically and intuitively simple, in practice it is difficult to use MSY to determine the optimal total catch. Populations and quotas are determined using various methods, such as research surveys, catch monitoring, ship's logs, landed catches and computer modelling. These calculations are not always reliable. Nonetheless, considerable sums of money are spent each year on determining MSY for deep-water stocks and the methods are now generally considered to be well tried. Given the current low levels of understanding of fish population dynamics and information regarding specific species, it is very difficult to identify the true value of BMSY or MSY for any population[211]. Therefore, it is necessary to use other measures as proxies for MSY. This allows for fish stock levels to fluctuate around a target based on MSY-related reference points.[212] Two reference points are being used in New Zealand's QMS: a static measure (Maximum Constant Yield); and a dynamic measure (Current Annual Yield).

Continued Impacts on Untargeted Marine Species

While the QMS has proved to be successful with regards to sustaining New Zealand commercial fish stocks, ecological issues resulting from the impact of fishing remain, particularly with respect to untargeted species. The QMS in itself does not address these wider ecological issues. To date, these effects have generally been addressed as externalities that are considered once the primary decision (setting of catch limits) has been made. They are implemented through secondary regulations and reliance on voluntary mechanisms.

According to the ministry for Primary Industries, an increased focus on biodiversity and environmental outcomes is characteristic of recent and planned developments in New Zealand's fisheries management regimes. Initiatives to reduce commercial fishing's impacts on species such as dolphin, sea lions and sea birds have included using exclusion devices on squid fishing nets to prevent seals and sea lions getting caught, the development of a National Plan of Action to reduce seabird mortality, regulatory measures to address Hector dolphin mortality, the closure of 19 seamounts to trawling to protect for biodiversity, and collaborative work with the Department of Conservation to improve the process for establishing marine reserves.

[210] Fisheries Act 1996, s 21
[211] According to the Ministry for Primary Industries' website, in 2011 there was sufficient information to report on the status of 164 stocks or sub-stocks out of a total of 633 stocks (26%) managed under the QMS.
[212] Fisheries Act 1996 section 13(2), Harvest Strategy Standard, paragraphs 10 and 11.

Nonetheless, it is argued by some commentators that commercial fishing has had, and continues to have, serious environmental effects on the marine environment[213]. In 2008, the Ministry of Fisheries released its 'Strategy for Managing the Environmental Effects of Fishing'. The Strategy states that the key principles relevant to managing fisheries to meet environmental standards are:

a. The onus to demonstrate that the effects of fishing are within environmental standards should be on those responsible for managing the fishery.

b. Environmental impact assessment (EIA) methods should consider all effects on habitats and species and be consistent across fisheries.

c. Implementation of management measures should be verifiable and monitored.

d. Determination of management measures necessary to meet environmental standards should take into account the views and interests of the Māori and stakeholders.

There remains considerable debate about whether this Strategy is being effectively implemented.

CONCLUSION

The New Zealand QMS has been viewed internationally as a success in terms of fish stock management, particularly in comparison with many of the world's fisheries that still adopt an open season approach. While certain fish stocks have been over-exploited, New Zealand has largely avoided the significant stock collapses that have occurred in fisheries in other jurisdictions.

Ultimately, QMSs offer a flexible approach that can be tailored to country situations. The manner in which quotas are allocated and traded, and the rules over ownership, directly influence how the quota market and the fishery will operate. Countries considering application in their own jurisdictions should establish appropriate legal measures to define initial allocation (to whom, how much), the nature of the right (exclusivity, duration), ownership limits (minimum or maximum quantities, nationality of owners) and limits over transfers (divisibility, restrictions on sale, leasing options).

Even with a QMS in place to manage fish stocks, the challenge is to ensure that the implementation of the system is adequate to meet the second part of Aichi Target 6 that "Fisheries have no significant adverse effects on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits".

[213] See for example, 'Beyond Rio - New Zealand's Environmental Record Since the Original Earth Summit WWF-NZ (2012). Online: http://www.wwf.org.nz/?8941/Paradise-lost-New-report-shows-20-years-of-environmental-inaction-threatens-NZs-natural-heritage

ANNEX 8: LEGAL BRIEF
Target 7 Sustainable Agriculture, Aquaculture and Forestry
Bolivia, Forest Law, 1996

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KEY MESSAGES:

- New forestry institutions introduced a series of checks and balances between numerous actors, the most powerful being the forestry superintendence, a politically independent central regulatory agency. Some power also rests with the Ministry of Sustainable Development and Planning, and municipal governments are given control over monitoring, administration and technical advice.
- Laws and regulations play a key role in determining whether sustainable forestry practices are adopted by actors in the industry and which practices are implemented in particular.
- Implemented stable long-term land tenure to encourage sustainable use and progress towards certification, and aims to make land tenure rights contingent upon compliance with sustainable production practices.

INTRODUCTION

The Forest Law 1996[214] and Regulations[215] aim to implement sound forest management practices to regulate the sustainable use of forest resources, in accordance with international standards set out by the Forest Stewardship Council (FSC), via a forest certification program. By democratizing access rights of stakeholders to forested land, outlining conservation norms, and clarifying pre-existing national forest administration, the law streamlined forest management and established a sound platform for sustainable forest development.

Under the new system, independent third party inspectors assess compliance with the FSC standards in a given forest and, if management of the forest substantially complies with the standards, it qualifies for FSC certification under the national scheme. FSC Certification allows consumers to make more informed choices rewarding sustainable producers, while prompting continued improvements in management practices among landowners, showing measurable biodiversity benefits.[216] While, the cost of meeting the standards can be high, and the economic benefits of certification seen as potentially insufficient compensation,[217] certification does allow producers increased market access, protects the land from conversion, and increases the long-term economic value of the forest.

BACKGROUND

[214] Government of Bolivia, Ley 1996 - 1700 Ley Forestal (Law 1700 of 1996 – Forest Law), 12 de Julio de 1996, available at: http://www.gacetaoficialdebolivia.gob.bo/edicions/view/1944. [Forest Law 1996]

[215] Government of Bolivia, Reglamento General de la Ley Forestal – Decreto Supremo 24453 de 1996 (General Regulations to Forest Law – Supreme Directive 24453 of 1996), online: http://www.gacetaoficialdebolivia.gob.bo/edicions/view/1971. [General Regulations on Forest Law 1996]

[216] Johannes Ebeling and Mai Yasue, "The effectiveness of market-based conservation in the tropics: Forest certification in Ecuador and Bolivia" (2008) Journal of Environmental Management, at 2. [Ebeling]

[217] R.E. Gullison, "Does forest certification conserve biodiversity?" (2003) 37(2) Onyx 153 at 161 Available at: www.cbd.int/doc/articles/2003/A-00137.pdf

Bolivia has 59 million ha of forests that cover more than 54% of the country, including significant areas within the Amazon Basin.[218] For decades, unsustainable harvesting of high-value species like mahogany led to a decline in their stocks. Under the old regime, concessions could be granted for up to 20 years but most forestry contracts lasted between one and five years and provided few incentives to invest in more sustainable methods.[219] The requirement that concession-holders implement forest management plans was poorly enforced and the system was skewed towards powerful producers that marginalized the rights of peasants and indigenous populations.[220]

Bolivia attempted to rationalize the management of national forest resources in 1992 with an "Ecological Pause" that prohibited new timber concessions for five years.[221] However, there was not enough political will to implement the rules and the effort was hamstrung by corruption and apathy.[222] There was a resurgence of political will in 1994 and a major forestry reform initiative was launched supported by the BOLFOR (Bolivian Sustainable Forest Management) project funded by USAID. This was initiated shortly after FSC laid out its international guidelines, and key actors in the creation of the FSC actively participated in designing Bolivia's law.[223] Extensive consultations led to legal reforms in 1996, including the Forest Law and its Regulations,[224] and modifications to the Constitution, including an amendment giving indigenous communities the exclusive right to their lands and territories.[225]

Many stakeholders took part in the dialogue on forestry issues, including private companies, environmental NGOs, indigenous groups, the central government, woodcutters, farmers and municipal governments.[226] International assistance agencies provided technical information and advice.[227] The Bolivian president helped speed up the process at crucial junctures.[228] The Forestry Law was just one of a number of new laws affecting management of forest resources, such as by institutionalizing greater democratic participation and control over resources by municipal governments and indigenous peoples.[229] These laws both helped to strengthen the multi-stakeholder nature of the forestry reform process and ultimately formed part of the forestry regime itself. Bolivia now has over 2 million ha of certified timber concessions.

ELEMENTS OF THE LEGAL MEASURE

International Conservation Standards for Certification

The Forest Law was designed to establish sound forest management practices in accordance with many of the international standards set out by the Forest Stewardship Council (FSC). FSC standards require, among other things, compliance with international agreements such as the Convention on International Trade in Endangered Species (CITES) and the CBD in Parties to these treaties; a system of long-term forest use rights; the right of local communities to maintain their local or customary land tenure;

218 M Boscolo, L Snook and L Quevedo, "Adoption of sustainable forest management practices in Bolivian timber concessions: a quantitative assessment" (2009) 11(4) International Forestry Review 514 at 515.

219 Arnoldo Contreras-Hermosilla and Maria Teresa Vargas Ríos, "Social, Environmental and Economic Dimensions of Forest Policy Reforms in Bolivia" (2002) Forest Trends, at 1. [Contreras]

220 *Ibid,* Contreras, at 1-2.

221 *Ibid,* Contreras, at 3.

222 *Ibid.*

223 *Supra,* Ebeling, at 5-6.

224 *Supra*, Boscolo, Snook and Quevedo at 515.

225 *Ibid,* Contreras, at 4.

226 *Ibid,* Contreras, at 4.

227 *Ibid.*

228 *Ibid,* Contreras, at 5.

229 *Ibid,* Contreras, at 3; An example of an enabling law is Law 1551 of 1994 (the Law of Popular Participation, available online: http://bolivia.infoleyes.com/shownorm.php?id=639.

respect for indigenous peoples' rights to their land and resources; conservation of biodiversity, ecosystems and ecological functions; safeguards to protect species at risk and their habitats; and maintenance and restoration of ecological functions and values, including genetic, species and ecosystem diversity; and a preference for native species in forest plantations.[230]

Forest Management Planning

By incorporating the precautionary principle[231] and proper planning into forest management, the law aims to ensure sustainability and the conservation of biodiversity. All use of Bolivia's forests requires a management plan, drafted by a civilly and criminally accountable third-party professional, which sets out protected areas and other uses of the land, and identifying all resources that will be used.[232] Further, the right to exclusive use of an area of forest carries with it the obligation to protect the entire area and its natural resources, including biodiversity, under penalty of revocation.[233] Adoption of these practices in forest concessions is high, and has primarily been driven by regulation.[234]

Institution of Autonomous Oversight

The Law created a semi-autonomous administrative agency, the *Superintendencia Forestal*, or Forest Superintendency (SIF), to oversee Bolivia's forestry regime, including the allocation and monitoring of concessions and enforcement of legal obligations. The Superintendency grants concessions through a public bidding process.[235] It has the power to conduct inspections to ensure compliance with the law and with Forest Management Plans,[236] and can call upon the National Police and armed forces to ensure compliance.[237] Concessions are also subject to independent forest audits every five years.[238] It offers greater stability in oversight, demonstrated by the fact that there were two Superintendents and 13 Ministers of Sustainable Development in the ten years following the adoption of the law.[239]

Incentivizing Reforestation

As an incentive for forestry operators to reforest degraded land, the Law exempts these operators from the forest fee, gives them technical assistance and preferential tax treatment, and grants them ownership rights if the reforestation takes place on public lands.[240] By creating legal standards that match the FSC standards, rewarding compliance with those standards, increasing the cost of non-compliance and creating a stable, predictable regime, the Forest Law creates conditions in which sustainable forest management and FSC certification are competitive options for private-sector producers.

LESSONS LEARNED IN IMPLEMENTATION

230 Forest Stewardship Council, FSC Principles and Criteria for Forest Stewardship 1996 (Amended 1999,2002) (FSC: Bonn, Germany) Available online: http://ic.fsc.org/download.fsc-std-01-001-v4-0-en-fsc-principles-and-criteria-for-forest-stewardship.181.pdf; *Supra,* Forest Law 1996, at Art.1-2,4.

231 Forest Law 1996, *supra* at Art. 9.

232 *Ibid* at Art.27.

233 *Ibid* at Art.29(3)(g).

234 M Boscolo, L Snook and L Quevedo, *supra* at 522.

235 *Ibid* at Art. 30.

236 *Ibid* at Art. 33.

237 *Ibid* at Art. 7.

238 *Ibid* at Art. 33.

239 M Boscolo, L Snook and L Quevedo, *supra* at 515

240 Forest Law 1996, *supra* at Art. 17.

Successes

The proof of the Forest Law's success lies in Bolivia's status among tropical countries in terms of FSC certification: as of 2008 there were 16 FSC-certified operations in Bolivia, covering 2.1 million ha of natural forests – more than 22% of the area in the country for which there are legal harvesting permits – and accounting for 60% of its total wood export value.[241] Bolivia contains 38% of the world's FSC-certified tropical natural forests.[242]

Longer and more secure land tenure creates a stable and secure environment for producers, encouraging them to invest in sustainable harvesting rather than seeking to harvest valuable species as quickly as possible.[243] Forest managers' perceptions have shifted so that the sustainability impacts of their operations may influence the way they operate more than economic considerations.[244]

The independence of the Forestry Superintendency also creates a level of stability in forest regulation and law enforcement that enables and encourages the long-term planning required for certification.[245] Its ability to exercise a reasonable level of control over most timber production[246] helps ensure that the Law's standards are observed and respected.

Remaining challenges

If certification is to have the desired outcomes, conditions must be in place to increase the cost of unsustainable production and reduce the cost of certification. Bolivia has aimed to achieve this by making sustainable practices the legal baseline, imposing sanctions on non-compliance with the law, and creating incentives for responsible forest management. The Forest Law ties harvesting rights to responsible environmental management. It requires every forest concession (grant of the exclusive right to exploit forest resources in a given area) and authorization to conduct forestry on private lands to have a Forest Management Plan, drafted by a forest professional who has taken an oath and is legally accountable for its contents.[247] Concession-holders have a legal obligation to protect the concession area and its biodiversity, on penalty of losing their forestry rights.[248] Forest concessions, which are granted for up to 40 years and can be sold or inherited, may be renewed if concession-holders comply with their forest management plans.[249]

However, compliance and comprehension of responsibilities, especially in rural communities, remains an ongoing issue. The SIF has insufficient funding to conduct on-site monitoring, which limits its enforcement capabilities.[250] Most control is exerted over larger companies, while smaller operations (less than 200 ha) enjoy a lower level of scrutiny as well as limited planning and documentation requirements.[251] Traditional users, peasant groups and lands comprising less than five hectares are subject to lower

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241 Ebeling, *supra* at 3; Cámara Forestal de Bolivia, "Operaciones certificadas y exportaciones de productos", online: http://www.cfb.org.bo/CFBInicio/.

242 *Ibid*.

243 *Supra,* Contreras at 3.

244 M Boscolo, L Snook and L Quevedo, *supra* at 522.

245 *Supra,* Ebeling at 5.

246 *Ibid.*

247 *Ibid,* Forest Law 1996, at Art. 27.

248 *Ibid,* Forest Law 1996, at Art. 29

249 *Ibid.*

250 *Ibid.*

251 *Ibid,* Ebeling at 6s.

fees, and preferential treatment.[252] The more lax treatment of small operations has effectively become a legal loophole for illegal harvesting.[253]

Beyond building the legal framework supporting certification, a key challenge is driving down the relative costs of certification to encourage produces to comply with legal standards. Stabilizing and reducing certification fees requires on-going harmonization of national laws with certification standards, legislation of long-term, stable land tenure which encourage sustainable use and progress towards certification, and making land tenure rights contingent upon compliance with sustainable production practices. Ongoing refinement of the law will ensure that measures intended to empower marginalized groups are controlled to prevent abuse, allowing for ongoing sustainable use.

CONCLUSION

Law 1700 (1996) and Decreto Supremo No. 24453 addresses a range of actions necessary to achieve Aichi Target 7, including:

- Adoption of the precautionary principle to reduce the impact of the use of natural resources.
- Implementation of a forest certification program, which sets in place management plans, to ensure long-term conservation and sustainable use of forest resources.
- Connecting exclusive use of land with the positive obligation to protect the area, including biodiversity.
- Alignment of national environmental standards with international conservation standards as developed by the FSC.

By incorporating product certification standards into national laws, creating a stable regulatory atmosphere, and punishing unsustainable forestry and reward sustainable practices to incentivize progress towards Forest Stewardship Council certification, Bolivia has achieved great success in establishing forest conservation and management practices. While challenges of uptake and overall cost undermine certification, through the cooperation of the Bolivian Forestry Chamber and environmental NGOs to operate an online data exchange to connect certified producers with buyers, and the continued efforts to promote detailed knowledge among staff of the Forest Superintendency and other government officials about forest certification and its costs and benefits, Bolivia will continue to provide a unique approach to forest conservation and management.

252 *Ibid,* Forest Law 1996, at Arts. 31 and 37.
253 *Supra,* Ebeling at 6.

ANNEX 9: LEGAL BRIEF
Target 14 Ecosystem Services
Costa Rica, Forest Law No. 7575, 1996

Authors: Mr. Freedom-Kai Phillips, Centre for International Sustainable Development Law

KEY MESSAGES:

- Ecosystems that provide essential services can be governed by an autonomous/semiautonomous institution that administers PES legislation, processes applications, collects data, and governs inter-ministerial communication and collaboration.
- Conservation and restoration efforts through the adoption of PES legislation can address the core of Aichi Target 14, including empowerment of local communities and the poor.
- PES Legislation should focus on defining accepted ecosystem activities, qualifying criteria, applicable payment methods, and prioritization mechanisms for participation in the system.
- Building upon/reforming existing natural resource incentive schemes can provide rapid up-take but may incorporate earlier inefficiencies or other problems unless carefully performed.

INTRODUCTION

Responding to a substantial reduction in overall forest cover, Costa Rica established a novel program to protect forested areas by paying individual land owners for the benefits provided by their forest ecosystem. Forest Law No. 7575[254] established a payment for ecosystem services (PES) program, the Programa de Pago por Servicios Ambientales (PPSA) for four services: (1) carbon mitigation, (2) hydrological services, (3) safeguarding of diversity; and (4) preservation of natural beauty. The Forest Conservation Certificate (Certificado para la Conservación del Bosque; CCB) program provided the legal basis to contract property owners to provide ecosystem services derived from the land. The existing financial incentive system for forest management was altered to provide direct payments to small landowners of natural forests and plantations for ecosystem services rendered to Costa Rican society, and the broader global community. The National Forest Financing Fund (Fondo Nacional de Financiamiento Forestal; FONAFIFO) was established to govern the PES program and collaborate with governmental and nongovernmental organizations (NGOs) involved.

BACKGROUND

Costa Rica experienced significant periods of increasingly severe deforestation in the half century prior to the enactment of the Forest Law No. 7575 of 1996. Due primarily to favourable land titling laws that encouraged conversion of forests into arable land and pasture, by the 1980's Costa Rica had one of the highest rates of deforestation globally.[255] The agricultural and cattle producing sectors were provided preferential incentives in contrast to the forest sector in terms of broader market access, and use of cattle as collateral for loans. The forest sector had limited market access, was provided

[254] Costa Rica, Forest Law No. 7575 (1996) [Forest Law 7575]. Online: http://www.cesdepu.com/leyes/7575.13-FEB-1996.htm

[255] Bennet, K., & Henninger, N. "Payments for Ecosystem Services in Costa Rica and Forest Law No. 7575: Key Lessons for Legislators", (2009) World Resources Institute, at 1. [Bennet & Henninger] Online: http://www.agora-parl.org/sites/default/files/090422_e-parliament_forests_initiative.pdf

no loans for forest projects and had to deal with complex harvesting permit procedures.[256]

Starting in the 1970's the Costa Rican government incrementally realised the socio-economic importance of forests, and reformed their domestic forest regime to establish financial incentives for preservation, remove pre-existing incentive programs harmful to biodiversity, and build environmental conservation and protection laws.[257] A variety of mechanisms were leveraged for forest management/reforestation leading up to the establishment of a payment system for ecosystem services. Forest Law No. 4475 of 1969 created a positive tax incentive program for reforestation allowing reforestation efforts to be tax deductible, but the initial focus was to insulate industrial forest companies from tax liability and provided additional concessions restricting imports of forested products, thus encouraging increased deforestation.[258]

Reforestation Act No. 6184 of 1977[259] was the first law to make reforestation a key national priority by earmarking 2% of commercial funds/loans for reforestation,[260] capping interest rates on these loans at 8%,[261] and allowing trees to be leveraged as collateral.[262] Forest Law No. 7032 of 1986 and Forest Law No. 7174 of 1990[263] created additional fiscal incentives for restoration and reforestation efforts.[264] A certificate program was established providing landowners with tradable certificates which could be sold or applied against government taxes or fees. Forest Bond Certificates (Certificado de Abono Forestal; CAF)[265] expanded the benefit of tax-deductibility for reforestation costs to a larger cross-section of the sector beyond large-scale commercial logging companies.[266] In 1992, two key instruments were introduced. Firstly, Forest Bond Certificates for Forest Management (Certificado de Abono Forestal para Manejo de Bosque; CAFMA) made direct subsidies for reforestation directly available. Secondly, Forest Protection Certificates (Certificado para la Protección del Bosque; CPB) supported forest conservation efforts over timber production, and afforded the enrolled parcels of land protection from exploitation, beyond ecotourism.[267]

ELEMENTS OF THE LEGAL MEASURE

Principle of appropriate and sustainable use

The primary objective of Forest Law No. 7575 is to conserve, protect and maintain natural forests and their production and industrial use in accordance with the principle of appropriate and sustainable use. Secondarily, it restricts all harvesting of forest resources except as provided in Art. 18.[268]

Clearly outline recognized ecosystem services

[256] Rodricks, S. "TEEB Case: Enabling the legal framework for PES, Costa Rica (2010), The Economics of Ecosystems and Biodiversity, at 1. [Rodricks] Online: http://www.eea.europa.eu/atlas/teeb/enabling-the-legal-framework-for/view
[257] Bennet & Henninger, *Supra*.
[258] *Ibid.*
[259] Costa Rica, Reforestation Homeland Act 6184 (1977) [Reforestation Act 6184]. Online: http://www.cesdepu.com/leyes/6184.29-Nov-1977.htm
[260] *Ibid.* Art. 2.
[261] *Ibid.* Art. 8.
[262] *Ibid.* Art. 6; Bennet & Henninger, *Supra*.
[263] Costa Rica Forest Law Reform Act 7174 (1990) [Forest Law 7174]. Online: http://www.cesdepu.com/leyes/7174.28-Jun-1990.htm
[264] Bennet & Henninger, *supra*.
[265] *Forest Law* 7174 Art. 5.
[266] Bennet & Henninger, *supra*.
[267] *Ibid.*
[268] Forest Law 7575, *supra* at Art 1

Four environmental services derived from forests qualify under the program: (1) carbon mitigation, (2) hydrological services encompassing water production for energy and human consumption, (3) biodiversity for scientific and research purposes; and (4) scenic beauty or bio-tourism.[269]

Empower an independent institution to govern the program

FONAFIFO was established as a semi-autonomous agency empowered to implement the PES program.[270] It acts as the primary coordinating and financial body for the PES program and is responsible for monitoring, evaluating and administration. Representatives from the Ministry of Environment and Energy, Ministry of Agriculture, National Banking System, and private forestry sector make up a governing board that provides operational governance.

Design instruments with normative value

The CCB was put in place to reward landowners for the ecosystem services rendered.[271] The certificate is a normative security and can be sold, or may entitle the holder to (a) tax exemptions on real estate, (b) protection from encroachment, and (c) exemption from tax on assets.[272]

LESSONS LEARNED IN IMPLEMENTATION

Successes

Costa Rica's PES program under Forest Law No. 7575 has been characterized as a success for ecosystem conservation. [273] In the first five years of operation the PES program saw immediate uptake with over 4,400 individuals having received payment.[274] Between 1997 and 2005, more than half a million hectares (equivalent to one-fifth of the country's forested areas) were enrolled in the payment scheme.[275] In 2005 forest conservation accounted for 91% of all PES programs, and PES enrolled area represented 10% of all national forests.[276] Requests for participation in the program have exceeded financial resources, demonstrating strong popularity.[277] It has also created additional jobs, particularly for disadvantaged communities,[278] and supported poverty eradication efforts with payments in some cases representing a tenth of the household income.[279]

By sparking national market demand for environmental services through legislation and allowing price to be established publicly, forest conservation efforts were put at the forefront of public debate. By also building on the pre-existing incentive program for forest conservation, Costa Rica was able to create a national PES program relatively quickly. Yet, even with a history of incentive-based programs, Costa Rica's implementation experience is not perfect. Having imported unhelpful components from the pre-existing system, a systemic lack of quantifiable data showing a positive trend on

[269] *Ibid.* Art. 3(k).
[270] *Ibid.* Art. 46. Executive Decree No. 30762 of 2002 streamlines administration under FONAFIFO.
[271] *Ibid.* Art. 22.
[272] *Ibid.* Art 22(a)-(c), Art. 23(a)-(c)
[273] Patrick ten Brink *et al.* "Rewarding Benefits through Payments and Markets" in Patrick ten Brink ed. *The Economics of Ecosystem and Biodiversity in National and International Policy Making* (London: Earthscan, 2011) at 187. [Brink]
[274] Bennet & Henninger, *Supra* at 2.
[275] *Ibid.*
[276] *Ibid.* at 8-9.
[277] Pagiola, S, "Payments for Environmental Services in Costa Rica" (2006) World Bank MPRA Paper No. 2012, at 8. [Pagiola] Online: http://mpra.ub.uni-muenchen.de/2010/
[278] Bennet & Henninger, *supra* note 7, at 15.
[279] *Ibid*. at 3, Pagiola, at 14-15.

forest conservation,[280] and a lack of long-term sustainable financing,[281] the program's shortcomings are being progressively exposed and addressed.

Remaining challenges

While reforms in 2000 streamlined the PES program into a two contract system (one for reforestation and one for conservation), challenges in administration and application still remain prevalent. Recent assessments have identified three key challenges.[282]

The first challenge is ensuring that the appropriate areas are identified to ensure the conservation and safeguarding of highly sensitive or at risk ecosystems. The difficulty is compounded by the need to balance the demand of conservation with the pressing reality of high opportunity-cost development projects. In the end, it is becoming increasingly difficult to ensure that the areas included in the PES program provide the optimal biodiversity impact, rather than working with areas that would have been targeted for conservation regardless.

A second challenge is to determine the best payment structure for the PES program. Concerns have been raised about the choice to pay all participants in the program a flat fee,[283] and for structuring payments based on land use practices rather than the ecosystem service provided. [284] A move away from uniform payments to floating rates based on the value of the ecosystem service would allow the payment structure to more accurately reflect the socio-economic benefit experienced and enhance the value of the program.

The final challenge is optimizing the prioritization model used by the PES programme to best balance the demand for participation in the program, initiatives that would provide the broadest social and environmental benefit, and the need to ensure the long-term availability of funds. Currently, prioritization criteria are set annually by decree and take into account the importance of the process, significance of the specific habitat, proximity to existing protected zones and overall potential for carbon sequestration; however poverty eradication has become increasingly relevant. [285] Overall priority is established based on an aggregated score of prioritization points and applications are processed on a first-come-first-serve basis.[286] A spatial targeting approach could be adopted to refine the prioritization scheme. By identifying areas where multiple ecosystem services converge or overlap and are jointly at risk of destruction, cost-effectiveness can be increased, lowering the cost of the program and increasing its attractiveness to international investors.[287]

CONCLUSION

Costa Rica's Forest Law No. 7575 prescribes a range of actions useful to achieving Aichi Target 14, including:

- Safeguarding and restoring forests that provide essential ecosystem services.

[280] Pagiola, Supra note 20, at 16; Sanchez-Azofeifa, G.A., Pfaff, A., Robalino, J.A., & Boomhower, J.P. 2007, "Costa Rica's Payment for Environmental Services Program: Intention, Implementation, and Impact", Conservation Biology, Vol. 21, No. 5, pp. 1165–1173.
[281] Pagiola, *Supra* note 20, at 16.
[282] Brink, *Supra.*
[283] Bennet & Henninger, *Supra* at 11.
[284] *Ibid,* at 5.
[285] Bennet & Henninger, *Supra* at 5.
[286] *Ibid.*
[287] European Commission, Science for Environment: Thematic Issue – Payment for Ecosystem Services (March 2012), online: http://ec.europa.eu/environment/integration/research/newsalert/pdf/30si.pdf; Wendland, KJ. *et al.* "Targeting and Implementing Payment for Ecosystem Services: Opportunities for Building Biodiversity Conservation with Carbon and Water Services in Madagascar, *Ecological Economics* 69 (2009):2093-2107.

- Establishing legal measures to prioritize conservation and restoration efforts in conjunction with poverty eradication efforts.
- Ensuring that the main benefactors of the PES program are those who live in and near the forests.
- Regulation and administration of forest ecosystem services.
- Centralising coordination between government agencies related to ecosystem services.

Building on its institutional experience with forest incentive programs, Costa Rica developed a PES system that channels funds efficiently to the safeguarding and restoration of forest ecosystems, supporting Aichi Target 14. In addition to forest preservation, the PES system has spurred job creation particularly for local communities and the poor, provided for a burgeoning eco-tourism sector, and established the nation as a world leader in environmental efforts. The difficulties of determining the appropriate areas for conservation, ideal payment structure, and method of prioritization are being addressed as experience with PES grows globally. However, Costa Rica has established a strong example for nations to learn from.

ANNEX 10: LEGAL BRIEF
Target 14 Ecosystem Services
India, Scheduled Tribes and Other Traditional Forest Dwellers Act, 2006 and Rules, 2008

Authors: Shawahiq Siddiqui and Shilpa Chohan, Indian Environmental Law Offices

KEY MESSAGES:

- Securing the forest tenure rights of indigenous people and forest dependent communities can result in improved biodiversity conservation and protection of commons that provide essential services for subsistence and survival.
- Recognition of community forest conservation initiatives, traditional governance and forest resource ownership in traditional areas has resulted in enhanced conservation efforts by communities to protect and safeguard forest ecosystems, biodiversity and community lands from unplanned development projects.
- The legal mechanism used to claim and vest forest rights ensures that tribal women are given recognition as equal shareholder in tenure, thus empowering the most vulnerable section of tribal society and allowing them to play a significant role in safeguarding, protecting and regenerating forests.
- The empowerment of community institutions through obtaining forest rights enables communities to better deal with external threats to their forests and to chart out their own management systems to help restore and safeguard these ecosystems.
- Forest rights also come with duties to safeguard and protect wildlife, forests, biodiversity, adjoining catchment areas, water resources and other ecologically sensitive areas, and stopping harmful activities. These adjoining duties can contribute to restoring degraded ecosystems and wastelands in conjunction with other forest restoration plans and management plans for protected areas.

INTRODUCTION

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) creates forest rights that can contribute to achieving Aichi Target 14. The Act provides for the recognition, vesting and securing of individual and community tenure rights to all forest dwelling Scheduled Tribes and Traditional Forest Dwellers on all forest lands.[288] The Act recognises and vests 13 set of forest rights to "forest dwelling scheduled tribes" and "other traditional forest dwellers". In doing so, it builds a rights based protection and conservation regime by recognizing and vesting forest rights, provides for a decentralized process of rights determination, and empowers the customary village assembly (Gram Sabha), so as to protect, regenerate and conserve ecosystems, biological and cultural diversity against any activity that affects natural habitat or forest resources.

The Act can recognize the diversity of use, access, and conservation practices and traditional knowledge of forest communities that significantly contribute to the conservation of forest ecosystems and biodiversity. The empowerment of local community institutions and increased recognition of community rights has enabled communities to better deal with external threats to community resources and to chart out their own management systems. Further, the Act recognizes the rights of primitive

[288] Forest Rights Act, 2006, Section 3 [FRA]. This includes National Parks, Wildlife Sanctuaries, Reserve Forest, Protected Forest or any other legal or administrative category of forest land under federal or state legislation in India.

tribal groups (PTGs) and pre-agricultural communities, and rights regarding community conservation initiatives. The Act provides legitimacy and statutory backing to community efforts aimed at regeneration and conservation as per their traditional knowledge, which earlier was guided by forest departments by preparing micro plans for regeneration and conservation activities in and around forest areas.

BACKGROUND

The enactment of the FRA in 2006 emerges from the longstanding issues of insecurity of land tenure, access rights and lack of recognition of community conservation initiatives in forest management, lack of recognition of traditional governance and resource ownership in tribal areas and threats to community lands and forests from development projects arising primarily from the inadequacy of the forest reservation process under the Indian Forest Act, 1927. Establishing reserve, protected and village forests under the Indian Forest Act, 1927 requires that a process be followed to recognize the rights of people over the land wherein reserve, protected forests are to be declared. The Indian Forest Act establishes an elaborate procedure for settlement of rights when a reserve forest is intended to be constituted. The settlement procedures require the forest officer called the Forest Settlement Officer (FSO) to consider the claims of local inhabitants to certain usage rights, but leave ample discretion for him to relocate, revise or discontinue such practices. The state is first required to issue a notification declaring its intention to reserve a certain tract of land, and appointing a FSO to inquire into the existence of any alleged rights in favour of local inhabitants. It may be noted that no new rights in notified land may arise after such notification has been issued, and those claiming any pre-existing right have a period of at least three months in which to appear and assert such right, and to make a case for compensation.

The drafting of the FRA emerged due to the non-recognition of rights (tenurial or usufructuary) of forest dependent communities during the forest reservation process, and the struggle for implementation of the Joint Forest Management (JFM) Orders issued by the Ministry of Environment and Forests (MoEF) in 1990. In order to resolve implementation difficulties and issues with JFM Orders, the MoEF issued guidelines that essentially provided for regularization of pre-1980 encroachments of forest land by giving land titles to settlers. However, several difficulties arose in implementing these guidelines on account of absence of statutory backing resulting in their non-implementation due to absence of clear guidelines to state departments.

On 12 December 1996, the Supreme Court of India expanded the scope of the term 'forest' (interpreting the Forest Conservation Act of 1980), in *T.N. Godavarman Thirumulkpad v Union of India*.[289] It held that no forest, National Park or Sanctuary can be de-reserved without the approval of the Supreme Court. This includes not only forests as mentioned in government records, but all areas that are forests in the dictionary meaning of the term, irrespective of the nature of ownership and classification thereof. Furthermore, no non-forest activity was permitted in any National Park or Sanctuary, even if prior approval under the Forest (Conservation) Act of 1980 has been obtained. An interim order in 2000 further prohibited the removal of any dead or decaying trees, grasses, driftwood etc. from any area comprising a National Park or Sanctuary. The case, popularly known as the "Forest Case", had far-reaching consequences that created a livelihood and conservation struggle for millions of tribal people in India subsisting on forest lands.

On 3 May 2002, MoEF issued a letter to the governments of all states and union territories in India on the removal of encroachments from forest land in a time bound manner by 30th September, 2002, explaining that such encroachments "…cause great harm to forest conservation (and)…are also seriously threatening the continuity of the

[289] Supreme Court of India, Order of December 12, 1996 in W.P.(C) 205/1995.

Wildlife corridors between various National Parks and Sanctuaries." The MoEF, by a notification dated 17th September, 2002, authorized the formation of a Central Empowered Committee (CEC) to monitor the implementation of the Court's orders and place reports of non-compliance before it, including in respect of encroachments, removals etc. The CEC sought to direct the Forest Departments to evict all perceived encroachers in a time-bound manner. Millions of forest dwellers and forest adjacent populations were perceived as encroachers, leading to attempted evictions and the resulting uproar and radicalization of popular tribal movements by forest dependent groups across the country.

In 2004, due to an intense and consistent struggle by Mass Tribal Organizations for reconciliation of tribal rights and conservation objectives, the MoEF withdrew its 2002 Order. That year, the Federal Government included tribal welfare in its agenda, with special reference to ownership rights of tribal people over minor forest produce, and enlisting their cooperation for protecting forests and for undertaking social afforestation. This was the genesis of FRA and, the Affidavit submitted by the MoEF to the Supreme Court on 12 July 2004 emphasized the "regularization of Rights of Tribal people" and the need for "recognition that the historic injustice done to the tribal forest dwellers through non recognition of their traditional rights must be finally rectified". These developments led the Prime Minister's Office on 19th January 2005 to instruct the Ministry of Tribal Affairs (MoTA) to draft the Forest Rights Bill, which was notified as an Act in January 2006.

ELEMENTS OF LEGAL MEASURE

The FRA and the Rules were enacted to redress a historical injustice and provides a framework for recognition and vesting of traditional rights. The FRA also places a responsibility and authority on the communities who have been granted forest rights to manage the community forest resource (CFR) sustainably, conserve biodiversity and maintain ecological balance. The Act thus serves a dual purpose i.e. to recognize the rights needed to guarantee food security and bonafide livelihood to the community which has been traditionally dependent on that resource, and at the same time ensure sustainable use of conservation of biodiversity. The Act recognises and vests forest rights for the "Forest dwelling scheduled tribes", being Scheduled Tribes notified under the Constitution of India residing in the forest and dependent on forests or forest land for meeting their livelihood needs. The second category being 'other traditional forest dwellers' who are residing in or have depending on forests or forest land for the last three generations (75 years) prior to 12 December 2005.

1. Individual and Community Rights under FRA

There are thirteen individual and community forest rights that can be conferred on the forest communities, as described below

INDIVIDUAL RIGHTS

Individual rights include the right to hold and live on forest land under individual or community occupation for habitation or for self- cultivation for livelihood. The land vested in pursuance of this right shall not exceed four hectares or the area under actual occupation;[290] Right of ownership, access to collect, use and dispose of minor forest produce which has been traditionally collected within or outside traditional village boundaries;[291] right in or over disputed lands under any nomenclature in any state where claims are disputed;[292] rights for conversion of *pattas* or lease or grants issued by

[290] FRA, Section 3(1) (a).
[291] Ibid, Section 3(1) (b).
[292] Ibid, Section 3(1) (f).

any local authority or any state government on forest land to titles;[293] the right to in-situ rehabilitation including alternative land in case where the scheduled tribe or other traditional forest dweller have been illegally evicted or displaced from forest land of any description without receiving their legal entitlement to rehabilitation prior to December 13, 2005.[294]

COMMUNITY FOREST RIGHTS

The Forest Rights Act allows for various community forest rights, such as *nistar*;[295] uses or entitlements such as fish and other aquatic products, grazing (both settled or transhumant) and traditional seasonal resource access of nomadic or pastoralist communities;[296] community tenure of habitat and habitation for PTGs and pre-agricultural communities;[297] the right to protect, regenerate or conserve or manage any CFR which has been traditionally protected and conserved for sustainable use;[298] rights which are recognized under any state law or laws of any Autonomous District Council or Autonomous Regional Council or which are accepted as rights of tribals under any traditional or customary law or the concerned tribes of any state;[299] the right of access to biodiversity and community right to intellectual property and traditional knowledge related to biodiversity and cultural diversity;[300] and, any other traditional right customarily enjoyed by the forest dwelling Scheduled Tribes or other traditional forest dwellers which are not mentioned above, excluding the traditional right of hunting or trapping or extracting a part of the body of any species of wild animal.[301]

2. The process of securing Forest Rights: Empowerment of *Gram Sabha* and strengthening of forest resource management at the decentralized level involving stakeholders who depend on such resources for their subsistence and survival

The rights under FRA can be secured though a due process of recognition under the FRA. The Act provides a transparent three step procedure[302] for recognizing the rights of the eligible persons. First, the Gram Panchayat (representative elected body) convenes the Gram Sabha (village assembly), which selects amongst itself to constitute a Forest Rights Committee[303] that receives the claims for individual and community forest rights. The Committee mandatorily comprises of one-third members who are women. Subsequently, the Gram Sabha makes a recommendation through a resolution endorsing the community forest rights amongst others. The Gram Sabha's recommendation goes through two stages of screening i.e. first to the committee at the *taluka* (sub-divisional) level through the Sub Divisional Level Committee (SDLC) and second, to the District Level Committee (DLC). The District Level Committee takes the final decision.[304] After the final decision is taken, a document is issued by the government delineating the right that can be exercised over the forest land by the forest rights holder. The individual entitlement to land is to the extent of land under actual possession and habitation not exceeding four hectares.[305] No such limitation is prescribed for community forest rights. The land that is vested under this Act cannot be sold or transferred but can only be inherited. Further, it requires that all recognition of individual rights of habitation and

[293] Ibid, Section 3(1) (g).
[294] Ibid at Section 3(1)(m).
[295] Ibid at Section 3(1)(b).
[296] Ibid at Section 3(1)(d).
[297] Ibid at Section 3(1)(e).
[298] Ibid at Section 3(1) (i).
[299] Ibid at Section 3(1)(j).
[300] Ibid at Section 3(1) (k).
[301] Ibid at Section 3(1) (l).
[302] Ibid at Section 6.
[303] *The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of forest rights) Rules, 2008*, Rule 3.
[304] FRA, Section 6(6).
[305] Ibid at Section 4(6).

occupation should be in the name of both the spouses, in relevant cases, thereby ensuring equal rights to tribal women and their empowerment.

3. Associated Duties of Forest Rights holders: *Conservation and protection of 'Community Forest Resource'*

The Act enumerates certain duties aimed at protection of wildlife, forest and biodiversity, preservation of catchments areas etc. that the forest right holders are entitled to perform.[306] This legal measure in the Act enables the protection and regeneration of CFR. The FRA defines CFR to mean a customary common forest land where the local communities had traditional access irrespective of the forest land that it encompasses.[307] It also includes seasonal land use by pastoralist communities and it is an innovation in law, as such seasonality of land use was not taken into account in earlier forest legislation. For the first time, the FRA addresses this complexity to make provisions for the CFR as well as its regeneration and protection through vesting of community forest rights. The CFR can extend to any area within any reserved or protected forest or a protected area. This may come into conflict with the other forest laws such as Indian Forest Act, 1927 and Wildlife Protection Act, 1972, under which these legal categories are created and governed and the rights of the communities are heavily restricted. In such a scenario the rights of the local communities over a community forest resource delineated and recognized under FRA will prevail.[308] The concept of a CFR is essentially an ecosystem concept directly associated to the right to protect, regenerate, conserve or manage any CFR that has been traditionally protected and conserved for sustainable use as defined in the Biological Diversity Act, 2002.

The FRA empowers, by way of statutory duty, the local communities and village assembly to regenerate and preserve the CFR once it is recognised and vested as a community forest right. It statutorily empowers holders of forest rights and their Gram Sabha to protect wildlife, forests and biodiversity from destructive practices affecting their cultural and natural heritage. This legal measure attempts to vest the local forest dependent community with the control and management of natural resources e.g. a source of their livelihoods. The FRA aims to reclaim "commons" separated by the reservation process from the forest dependent communities that traditionally managed and conserved them. By linking community forest rights with the authority of forest rights holders to conserve and sustainably use forest resources, and promoting this partnership as a means to strengthen the conservation regime of biological diversity while ensuring livelihood and food security, the Act, attempts at democratic decentralization of forest governance in the country.

LESSONS LEARNED

Institutional reform in forest governance leading to decentralized and community management of ecosystems that fulfil subsistence needs:

The incorporation of community duties under FRA marks a major institutional reform by changing the existing balance of power between the forest bureaucracies and right holding communities. It statutorily empowers holders of forest rights and their Gram Sabha to protect wildlife, forests and biodiversity as well as their habitats. It empowers forest right holders and their Gram Sabha to undertake conservation measures in degraded ecosystems based upon traditional practices. By empowering right holders to comply with collectively taken decisions for regulating access to community forest resources to ensure sustainability, this legal measure devolves rule making power over village forest commons from the forest department to the village assembly. It strengthens the practice of taking collective decision pertaining to management and

[306] Ibid at Section 5.
[307] Ibid at Section 2(a).
[308] Ibid at Section 4(2).

conservation of forest and natural resources, thus acknowledging the role of community conservation efforts.

Decentralisation of forest governance:

FRA is the first legislation in India that involves the village assembly in the exercise of delineation of forest rights and heralds the democratization and decentralisation of forest governance in the country.

Reclaiming forest commons for community wellbeing:

The linkages of community forest rights and sustainable use for livelihood needs by way of duties would result in reclaiming forest commons that were usurped by the forest bureaucracy during the forest reservation process without following due process of law. These reclaimed forest commons would thus be helpful in fulfilling subsistence needs of forest dependent Scheduled Tribes, the vulnerable and the poor.

Mainstreaming gender in the decision making process for management of forest resources:

The procedure for recognising and vesting of forest rights under the FRA and Rules involves delineation of these rights by forest rights committee selected by the Gram Sabha. The mandated one-third involvement of women in this process of recognition underlines empowerment of women and also the crucial role they play in conserving biological diversity and ecosystems.

Implementation status

Implementation of Forest Rights Act, 2006 is faced with number of challenges. The foremost is community sensitization on individual and community forest rights and the claim process itself. The requirement of one third women membership in Forest Rights Committee is being met wherever such Committees have been formed. The implementation of the Act, by far, has been satisfactory as far as individual rights are concerned. However, the move towards claiming forest rights is rather slow due to lack of understanding, and its scope in securing community forest resource and ecosystems that provide and fulfil subsistence needs of these communities. Recently, in many forest rich areas in the country, communities have made claims for CFR.

CONCLUSION

The recognition of community forest rights over forests for forest dependent communities and the duties of forest right holders promises far reaching consequences to enable the restoration and conservation of ecosystems, thus helping achieve Target 14. It further marks a paradigm shift of involving the forest dependent communities and village assemblies collectively in the regeneration and conservation of biodiversity where they are the arbiters that select and implement conservation measures based on their traditional knowledge. As a legal measure, the incorporation of duties for regulating access to community forest resource to ensure sustainability devolves rule making power over village forest commons from the forest department to the village assembly. It strengthens the practice of taking collective decisions pertaining to management and conservation of forest and natural resources and takes forward the agenda of decentralised planning of natural resources by the stakeholder communities that are dependent on these resources for their survival and subsistence needs, thus leading to effective conservation measures.

ANNEX 11: LEGAL BRIEF
Target 17 NBSAPs
Japan, Basic Act on Biodiversity, 2008

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KEY MESSAGES:

- Development of a national biodiversity strategy and action plan can be accomplished effectively by leveraging coordination of national, regional and local strategies in a participatory fashion.
- Japan's strategic sustainability and biodiversity conservation planning efforts address the core of Aichi Target 17, including the effective, participatory, and updated components.
- Focus on legislation to developing a national biodiversity strategy which builds in reform and elaboration at the local level with an iterative review mechanism to refine and incorporate best practices efficiently.
- Establish clear responsibilities of each tier of government and sector of civil society with coordinated forums for debate to foster public engagement in the strategic planning process.

INTRODUCTION

Japan's Basic Act on Biodiversity was enacted to clarify the fundamental principles for the conservation and sustainable use of biodiversity, as well as the responsibilities of the national government, local governments, businesses, citizens, and other private bodies. It is intended to guide the review of existing laws, and serve as a basis for future policies for the development of a society in harmony with nature. The Act requires the national government to formulate a National Biodiversity Strategy (NBS), in consultation with civil society through the Central Environmental Council, which includes basic principles and targets; comprehensive policies to be implemented by the government; as well as all other necessary matters for the promotion of the conservation and sustainable use of biodiversity. Further, prefectures and municipalities are encouraged to formulate regional biodiversity strategies to respond to the unique environmental conditions of each localized ecosystem. By reviewing the NBS iteratively and consistently working to incorporate successful practices from the prefectural/municipal levels into the national strategy, the Government of Japan has set in place an effective, highly participatory, and continually refined strategic environmental planning framework.

BACKGROUND

The Government of Japan has over 15 years of experience in developing national strategies on biodiversity. Japan became a signatory to the Convention on Biological Diversity in 1993 and adopted its first National Biodiversity Strategy in 1995. That strategy was reviewed twice, in 2002 and 2007. By then, the conservation of nature had evolved into a governmental priority in Japan, identified as one of the three pillars of its 2007 Sustainable Society Strategy, which called for the conservation of biodiversity and a re-orientation of socio-economic activities in harmony with nature.[309]

[309] Government of Japan, "Becoming a Leading Environmental Nation in the 21st Century: Japan's Strategy for a Sustainable Society," available: www.env.go.jp/en/focus/attach/070606-b.pdf

It is in this context that the government adopted the Basic Act on Biodiversity in 2008. In line with the principles of the country's Basic Environment Law (Act No.91 of 1993),[310] the Basic Act on Biodiversity aimed to clarify the fundamental principles for the conservation and sustainable use of biodiversity, and guide the development of related policies in a comprehensive, coordinated and participatory manner. Notably, the Act requires the national government to formulate a National Biodiversity Strategy, and encourages the development of regional biodiversity strategies at the prefectural and municipal levels.

ELEMENTS OF THE LEGAL MEASURE

Establishment of fundamental principles

The prime objective of the Act is to build upon the Basic Environment Law, in a comprehensive and participatory fashion, to establish fundamental principles for national, regional and local strategic sustainability and biodiversity planning.[311] The fundamental principles are that: (1) conservation of biodiversity shall be done with respect to unique conditions of regional environment;[312] (2) use of biodiversity shall be done in a sustainable and minimally impactful manner;[313] (3) conservation and sustainable use of biodiversity shall be guided by scientific evaluation and continually refined based on these evaluations;[314] (4) conservation of biodiversity is aimed at regeneration of ecosystems, done from a long-term perspective;[315] and, (5) conservation efforts shall be done recognising the impact of global warming on biodiversity, and the preventative role biodiversity conservation plays.[316]

Broad participation of stakeholders

The Act takes a broad approach to stakeholder engagement, providing responsibilities for various groups. National ministries are generally responsible for formulation and implementation of biodiversity conservation and sustainability efforts.[317] Local governments hold responsibility for refining national measures for local application with respect to the unique natural and social make-up of the area.[318] Enterprises are encouraged to reduce their impact on biodiversity and develop and incorporate biodiversity-friendly measures into their normal course of business.[319] Civil society shall endeavor to reduce their impact on biodiversity by handling alien species appropriately, aiming to choose biodiversity friendly goods and services,[320] and cooperating with others to incorporate conservation measures into their daily life.[321]

Development of a comprehensive and coordinate strategy

A National Biodiversity Strategy is established to promote conservation and sustainable use of biodiversity,[322] which addresses: (1) basic policy principles for conservation and sustainable use of biodiversity;[323] (2) suitable biodiversity conservation targets;[324] (3)

[310] Basic Environment Law (Act No. 91 of 1993), available: http://www.env.go.jp/en/laws/policy/basic/index.html [Basic Environment Law 1993]
[311] Government of Japan, Act. No. 58 of 2008 (Basic Act on Biodiversity), 6 June 2008 available: http://faolex.fao.org/docs/texts/jap100101.doc [Basic Act on Biodiversity] at Art. 1.
[312] *Ibid.* Art. 3(1).
[313] *Ibid.* Art 3(2).
[314] *Ibid.* Art. 3(3).
[315] *Ibid.* Art. 3(4).
[316] *Ibid.* Art. 3(5).
[317] *Ibid.* Art. 4.
[318] *Ibid.* Art. 5.
[319] *Ibid.* Art. 6.
[320] *Ibid.* Art. 7(1).
[321] *Ibid.* Art. 7(2).
[322] *Ibid.* Art 11(1).
[323] *Ibid.* Art. 11(2)(i).

comprehensive conservation and sustainability strategic policy planning;[325] and, (4) other additional policies as needed to promote conservation and sustainable use of biodiversity.[326] The Minister of the Environment is tasked with developing a draft strategy,[327] which incorporates opinions of civil society as represented by the Central Environmental Council,[328] for submission to cabinet. Finally, an annual review is conducted and submitted to the Diet which outlines *the current state of* biodiversity policies,[329] and identifies policy areas of focus for the subsequent year for further strategic planning.[330]

A common but differentiated national and regional focus

The NBS is developed based on the principles of comprehensiveness and systematic promotion of environmental conservation as enumerated in the Basic Environment Law of 1993,[331] and is the guiding policy document for all strategic planning on sustainability and conservation of biodiversity.[332] Regionally, prefectures and municipalities are encouraged to independently or jointly establish a regional biodiversity strategy based on the unique conditions and constraints of that region. Following the development of a regional strategy, prefectures and municipalities must send the strategy to the Minister of the Environment.[333]

LESSONS LEARNED IN IMPLEMENTATION

Successes

Japan's Basic Act on Biodiversity provides for an effective and frequently reviewed strategic planning mechanism. Beyond annual progress reporting and refinement, the NBS benefits from the experience and incorporation of prefectural and municipal strategic plans. In 2002, Japan refined their monitoring process to incorporate quarterly review cycles.[334] This pre-existing institutional experience has allowed Japan to produce five versions of their NBS, with the most recent version set for revision in 2015 based on the midterm review results on the Aichi Targets.[335] By leveraging a continuous refinement model based on national, prefectural and municipal knowledge transfer, Japan has developed a highly responsive strategic environmental planning model.

In 2010, in accordance with the Basic Act on Biodiversity, cabinet adopted the fourth NBS. The Strategy established an ambitious long-term perspective on biodiversity conservation and sustainable use with its 100 year "Centennial" plan, in addition to adopting short- and mid-term targets (for 2020 and 2050, respectively).[336] By adopting a long-term perspective in their strategic environmental planning but focusing attention on short-term implementation and review, Japan has been able to establish an effective interplay between long-term conservation goals and short-term planning and implementation. This approach has allowed for enhanced knowledge transfer between

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[324] *Ibid.* Art. 11(2)(ii).
[325] *Ibid.* Art. 11(2)(iii).
[326] *Ibid.* Art. 11(2)(iv).
[327] *Ibid.* Art. 11(3).
[328] *Ibid.* Art. 11(4); Basic Environment Law 1993 at Art. 41.
[329] *Ibid.* Art. 10(1).
[330] *Ibid.* Art. 10(2).
[331] *Supra,* Basic Environment Law 1993, Art. 15.
[332] *Supra.* Basic Act on Biodiversity, Art. 12 (2).
[333] *Ibid*, at Art. 13(3).
[334] Convention on Biological Diversity, *Action for Biodiversity: Towards a society in harmony with nature* (CBD Secretariat: Montreal, Canada, 2010) at 38.
[335] Japan, The *National Biodiversity Strategy of Japan (2012-2020): Roadmap towards the Establishment of an Enriching Society in Harmony with Nature* (Ministry of the Environment: Government of Japan, 09-28-2012) at 125. [NBSAP 2012]
[336] Japan, *The National Biodiversity Strategy of Japan 2010: Biodiversity is life, Biodiversity is our life* (Ministry of the Environment: Government of Japan, 2010) at 5. [NBSAP 2010]

national, prefectural and local governments and environment councils, and iterative refinements to strategies at all levels based on exemplars.

Another notable success is the highly participatory nature of the strategic planning and prioritization initiatives. Beyond enumerating the various responsibilities of civil society, Japan's Basic Act on Biodiversity also leverages the pre-existing Central Environmental Council (nationally, regional, and locally) as a conduit for stakeholder communication, debate and consultation.[337] The Central Environmental Council is comprised of a cross-section of civil society (medial, academia, NGO/Citizens, business, relevant agencies/ministries, media, and local government) having expertise with regard to environmental conservation.[338] Similarly, prefectures and municipalities implement environmental councils to localize the debate. Taken in concert, the multiple tiers of engagement with civil society illustrate Japan's dedication to public participation in biodiversity conservation planning.

Remaining challenges

The primary challenge facing the Diet is completing the activities needed to meet the ambitious biodiversity goals set in the allotted timeline – by 2020 and 2050 respectively. As of February 2012, 15 prefectures and 11 municipalities had completed the development of Local Biodiversity Strategies, with 27 other prefectures and 26 municipalities in the development process.[339] Japan's cabinet recently approved the fifth iteration of the NBS,[340] which builds on the approximately 720 measures and 35 numerical targets outlined in 2010 in light of the Aichi Targets and the Great East Japan Earthquake.[341]

Providing increased support for regional measures and planning is essential to increasing channels of communication and civil engagement. A lack of understanding of biodiversity, and the impact humans have on ecosystem integrity, was noted as a key challenge in 2009 following a Cabinet Office survey which highlighted that only 13% of citizens knew the meaning of biodiversity, and only 36% had heard of biodiversity.[342] While inroads have been made on raising public awareness (the same survey administered in 2012 showed an increase to 19% and 56% respectively), mainstreaming biodiversity into the daily lives of Japanese citizens remains difficult.[343] Focus remains on developing and implementing national and regional campaigns to increase understanding of biodiversity through first-hand experiences, promotion of a biodiversity-conscious social system and lifestyles.

Effectively identifying and introducing exemplary components, characteristics and experiences of each regional strategy also slows Japan in realizing their Centennial Plan. While significant progress in biodiversity conservation has been realized in many areas, developments are based on loosely coordinated individual efforts rather than a harmonized collection of initiatives.[344] The promotion of cross-sectorial and inter-regional initiatives will increase cooperation and collaboration among participating organizations. Further, by focusing on establishing sound educational frameworks at the elementary,

[337] *Supra,* Basic Environment Law 1993 at Art. 41.
[338] *Ibid,* Art. 42.
[339] COP 11 Review of Progress in Implementation of the Strategic Plan for Biodiversity 2011 – 2020, Including the Establishment of National Targets and the Updating of National Biodiversity Strategies and Action Plans, UNEP/CBD/COP/11/INF/12, available: www.cbd.int/cop11/doc
[340] *Supra*, NBSAP 2012.
[341] *Ibid,* at 2.
[342] *Ibid,* at 57.
[343] *Ibid.*
[344] *Ibid,* 58.

secondary, and post-secondary levels which promote biodiversity conservation, human-natural capital constraints which are currently being experienced can be alleviated.[345]

CONCLUSION

The Basic Act on Biodiversity (2008) addresses a range of actions necessary to achieve Aichi Target 17, including:

- Development of a comprehensive, annually reviewed and updated, National Biodiversity Strategy
- Creation of a National Biodiversity Strategy to implement the Convention on Biological Diversity and revision in light of the Aichi Targets
- Establishment of a highly participatory, effective and refined strategic environmental planning mechanism

Leveraging over 15 years of strategic environmental planning, Japan has been able to quickly develop a highly effective, coordinated and participatory framework to develop and update their NBS and meet Aichi Target 17. Now on its 5th version, updated in September 2012, the NBS is a response to Japan's commitments under the Aichi Targets and the 2011 Great East Earthquake, which illustrated the fragility of nature's balance to many. While success is being realized, the difficulties of enhancing local and regional collaboration and cooperation will remain impediments.[346] Nonetheless, Japan's successes in participatory ecosystem planning are very significant and provide a strong example for other nations.

[345] *Ibid.*
[346] *Supra,* NBSAP 2012 at 52.

ANNEX 12: LEGAL BRIEF
Target 17 NBSAPs
South Africa, National Environmental Management: Biodiversity Act, 2004

Authors: Nihaya Khalaf, Centre for International Sustainable Development Law and Stanley Tshitwamulomoni, University of Cape Town/ Department of Environmental Affairs

KEY MESSAGES:

- The National Environmental Management: Biodiversity Act (NEMBA) was adopted in 2004 to consolidate laws relevant to biodiversity. It made South Africa one of the few countries to give an NBSAP legal status and impact by adopting a legal requirement for the development of a National Biodiversity Framework (NBF).
- The NBF ensures an integrated, co-ordinated and consistent approach to biodiversity management by organs of state in all spheres of government, NGOs, the private sector, local communities, the public and all other stakeholders.
- The NBF provides a five-year framework to co-ordinate and align the efforts of the many organisations and individuals involved in conserving and managing South Africa's biodiversity.
- While the NBSAP is comprehensive and based on a 15 year timespan, the NBF focuses attention on the most urgent strategies and actions that can make the greatest difference. It identifies 33 priority actions for the period 2008 to 2013, organised according to the five strategic objectives of the NBSAP.
- The NBF is reviewed every five years, providing an opportunity to take stock of progress, review priorities and realign efforts.

1. BACKGROUND

1.1 Social and Political Context

South Africa is diverse not only in terms of people and culture but also in terms of biological resources and ecology. With only 2% of the planet's land area, the country is home to 6% of the world's plant and mammal species, 8% of bird species and 5% of reptile species, many of which are found only in South Africa. With nine biomes ranging from Desert to Grassland to Forest, South Africa has a huge range of habitats, ecosystems and landscapes. The country has three of 34 globally recognized biodiversity hotspots: the Cape Floristic Region, which falls entirely within South Africa; the Succulent Karoo, shared with Namibia; and the Maputaland-Pondoland-Albany hotspot, shared with Mozambique and Swaziland. South Africa's seas straddle three oceans, the Atlantic, the Indian and the Southern Ocean, and include an exceptional range of habitats, from cool-water kelp forests to subtropical coral communities. The southern African coast is home to almost 15% of known coastal marine species, including 270 marine fish families out of a world total of 325. South Africa is recognised as one of only 17 megadiverse countries.

This vast wealth of biodiversity assets provides a foundation for economic growth, social development and human wellbeing.[347] However, the country's unique biodiversity is heavily threatened by the three interrelated threats of habitat destruction, climate

[347] Driver A., Sink, K.J., Nel, J.N., Holness, S., Van Niekerk, L., Daniels, F., Jonas, Z.,Majiedt, P.A., Harris, L. & Maze, K. 2012. *National Biodiversity Assessment 2011: An assessment of South Africa's biodiversity and ecosystems. Synthesis Report*. South African National Biodiversity Institute and Department of Environmental Affairs (SANBI), Pretoria.

change and invasive alien species.[348] The new political climate in 1994 after the end of apartheid brought about a significant shift in thinking in the biodiversity conservation sector. The core focus remained to understand, protect, manage and use the country's rich and valuable biodiversity resources wisely, but with a new focus on ecosystems, social justice and socio-economic development. Specifically, conservation had to embrace participatory approaches to decision-making and help keep people on the land in production landscapes that support sustainable livelihoods.[349]

South Africa's 1996 Constitution and Bill of Rights create the overall framework for environmental governance in the country. Although the Constitution does not specifically refer to biodiversity as such, it enshrines environmental rights,[350] and specifies the powers and functions of national and provincial governments over the environment, nature conservation and natural resources, such as soil, water, forests and marine resources. In keeping with these Constitutional provisions, three key pieces of legislation set out the principles and procedures governing biodiversity management in the country: the National Environmental Management Act of 1998 (NEMA), the Protected Areas Act of 2003 (NEPAA) and the Biodiversity Act of 2004 (NEMBA).[351]

1.2 Legal Reform Process

The democratic election of 1994 was a catalyst for a series of changes to South Africa's legislative, policy and institutional framework for biodiversity conservation.[352] The first ten years of democracy saw an overhaul of founding principles, policies and legislation to achieve social justice, equitable access to resources and economic sustainability.[353] In 1995, the South African Government initiated a national consultative process to develop a policy and strategy for biodiversity conservation that would reflect the interests and aspirations of all South Africans. This culminated in 1997 with the White Paper on the Conservation and Sustainable Use of Biological Diversity and the ratification of the CBD. The White Paper sets out a number of goals, strategies and priorities for conservation, sustainable use and equitable benefit sharing, and sets the scene for the development of appropriate legal instruments, including NEMBA in 2004.[354]

2. ACHIEVING THE AICHI BIODIVERSITY TARGET

2.1 Element of the Target Achieved

348 Ibid at 9.

349 Mandy Cadman, Caroline Petersen, Amanda Driver, Nik Sekhran, Kristal Maze, Shonisani Munzhedzi, *Biodiversity for Development: South Africa's Landscape Approach to Conserving Biodiversity and Promoting Ecosystem Resilience* (2010), SANBI at 25.

350 Section 24 of the Constitution states that all South Africans have the right to an environment that is not harmful to their health and well-being, and is protected for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation, and secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development.

351 *Biodiversity for Development: South Africa's Landscape Approach to Conserving Biodiversity and Promoting Ecosystem Resilience*, supra at 30.

352 Louis J Kotze and Anel Du Plessis, "The Inception and Role of International Environmental Law in Domestic Biodiversity Conservation Efforts: The South African Experience" (2006) 6(1) Queensland University of Technology Law and Justice Journal 30

353 *Biodiversity for Development: South Africa's Landscape Approach to Conserving Biodiversity and Promoting Ecosystem Resilience*, supra at 24.

354 Ibid

In response to CBD requirements, a South African NBSAP was released in 2005 through extensive stakeholder consultation led by Department of Environmental Affairs (DEA).[355] It was informed by a spatial component also released in 2005, the National Spatial Biodiversity Assessment (NSBA). The NBSAP was formalized as a policy instrument in the 2008 National Biodiversity Framework (NBF),[356] which establishes priority actions to guide the biodiversity sector in South Africa and is reviewed every five years.[357]

2.2 Legal Basis for Measure

Chapter 3 of NEMBA governs biodiversity planning and monitoring, with the first object being to provide for integrated and coordinated biodiversity planning.[358] Section 38 requires the Minister to prepare and adopt a NBF within three years of the coming into effect of the Act. It also requires the Minister to monitor implementation of the NBF and review it at least every five years. The NBF must be published by notice in the *Gazette* along with any future amendments by the Minister. Section 39 of the Act defines the content of the NBF. It mandates that the NBF: provides for an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders and the public.

2.3 Indicators of Success

The NBSAP and NBF have led to progress in biodiversity planning in South Africa. The NBSAP provides a comprehensive long-term strategy, including fifteen year targets. The NBF provides a framework to coordinate and align the efforts of the many organisations and individuals in conserving and managing biodiversity in support of sustainable development. It aims to focus attention on the most urgent strategies and actions required over a five year period, and assign roles and responsibilities of key stakeholders, including organs of state whose mandates impact on biodiversity conservation and management. At its heart lie 33 Priority Actions which provide an agreed set of priorities to guide the work of the biodiversity sector and focus collective attention and effort on the activities that will make the most difference. Progress has also been made with regard to the various targets for protected areas coverage and to mainstreaming biodiversity across sectors, especially in terms of spatial planning and decision-making, through development of bioregional plans. Business and biodiversity initiatives have been established, and various fiscal incentives to promote sustainable biodiversity management are under development.[359]

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355 Ibid at 36

356 National Biodiversity Framework, South African Gazette No 32474, 3 August 2009

357 *Biodiversity for Development: South Africa's Landscape Approach to Conserving Biodiversity and Promoting Ecosystem Resilience* at 36.

358 NEMBA 2004 at s 37.

359 Christian Prip et al, *Biodiversity Planning: an assessment of national biodiversity strategies and action plans* at 32

3. INNOVATIVE AND TRANFERABLE LEGAL PRACTICE

3.1 A Novel Legal Approach:

South Africa's NBSAP was developed in response to its CBD obligations through an intensely participatory process led by the Department of Environmental Affairs with the financial support of the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP).[360] The concept document was completed in 2002 and consultations led by the Department of Environmental Affairs and Tourism (DEAT) lasted from 2003-2005. The NBSAP sets out five strategic objectives over 15 years. Each strategic objective identified a number of outcomes combined with indicators for five year targets and activities to achieve these targets according to its priorities with support from partners and the DEAT.[361] The first strategic objective is an enabling policy and legislative framework that integrates biodiversity management objectives into the economy.[362] To integrate biodiversity into socio-economic development, biodiversity concerns were mainstreamed into the South Africa National Treasury Budgeting Process, National Strategy for Sustainable Development, National Climate Change Response Strategy, Mining Sector-Mining and Biodiversity Forum (MBF), National Action Plan and the National Spatial Development Perspective.[363]NEMBA was adopted in 2004 and entered into force on 1 January 2006. It is the main legal platform for biodiversity conservation in South Africa, providing for the management and conservation of South Africa's biodiversity within the framework of NEMA.

Chapter 3 of NEMBA calls for what can be described as an effective, participatory, and updated NBSAP. Section 37 of the Act provides that Chapter 3 aims to provide for integrated and coordinated biodiversity planning. Section 38 obliges the Minster of Environmental Affairs to prepare and adopt a national biodiversity framework within three years of the coming into force of the Act, to monitor the implementation of the NBF, and to review the NBF at least every five years.[364] Section 38 also gives the Minister the ability to amend the NBF when necessary.[365] The NBF and each amendment must be published by notice in the Gazette.[366] Section 39 deems that the NBF must provide for an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government, non-governmental organisations, the private sector, local communities, other stakeholders and the public.[367] It also requires the NBF to be consistent with NEMBA itself, the national environmental management principles elaborated in NEMA, and any relevant international agreements binding on South Africa.[368] Further, the NBF must identify priority areas for conservation action and the establishment of protected areas, and reflect regional cooperation on issues related to biodiversity management in Southern

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360 *Biodiversity for Development: South Africa's Landscape Approach to Conserving Biodiversity and Promoting Ecosystem Resilience* at 36

361 Ibid.

362 Nine ecosystems, marine, river, terrestrial and estuarine, were indicated as in need to priority conservation actions in the 2005 NBSA.

363 Presentation by Wilma Lutsch, "National Biodiversity Strategy and Action Plan: South Africa" Capacity-Building Workshop on Implementing NBSAPs and Mainstreaming Biodiversity for Southern and Eastern Africa, 4 - 8 February 2008, Rustenburg, South Africa, online: http://www.cbd.int/doc/meetings/nbsap/nbsapcbw-seafr-01/other/nbsapcbw-seafr-01-za-nbsap-en.pdf

364 NEMBA at s 38(1)(a)-(c).

365 Ibid at s 38(1)(d).

366 Ibid at s 38(2).

367 Ibid at s s 39(1)(a)

368 Ibid at s 39(1)(a)-(b).

Africa.[369] The NBF may also determine norms and standards for provincial and municipal environmental conservation plans.[370]

Innovative biodiversity management concepts and tools of legal standing have been developed based on the Act.[371] For instance, in line with Chapter 4 of the Act, the NBSAP focuses on ecosystem and species conservation to ensure efficiency and adaptation to climate change. Within the focus on identifying critical biodiversity areas and ecological support areas, such as wetlands and water yield catchments, the NBSAP gives explicit consideration to climate change principles.[372]

3.2 International Commitments Met

This legal measure helps implement international obligations relating to national biodiversity strategies and action plans,[373] which can guide the implementation of other biodiversity-related conventions on the conservation of wetlands, endangered species, migratory species, and natural resources.[374]

3.3 Ministerial Competencies

The Department of Environmental Affairs has overall responsibility for the implementation of NEMBA. The Minister is responsible for developing, implementing and reviewing the NBF, can amend it, and must publish it in the Gazette.

4. KEY LESSONS LEARNED

Lessons Learned in Implementation

- Much biodiversity conservation work has been carried out in global biodiversity hotspots through GEF and other funding, but this is uneven across the country and has not yet prioritised areas where high poverty and high ecosystem productivity coincide. Gains made through bioregional programmes with donor funding have resulted in many of the targets of the NBSAP being addressed.

- Some gains were sustained beyond the funded period and functions embedded into provincial and local government, but many challenges remain, particularly the challenge of resourcing biodiversity stewardship work with communal and private landowners.

- Provincial conservation authorities and municipalities lack skills and resources to tackle biodiversity management mandates – and it is at these levels that many critical decisions are taken affecting biodiversity. In particular, provincial authorities have a limited emphasis on monitoring and limited capacity for monitoring in relation to achieving targets set out in the NBSAP and NBF.

- Lead agents have lacked capacity and human resources to implement the NBSAP and NBF fully. Many of the priorities have been tackled, but not in a systematic way, with priority actions being allocated, costed and resourced.

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369 Ibid at s 39(1)(c)-(d).
370 Ibid at s 39(2).
371 *Biodiversity for Development: South Africa's Landscape Approach to Conserving Biodiversity and Promoting Ecosystem Resilience* at 43.
372 Ibid.
373 CBD Article 6(a)
374 Ramsar Convention, CITES, CMS, the *African Convention on the Conservation of Nature and Natural Resources*

Progress has been made in mainstreaming biodiversity into spatial and development planning at local and provincial levels, but much work remains to be done, particularly in relation to major economic sectors such as mining, agriculture, forestry and fisheries.