



INECE - UNEP INDICATORS PROJECT
FINAL SUMMARY AND COUNTRY REPORTS

30 APRIL 2006

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INECE - UNEP INDICATORS PROJECT: FINAL SUMMARY

1 INTRODUCTION

1.1 Objectives of the INECE-UNEP Indicators Project

Over the past 30 plus years, states have agreed to numerous international instruments designed to protect the environment and advance sustainable development. While states may often agree with the principles promoted in the agreements and have a good-faith desire to implement their obligations, the reality has been that many states have felt overwhelmed by the multiplicity of obligations they have incurred under multilateral environmental agreements (MEAs). In a series of regional meetings, the United Nations Environment Programme (UNEP) received constant requests for assistance in identifying synergies and developing methodologies to more effectively and efficiently implement MEAs, so that states could improve compliance with their MEA obligations.

UNEP partnered with the International Network for Environmental Compliance and Enforcement (INECE) (the “Parties”) to develop pilot projects to identify opportunities to create efficiencies in the implementation of biodiversity-related MEAs. Through the identification, design, and use of environmental compliance and enforcement indicators, the Parties sought to recognize potential synergies among activities designed to ensure compliance with MEA obligations and to enable countries to more effectively and efficiently implement MEA requirements.

The relevant MEAs include the Ramsar Convention on Wetlands, the Convention on Biological Diversity (CBD), the Convention on the Conservation of Migratory Species (CMS), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as well as the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (the Lusaka Agreement) when applicable. After a series of discussions, INECE and UNEP agreed to initiate pilot projects in Brazil, Costa Rica, Kenya, and South Africa.

1.2 Evolution of the Project Scope

The Parties originally envisioned the project to focus on synergies within two thematic groupings of MEAs: a Biodiversity theme and a Hazardous Substances theme. Based on concerns raised by representatives in the chemical secretariats, INECE and UNEP decided to re-focus the project on biodiversity MEAs exclusively.

The initial vision of the project was to develop indicators of MEA implementation synergies, a task that was determined to be conceptually and practically complicated. Through a gradual process of analysis and application, including discussions with the INECE Expert Working Group on Compliance and Enforcement Indicators and a workshop on the project at INECE’s 7th International Conference on Environmental Compliance and Enforcement in Marrakech, Morocco, the project was further defined in a manner that would be both workable and useful: identifying a specific biodiversity challenge in an area of synergy among the MEAs and then developing indicators (quantitative and qualitative) to improve the effectiveness of compliance and enforcement programs targeted to that challenge.

Specific compliance and enforcement activities were identified in two of the pilot countries. The other two pilot countries focused less on specific activities, focusing instead on the coordination and communication among those in each country tasked with MEA negotiation, ratification, and implementation.

1.3 Selection of the Pilot Countries

INECE and UNEP had agreed that the four countries to be included in the project should: (1) have ratified at least three of the MEAs; (2) be located in South America, Africa, Asia, and/or Central America and include at least one country that is a member of the Partnership for Development of Environmental Law and Institutions in Africa (PADELIA); and (3) represent a range of development and demographic characteristics.

Under the original conception of the project, South Africa and Thailand had been selected for the Hazardous Substances Theme, and Brazil and a not-then-determined fourth were to be the Biodiversity theme countries. When the concerns of the chemical secretariats were raised and the new scope determined, INECE worked closely with UNEP to identify appropriate new pilot countries to fit under the biodiversity cluster. INECE communicated with existing “chemical” cluster contacts in South Africa to identify appropriate practitioners on the biodiversity side and worked with the broader INECE network to identify additional pilot countries. The selection was shifted from Thailand to Costa Rica, and Kenya was chosen to be the PADELIA country. The pilot countries thus represented two from Africa, one from Central America, and one in South America.

While pilot projects in Brazil, Costa Rica, and Kenya were to be national in scope, it was determined that it would add value to conduct one of the pilot projects (South Africa) at a sub-national level. Limpopo Province in South Africa was chosen because of a decision to follow up on the participation in the 7th INECE Conference by Dr. Moshibudi Rampedi, a General Manager in the Limpopo Department of Economic Development, Environment, and Tourism.

Reports and accompanying documentation on the pilot projects in each country can be found in the first four annexes (Annex A: South Africa; B: Kenya, C: Costa Rica, D: Brazil).

1.4 Project Methodology

The project proceeded along two parallel tracks: (1) research and design, and (2) in-country activities. The main activities are outlined below:

1.4.1 Research and Design Track

The initial stage of the project required analysis of the biodiversity-related MEAs and determination of the proper areas of synergy and types of indicators. The INECE Secretariat analyzed each of the MEAs to identify themes regarding synergistic elements relating to compliance and enforcement and other implementation activities. INECE also prepared memos on prior efforts to identify MEA synergies. Selected background materials can be found in Annex E.

INECE also sought input and guidance from experts in the field. INECE conducted calls and/or meetings with Lyle Glowka of the CMS Secretariat, Marci Yeater of the CITES Secretariat, Peter Bridgewater of the Ramsar Secretariat, Dan Ogolla of the CBD Secretariat, and Emily Kisamo of the Lusaka Secretariat. Notes of the meetings can be found in Annex F. INECE sought the Secretariats’ assessments of what “compliance” with their MEA means and their perspectives on MEA implementation and synergies. The list of general questions asked of the MEA Secretariats also can be found in Annex F.

INECE leveraged the knowledge of the INECE Expert Working Group on Environmental Compliance and Enforcement Indicators at several points, seeking their guidance and input at a meeting in Marrakech, Morocco, and at a meeting in The Hague, The Netherlands. INECE also sought the input of other experts at workshops in Marrakech, Morocco, and in Santa Barbara, California, that brought together environmental compliance and enforcement practitioners and academics. These experts suggested possible synergies and recommended the use of qualitative indicators for some of the pilot projects. The list of experts and stakeholders consulted during this project can be found in Annex G.

The INECE Secretariat used its research to develop a model matrix of input and output indicators organized into sets based on linkages among the biodiversity-related MEAs. This matrix can be found in Annex H. The matrix was used to illustrate the types of input and output indicators that could be identified under different types of thematic or institutional synergies. INECE sought and received feedback from its expert group on the model matrix and example indicators.

Additionally, INECE promoted the project widely and solicited feedback in various forums, including international conferences, workshops, and meetings, and in academic publications, constantly seeking further input into the process.

1.4.2 In-Country Activities Track

INECE partnered with stakeholders from each pilot country, including focal points, national and provincial environmental ministries, wildlife services, NGOs, academics, international organizations, and others. INECE worked with these partners in meetings and workshops to design the pilot project, assess data capabilities and needs, and identify a key challenge in compliance with laws responsive to biodiversity-related MEAs. INECE then identified, refined, and tested a set of input and output indicators potentially applicable to the identified challenge. Descriptions of the stakeholders, meetings, documents, and indicators for the pilot countries can be found in each country's project summary in their respective Annexes, as detailed below.

1.4.3 Project Website

Background documents and project updates were posted on a password-protected website (www.inece.org/indicators/unep/)¹ for the purposes of project management, communications, and organization.

1.5 Identification of Project Focus

Country stakeholders were presented with a range of possible areas of synergy to consider in the scoping phase of this project (e.g., transboundary trade issues, habitat protection issues). Synergies among "institutional arrangements" emerged during discussions with each of the countries as the general topic of greatest interest. It emerged during discussions with each country that institutional arrangement considerations were the most relevant.

Two of the pilot countries – South Africa and Kenya – focused the project on a specific challenge in an area of synergy among the biodiversity MEAs.

- *South Africa* focused the project on follow-up / compliance with conditions in permits required under the Limpopo Environmental Management Act (largely natural resource utilization). Stakeholders identified as one of their key biodiversity challenges the fact that many permits issued receive little or no follow-up to determine if permit conditions were met. This issue affects the implementation of obligations from all relevant MEAs.
- *Kenya* focused the project on efforts to protect African elephants and several species of sea turtles, specifically on the flow of information among Kenya Wildlife Service scientists, field personnel, and enforcement agents and partners. The project's specific focus was on three types of information flows: (1) scientific data such as habitat and biological activity, (2) field-level information and intelligence, and (3) enforcement activities. This issue affects Kenya's MEA responsibilities under CITES, CMS, and Lusaka, and is also relevant to improving compliance with correspondent national legislation.

¹ Login: inece. Password: unep.

The other two pilot countries – Costa Rica and Brazil – looked at MEA implementation on a broader level, focusing on the coordination and communication among those in each country tasked with MEA ratification and implementation.

- *Costa Rica* focused the project on developing a set of indicators to understand the communications and coordination activities among country stakeholders in the MEA ratification process.
- *Brazil* focused the project on communications and coordination among MEA focal points. Additional elements of the project included evaluating existing Brazilian legislation to identify gaps in MEA implementation and assessing how deep into the Brazilian system the concept of MEAs is permeating.

In all four pilot countries, therefore, the topic selected focused on an “institutional arrangements” area of synergy, as opposed to a thematic synergy (e.g., transboundary trade). The fact that all four countries selected such a topic illustrates the centrality of consideration of institutional arrangements in efforts to improve the efficiency of MEA implementation. Further, the consistency of the selection of the “institutional arrangements” topic across the pilot countries seemed to imply that countries were most interested in resolving the “big picture” framework issues first, before addressing more topic specific issues.

1.6 Outputs of the INECE-UNEP Indicators Project

In accordance with Article IV of the INECE-UNEP Memorandum of Understanding, the outputs of this project are: (1) environmental compliance and enforcement indicators pilot projects in four countries, which are now up and running; (2) project web site, which was described above in section 1.4.3; (3) initial country reports on the findings of applying the first round of indicators for the thematic area to that particular country, which are included in each country’s project summary Annex; and (4) final project summary, including findings, a comparative analysis of results, and recommendations for improving the indicators and their application, which is represented by this document.

1.7 Leveraged Funding & Support

INECE leveraged significant additional monetary and in-kind contributions from partners in support of the INECE-UNEP indicators project, including networking with relevant experts and in-country stakeholders at formal and informal meetings and building on existing INECE projects and experience.

INECE and UNEP, in conjunction with the World Bank, organized and facilitated a workshop at INECE’s 7th International Conference on Environmental Compliance and Enforcement in Marrakech, Morocco in April 2005. The U.S. Environmental Protection Agency (US EPA) provided funding for design and facilitation of the workshop. Travel funds for the participation of South Africa representatives was provide by Environment Agency (England and Wales.)

INECE also convened two meetings of its Expert Working Group to provide guidance on the application of the INECE indicator methodology to MEA-related compliance and enforcement activities and to offer guidance and feedback on the project as it developed. These meetings took place in April 2005 in Marrakech and in November 2005 in The Hague. Meeting participants included representatives from the environmental agencies of Canada, The Netherlands, the US, and other governments, along with representatives from organizations including the World Bank Institute and the Organization for Economic Co-operation and Development (OECD). Furthermore, INECE provided funding for Jose Pablo Gonzalez from Costa Rica, an environmental prosecutor and an in-country project coordinator, to participate in the indicators meeting in The Hague.

The International Fund for Animal Welfare (IFAW) has dedicated significant professional staff hours (primarily through Rosalind Reeve) to the overall project and, in particular, to the

Kenyan pilot project. In Brazil, Instituto "O Direito por um Planeta Verde contributed significant staff hours to prepare for and hosted a workshop on indicator development, as has AMAZON.

VROM funded the participation of Jose Luis Cappella of Peru's Sociedad Peruana del Derecho Ambiental (SPDA) to participate in the Brazil workshop and prepare a report on the applicability of the project to Peru. The US Department of State provided funding for translation during the Brazil workshop.

Feedback on the project was received during several workshops among leading academic and compliance and enforcement practitioners, including an October 2005 workshop at the University of California, Santa Barbara) (which was funded in part by VROM) and at the November 2004 IUCN World Congress (where INECE travel to the Congress was supported by US EPA and VROM).

INECE also has leveraged the UNEP project funding by supporting four law school students and one environmental policy graduate student in conducting research and analysis on country systems, synergies among biodiversity-related MEAs, and other issues of relevance to the project. INECE calculates the estimated intern contribution at greater than 600 hours.

2 BACKGROUND

This section describes the project background: the first part offers brief synopses of each of the MEAs involved in the project; the second part provides an overview of some of the earlier efforts to identify and promote synergies among the biodiversity-related MEAs; the third part describes INECE's experience at the forefront of the development of compliance and enforcement indicators projects.

2.1 The Biodiversity-Related MEAs

*The Convention on Biological Diversity (CBD)*² is the broadest of the MEAs under consideration. The CBD focuses on conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from commercial and other utilization of genetic resources. The convention covers all ecosystems, species, and genetic resources. Its main goals include conserving diverse biological resources *in situ* (in their natural habitat), conserving them *ex situ* (outside their natural habitat) to complement *in situ* conservation, and using biological resources sustainably while avoiding adverse impacts on biodiversity. The CBD's Cartagena Protocol on Biosafety sets up a notification and advance informed agreement procedure for the transboundary movement of living modified organisms.

*The Convention on International Trade in Endangered Species of Flora and Fauna (CITES)*³ focuses on ensuring that international trade in species and specimens of wild animals and plants does not threaten their survival. The convention focuses principally at the species level, and on ensuring that international trade in specimens of selected species is subject to certain import and export controls (permits).

*The Convention on the Conservation of Migratory Species of Wild Animals (CMS)*⁴ focuses on conserving terrestrial, marine, and avian migratory species throughout their range. The convention assists its parties in conserving migratory species and their habitats by concluding agreements and by undertaking cooperative research activities. The fundamental principles of the CMS are that parties: (a) should promote, cooperate in, and support research relating to migratory species; (b) shall endeavor to provide immediate protection for certain listed migratory species; and (c) shall endeavor to conclude agreements covering the conservation and management of certain other listed migratory species.

² <http://www.biodiv.org/default.shtml>

³ <http://www.cites.org/>

⁴ <http://www.cms.int/>

*The Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar)*⁵ focuses on conservation and wise use of wetlands and their resources. The convention provides a framework for national action and international cooperation and covers all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are important for biodiversity conservation and for human well-being.

*The Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (Lusaka Agreement)*⁶ was created in part to address the enforcement and compliance deficiencies in Southern and Eastern Africa associated with the CITES convention, as well as the CBD and the African Convention on the Conservation of Nature and Natural Resources. The Lusaka Agreement embraces stricter enforcement and compliance measures at a regional level to achieve these goals. The six states that have ratified or acceded to Lusaka are the Republic of Congo, Kenya, Lesotho, Tanzania, Uganda, and Zambia; Ethiopia, South Africa, and Swaziland signed it, and it remains open for accession by any African State.

2.2 Synergy Efforts Among Biodiversity-Related MEAs

To ensure that the INECE-UNEP project did not replicate previous efforts to identify and strengthen synergies among MEAs, the INECE Secretariat assessed efforts by several organizations to promote synergies among the biodiversity-related MEAs, including the ones discussed below.

2.2.1 MEAs and the MEA Secretariats

While each of the conventions stands on its own, the inter-linkages between the issues and processes involved in each have led to cooperative efforts among the conventions, including a joint website.⁷ These efforts generally take the form of joint work plans and programs between individual MEAs, usually between only two conventions at a time. The CBD is the logical focal point for linkages among the biodiversity MEAs and has linkages to CITES, CMS, and Ramsar. Collaboration between conventions typically progresses in at least two phases. It usually begins with a memorandum of understanding or cooperation between the Secretariats of two conventions, usually expressing the intention of the Secretariats to collaborate in an unspecified way and look for further opportunities for synergy or joint work. The next level of collaboration is a joint work plan or program. These may be either between the Secretariats or between the conventions themselves, creating links between parties to the convention or, more frequently, between the scientific or technical advisory bodies of the conventions. These documents are usually more specific than the MoUs and establish specific tasks that will be accomplished, often with accompanying deadlines.

2.2.2 United Nations University Inter-Linkages Initiative

The United Nations University (UNU) Inter-Linkages Initiative began its work on inter-linkages in 1998 and held a conference on MEA synergies and coordination in 1999. The UNU Interlinkages Initiative has produced project training workshops, several case studies on countries (e.g. Sri Lanka, Pakistan, etc.), and several policy briefs on a series of topics related to synergies. UNU Inter-Linkages workshops promoted an approach focusing on functions (e.g., data assessment, information storage, institutional support, legislative arrangements, and compliance) and sought synergies and coordination across functional areas and across

⁵ <http://www.ramsar.org/>

⁶ <http://www.internationalwildlifelaw.org/lusaka.pdf>

⁷ <http://www.biodiv.org/cooperation/joint.shtml>

thematic clusters (i.e., climate-related, biodiversity-related, and chemical-related conventions). More information on the case studies and the initiative in general are available online.⁸

2.2.3 United Nations Environment Programme

UNEP has been very active in its search for and promotion of synergies. The Economics and Trade Branch developed a study suggesting that the use of economic instruments such as property rights, charges, fiscal instruments, and environmental funds could be further developed to build synergies among the CBD, CITES, and Ramsar. The World Conservation Monitoring Centre (WCMC) conducted a feasibility study on increased harmonization of the CBD, CITES, CMS, Ramsar, and the World Heritage Convention (WHC), with a focus on increased harmonization of information management, reporting, capacity building for implementation, and process. In May 2004, UNEP-WCMC released an extensive status report on activities undertaken by individual MEAs, UNEP, other UN agencies, and other institutions on synergies and cooperation among the biodiversity-related MEAs.⁹ The status report was meant to prevent redundant efforts in areas already considered with regard to synergy promotion. The WCMC offered its conclusions and recommendations as drawn from the overview of existing initiatives in synergies and cooperation.

More recently, in January 2006, UNEP organized a High-Level Meeting on Compliance with and Enforcement of MEAs. This meeting in Sri Lanka gathered representatives from MEA secretariats, the Chairs of MEA compliance committees, government representatives and representatives of civil society to discuss, in their personal capacities, the technical aspects of compliance and enforcement and to search for potential legal, structural and institutional innovations that could enhance implementation of MEAs. The meeting addressed issues including whether the clustering of issues and the development of synergies and inter-linkages was the proper way forward. The report of the meeting is available online.¹⁰

2.2.4 Vilm Workshop

TRAFFIC organized a workshop on the Isle of Vilm, Germany, in April 2004 to discuss effective collaboration between the CBD and CITES.¹¹ The workshop identified opportunities for achieving greater synergy in CITES and CBD implementation at the national and international levels and generated background papers on a variety of related issues. Particular attention was paid to the issues of sustainable use of wildlife resources, access and benefit sharing, and linking site-based, thematic and species-based approaches to achieving biodiversity conservation and sustainable use. Changes desired within each of these areas were identified, methods and mechanisms to achieve those changes suggested, and possible constraints to achieving such changes noted.

2.3 Environmental Compliance and Enforcement Indicators

UNEP determined that INECE's experience at the forefront of development of compliance and enforcement indicators projects through its extensive international network of environmental compliance and enforcement practitioners would usefully support and complement prior and concurrent synergy efforts. The following provides a brief introduction to environmental compliance and enforcement indicators.

2.3.1 What are Compliance and Enforcement Indicators?

⁸ <http://www.unu.edu/inter-linkages/>

⁹ <http://www.unepwcmc.org/conventions/harmonization/workshop04/BackgroundSynergies.pdf>

¹⁰ <http://www.iisd.ca/yimb/unepmea/yimbvol121num1e.html>

¹¹ The proceedings of the workshop are available at <http://www.bfn.de/09/skript116.pdf>.

Environmental compliance and enforcement indicators are instruments that measure results achieved by environmental compliance and enforcement programs. This information helps decision-makers to improve the effectiveness and efficiency of those programs.

By identifying, designing, and using performance indicators, senior officials can better evaluate and communicate how effectively environmental compliance and enforcement programs respond to priority environmental problems. Indicators can improve:

- control of program operations;
- ability to set goals and adjust strategies;
- decision-making for resource allocation;
- identification and correction of performance issues;
- ability to motivate employees;
- accountability;
- communications with the public; and
- efficiency and effectiveness of programs.

2.3.2 What Types of Indicators are Commonly Used?

There are four principal categorizations of indicators. The first two – *input & output* – describe an agency’s resources and activities. The second two – *intermediate outcome & final outcome* – describe the impacts of those efforts.

- *Input indicators* reflect the resources that government agencies contribute to a program, including: time, staff, funding, and equipment.
- *Output indicators* reflect the agencies’ activities and work products, including: number of inspections performed, number of compliance assistance workshops provided, and number of enforcement cases pursued.
- *Intermediate outcome indicators* reflect progress toward a final outcome, such as a change in behavior or knowledge in the regulated community.
- *Final outcome indicators* measure the ultimate result the program is designed to achieve, such as an improvement in ambient air quality or reduction in loss of biodiversity.

These types of indicators are often organized in a logic model such as this one, to graphically depict the relationships between resources invested, activities undertaken, and the results of those activities.

Table 1: Demonstration of a Logic Model for Environmental Compliance and Enforcement Indicators

Inputs <i>resources</i>	Outputs <i>activities</i>	Intermediate Outcome <i>behavior change</i>	Final Outcome <i>environmental Impact</i>
Personnel Funds for salaries, contracts, computers, etc	Inspections conducted Enforcement actions taken Fines assessed and collected	Greater understanding of how to comply Improved environmental management practices Increased compliance	Reduced pollution emissions Improved ambient water quality Reduced contaminant burden in wildlife

Ideally, a logic model should demonstrate a results chain, although even a model that does not yield a perfect logical chain can still highlight important relationships.

2.3.3 INECE's Experience with Compliance and Enforcement Indicators

INECE initiated its work on environmental compliance and enforcement indicators during its 6th International Conference in Costa Rica in 2002 and formally launched the project during the 2002 World Summit on Sustainable Development. Since then, INECE has formed an Expert Working Group on Environmental Compliance and Enforcement Indicators, hosted international meetings on indicators, conducted research, developed publications, and provided guidance and expertise to country-level pilot projects.

In November 2003, INECE and OECD co-hosted an international workshop in Paris, France, to promote the development and use of environmental compliance and enforcement indicators. The workshop convened more than 50 senior practitioners from more than 20 developed, transition, and developing countries, as well as international organizations, MEA secretariats, and nongovernmental organizations. The workshop promoted performance measurement indicators as a fundamental practice for achieving good compliance and resulted in the commitment of many officials and experts to continue and/or initiate indicator pilot projects in their home countries.

At the request of participants from the INECE-OECD workshop and other events, INECE's Expert Working Group on Compliance and Enforcement Indicators developed a *Performance Measurement Guidance for Compliance and Enforcement Practitioners* that presents practitioners with definitions and a methodology for the identification, design, and use of these indicators. The publication has become the leading resource for those involved with the development of environmental compliance and enforcement indicators programs.

INECE also maintains a Web forum which provides a central location for ongoing indicators activities. INECE has used the Web site to host "e-dialogues" that brought together experts from around the world to discuss best practices for designing, implementing, and using indicators. More information about INECE's work on indicators, including workshop proceedings and the *Guidance* document, is available at <http://inece.org/forumsindicators.html>.

3 THE INECE/UNEP PILOT PROJECTS

Brief summaries of each country's pilot project are presented below. These synopses present information about the focus in each country, the types of indicators developed, and the outcomes. More detailed information about the pilot project in each country, including the stakeholders, meetings, documents, and indicators, can be found in each country's project summary in their respective Annexes.

The first two countries discussed are South Africa and Kenya, which both focused the project on a specific institutional challenge relevant to their implementation of the MEAs. Then summaries are presented for Costa Rica and Brazil, which looked at MEA ratification and implementation on a broader level, focusing on communication and coordination.

3.1 South Africa

The project report and full set of indicators for South Africa can be found in Annex A, as can other documents relevant to that project, including the initial list of questions, presentations, the INECE trip report, and the preliminary list of indicators generated at the in-country meeting.

3.1.1 Focus of the Project

At a meeting of environmental compliance and enforcement officials in Limpopo Province, South Africa, it was agreed that the focus of the project would be on compliance with permits required under the Limpopo Environmental Management Act, which generally relate to utilization of natural resources. Meeting participants identified as one of their key biodiversity

challenges the fact that many permits issued receive no follow-up to determine if permit conditions were met. This issue affects the implementation of obligations from all relevant MEAs.

3.1.2 Indicators

The input indicators developed for the project in Limpopo Province will help track the level of resources available for permit compliance efforts at the provincial and district levels – i.e., the number and competence of the compliance officers, the equipment and technology available, and the funds available. The input indicators also monitor the crucial involvement of judicial officials in the permit enforcement process – their competence and the amount of time they allocate to environmental crimes.

The output indicators will measure and assess the permits issued, the compliance investigations undertaken and reports submitted, and the prosecutions for violations. In other words, given the resources, support, and judicial involvement, the output indicators will monitor how well the provincial and district officials enforce the permit conditions.

Combined, these indicators will shed light on provincial efforts to enforce Limpopo's natural resource utilization legislation, and consequently will improve compliance within the province with South Africa's MEA obligations.

3.2 Kenya

The project report and full set of indicators for Kenya can be found in Annex B, as can other documents relevant to that project, including the initial list of questions, presentations, and the INECE trip reports.

3.2.1 Focus of the Project

The Kenya pilot project focused on efforts to protect African elephants and several species of sea turtles, specifically on the flow of information among Kenya Wildlife Service scientists, field personnel, and enforcement agents, as well as other partners such as MIKE and the Kenyan Sea Turtle Conservation Committee (KESCOM). The project's initial focus was on three types of information flows: (1) scientific data such as habitat and biological activity, (2) field-level information and intelligence, and (3) enforcement activities. African elephants and several species of sea turtles are listed on both CITES and CMS Appendices. All are listed on CITES Appendix I, while elephants are listed on CMS Appendix II and sea turtles on CMS Appendix I. These sea turtles are also the subject of a CMS daughter agreement, the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia (IOSEA), of which Kenya is a signatory. This project therefore affects Kenya's MEA responsibilities under CITES, CMS, and Lusaka, as well as Ramsar, though less directly. It is also relevant to improving compliance with correspondent national legislation.

The project considered both the vertical flow of information – from data collection (e.g., in the field) through to its use (e.g., by senior Kenyan Wildlife Service (KWS) management and the Lusaka Agreement Task Force (LATF)) – as well as the horizontal flow of information through other relevant national agencies, such as the National Museums of Kenya, police and Customs.

3.2.2 Indicators

INECE, KWS, LATF and other key stakeholders developed indicators concerning three levels of information flow: (1) communication of scientific information from Museums, MIKE, KESCOM, KWS Science, Academia, and CITES to the KWS Conventions Bureau; (2) communication of field-level information and intelligence from LATF, KWS rangers, KWS intelligence, informants, the police, and KWS Conventions to the KWS Security headquarters;

and (3) enforcement activity communications among KWS Security headquarters, KWS rangers, police, LATF, Interpol, World Customs, CITES, KESCOM, and MIKE.

Generally, the input indicators assess whether legal requirements exist for communications, while the output indicators assess the frequency of communications and the time it takes for information to move between actors. Other input and output indicators assess whether information collected in the field is easily relayed and whether that information is then utilized by KWS Security headquarters and by enforcement agents.

3.3 Costa Rica

The project report and full set of indicators for Costa Rica can be found in Annex C, as can other documents relevant to that project, including the initial list of questions and a memo on the implementation of biodiversity-related MEAs in Costa Rica.

3.3.1 Focus of the Project

During the scoping phase of this project, in-country stakeholders identified the lack of institutional coordination and the issue of conflicting institutional responsibilities generally as key challenges. They proposed that the project focus specifically on identifying measures to improve communications and coordination activities among country stakeholders in the MEA ratification process.

This project focus is particularly timely because Costa Rica is not yet a party to CMS or to the CBD's Cartagena Protocol on Biosafety, so improvements in institutional arrangements during the ratification process are still relevant to ratification of these instruments. More broadly, this issue affects the implementation of obligations from all relevant MEAs.

3.3.2 Indicators

Given the nature of the pilot project's focus in Costa Rica, the indicators are mainly qualitative output indicators across three levels of activity in the MEA ratification process: during negotiations (prior to signature), prior to ratification, and when drafting legislation to implement the MEA. Examples include communications between the negotiation team and other stakeholders, whether the country has the laws and resources in place to implement the MEA, and whether there are formal legislative hearings on the ratification process.

Some inputs into the negotiation process, including the scope and composition of the negotiation team and the existence of legislation to support a public review of MEAs prior to ratification, are also included.

3.4 Brazil

The project report and full set of indicators for Brazil can be found in Annex D, as can other documents relevant to that project, including the initial list of questions and minutes of the in-country meeting.

3.4.1 Focus of the Project

In discussions with the political and technical focal points of the biodiversity-related MEAs in Brazil, the lack of coordination among the focal points became apparent. Participants at the Brazil workshop requested that the project focus on developing indicators that will assist in assessing and improving the quality and frequency of communications and coordination among focal points.

A further aspect of this project includes identifying indicators to assess the existing Brazilian legislation, correlate this legislation with MEA obligations, and identify gaps in implementation. Additionally, the project will identify indicators to assess how deep into the Brazilian system the concept of MEAs is permeating.

This project focus is responsive to Brazil's extensive regulatory schemes and complex administrative structure. It also responds to the realities of shared responsibilities among the federal, state, and municipal governments. This project will implicate the implementation of obligations from all relevant MEAs.

3.4.2 Indicators

In identifying and designing indicators to help assess the quality and frequency of communications among the focal points for biodiversity-related MEAs in Brazil, it was determined that the most useful form of indicators would be in the form of a qualitative yes/no survey for focal points, with the addition of quantitative indicators when appropriate

Input indicators include assessments of the existence of legal requirements for communication, adequacy of focal point budgets, the diversity and number of laws and agencies implementing the MEAs, and the number of judicial officials who have been introduced to the MEA requirements. Output indicators include the frequency of focal point communication, the communication between focal points and enforcers, and the frequency of MEA references in judicial activities.

4 BROAD FINDINGS

4.1 Impacts of the Project

4.1.1 Impacts Realized

The INECE-UNEP indicators project has already yielded beneficial results. The process of consultation and indicator development resulted generally in greater appreciation of the utility of environmental compliance and enforcement indicators, increased attention to the need for good data, improved communication and coordination among stakeholders, brought new or renewed focus in the pilot countries on the key challenges being addressed, and enhanced understanding of gaps and unmet needs.

The pilot projects introduced new groups of practitioners in the pilot countries to the idea of compliance and enforcement indicators. The in-country stakeholders appreciated the potential utility of indicators, and it is hoped that these principles can be applied to a broader range of issues. For instance, officials in Limpopo Province, South Africa, developed 3-4 additional projects for which indicators could prove useful in the future, and the South African Department of Environmental Affairs and Tourism expressed interest in expanding the indicator project model to all other provinces in the country, which also face the challenge of improving permit compliance.

The projects also resulted in increased attention to the importance of instituting good practices for data collection and management. For instance, in Kenya, INECE's visit resulted in the development of a database template for sharing scientific and enforcement data.

The stakeholder meetings held in the pilot countries often represented the first time many of these stakeholders had met with each other to compare their activities and experiences, resulting in improved communication and coordination going forward. In Limpopo Province in South Africa, for instance, INECE's visit provided a rare opportunity for different directorates within the provincial environment ministry to sit down together and learn what the others are doing. Similarly, in Brazil, the MEA focal points had minimal interaction with each other prior to INECE's visit.

The process of developing the pilot projects has also brought new or renewed focus in the pilot countries on the key challenges being addressed. For instance, the pilot project yielded improved understanding of the limitations faced by Costa Rica (and by extension many

other countries in the region) in ratifying biodiversity-related MEAs. The increased attention alone provides hope for improvement in efforts to address these challenges.

The consultation and development processes also enhanced understanding of gaps and unmet needs in the pilot countries. INECE's discussions with the Kenya Wildlife Service, NGOs, Lusaka, CITES, and other in-country actors during the course of this pilot project led to increased awareness of the need for effective and timely communications among field, Security, and enforcement officials. INECE's visit to Kenya facilitated much-needed discussion among the relevant actors concerning unmet needs, inadequate responsiveness, and the impact of these on enforcement efficiency. INECE's visit also revealed a clear gap in the enforcement chain concerning prosecutors, leading to an immediate response of new funding for prosecutor training on environmental crimes.

4.1.2 Impacts Anticipated

The principal expected impact of the INECE-UNEP indicators project is heightened understanding of how to improve country implementation of biodiversity-related MEAs. Specifically, the project may yield:

- More effective enforcement of national legislation designed to satisfy MEA requirements;
- New efficiencies in meeting biodiversity MEA obligations;
- Improved communication among relevant stakeholders and institutions, as well as with the public, international organizations, and donors;
- Strengthened environmental governance.

The pilot projects' input and output indicators will also provide initial insight into where gaps in compliance systems are and where efficiency in implementation can be improved.

These projects will expand the capacity of national stakeholders, UNEP, and INECE to use environmental compliance and enforcement indicators as tools to measure and manage the effectiveness of national implementation of multilateral environmental agreements (MEAs).

4.2 Comparative Analysis of Results

By conducting four different pilot projects, the INECE-UNEP project enabled comparative analysis of the utility of environmental compliance and enforcement indicators with respect to the assessment of MEA implementation. The clearest distinction among the projects was that two focused on in-country challenges, whereas two others focused on the broader level of MEA ratification and implementation. This dichotomy had important implications for the suitability of indicators for assessing MEA implementation. Development and implementation of this project in the four pilot countries made clear that there are significant differences in the utility of compliance and enforcement indicators to improve MEA implementation based on the breadth of the issue chosen.

Environmental compliance and enforcement indicators, as described above in section 2.3, are designed to monitor and assess the performance of a management program. The model involves determining what resources the agencies have to manage the problem, what activities they undertake with those resources, and what effects those actions have on the regulated community and on the problem itself. The process involves working with stakeholders to identify the key pieces of data that can reveal information about the larger situation.

INECE's standard indicators model fits relatively well where specific challenges within a particular management program were chosen (i.e., lack of follow-up with natural resource utilization permit conditions in South Africa, and inadequate information flows from field through to enforcement on elephants and turtles in Kenya). In both cases, stakeholders were surveyed and consulted, and lists of input and output indicators were generated that fit cleanly within the

INECE logic model and that could be tracked over time in order to manage and adapt the relevant compliance program.

In contrast, in Costa Rica and Brazil, stakeholders identified much broader challenges that do not directly involve on-the-ground enforcement and instead focus on the MEA level. In these two instances, INECE was able to develop indicators to identify potential gaps in the MEA ratification and negotiation process in Costa Rica and in the communication activities of MEA focal points in Brazil. However, the indicators generated tended to read much more as a checklist of steps in a process for “good practices” for institutional arrangements, and it was often challenging to determine which category in the logic model (input vs. output) was appropriate for any given indicator. The indicators were not designed to measure the resources invested or the activities that resulted from those resources, which also means that it would be challenging to track the effect of changing levels of resources over time. Rather these indicators sought to identify synergies at a higher level in the country’s implementation process. The challenges selected by stakeholders were at too abstract or conceptual a level to fit neatly within the standard INECE indicator framework. The process of consulting stakeholders, identifying a problem, and determining the key issues within that problem still proved useful in identifying gaps in communication and capacity.

In sum, the INECE indicators framework was most applicable when the indicators concerned specific resources and activities within a particular enforcement program. Increased efficiency in these programs, in turn, can improve the efficiency of MEA implementation. If Limpopo Province, and eventually all South African provinces, can improve compliance with natural resource utilization permits, then that should in turn improve South Africa’s compliance with its biodiversity-related MEA obligations. Similarly, if Kenya can improve its information flows concerning enforcement of laws protecting African elephants and sea turtles, and later on other species that should improve its MEA implementation as well.

In Costa Rica and Brazil, in contrast, where the projects did not involve a specific on-the-ground enforcement program but rather a broader assessment of MEA coordination, the indicators developed were more likely lead to changes at an institutional level, which ultimately may have a greater impact in creating efficiencies in a country’s implementation of several biodiversity-related MEAs. The in-country representatives in both Costa Rica and Brazil have indicated the potential for this project to lead to changes in the ways the countries implement their biodiversity-related MEA obligations. Furthermore, the results from Brazil and Costa are relevant and appropriate for testing in other countries as well as in a peer review evaluation process.

5 LESSONS LEARNED & RECOMMENDATIONS

The process of developing pilot projects in each of the four countries highlighted some key lessons that should be accounted for in other similar projects and in future phases of the INECE-UNEP project.

First, progress in the project was most significant when INECE visited the pilot countries or otherwise worked in-person with the in-country stakeholders. During Phase I of the project, INECE encountered its most significant challenges in securing the commitment of persons within the national agencies who were willing to dedicate time and resources to assist with the project and to provide relevant information. Even when in-country commitment seemed to have been secured, communication and actual progress were often still slow. In contrast, progress on the project was significant each time the INECE Secretariat visited the country for an extended period of time (at least 7-10 days); INECE visits to South Africa and Kenya engaged in-country partners and established those projects on solid footing. Accordingly, INECE recommends an increased level of in-country time by project staff, as well as increased budgets for in-country consultants, so as to increase levels of buy-in and utility and so as to move these projects forward with greater focus and speed.

Second, particularly in Brazil, INECE was continually challenged in implementing and advancing this project not only by the large volume of biodiversity laws, but also by the language barriers. These language barriers necessitated increased reliance on bilingual in-country assistance, and as noted above, this was often time-consuming and challenging to obtain. Accordingly, INECE recommends making provisions for language barriers and other related complexities that may be encountered.

Third, as described in the comparative analysis above, INECE recommends that future indicators projects focus on specific in-country challenges within a particular enforcement program. Relatedly, INECE recommends that the continuation of the Costa Rica and Brazil projects should perhaps involve a peer review process that could be standardized and applied to additional countries, as a complete understanding of institutional arrangements on multiple dimensions (i.e., ratification and implementation processes.)

INECE also recommends that countries look early in the scoping process at whether they want to use qualitative indicators, quantitative indicators, or a mix of both. Quantitative indicators are generally much more data-intensive and therefore require more effort on the part of in-country stakeholders to collect, organize, and analyze this data. Quantitative indicators are easier to measure, however, and to track over time. Qualitative indicators, on the other hand, generally require less in-country effort to collect data. However, it can be challenging to present qualitative data in a way that allows for meaningful monitoring over time so as to enable adaptation in management; qualitative data should be organized and systematized in a logical way.

6 NEXT STEPS

In an effort to concentrate its activities, INECE initially proposes to focus the next phase of this project on advancing the pilot projects in Kenya and South Africa. Phase II of the project will serve as a component in a more comprehensive capacity building and enforcement cooperation strategy in Kenya and South Africa that leverages support from other INECE donors including, but not limited to, the Environment Agency (England and Wales), the Netherlands, the United States, the European Commission, and the International Fund for Animal Welfare.

INECE will also seek to advance the results from the pilot projects in Brazil and Costa Rica. INECE is recommending developing a peer review process for determining status of institutional arrangements and capacity for implementing biodiversity related MEAs efficiently within a country, as well as determining needs for further capacity building activities.

These activities will be included in a broader proposal for collaboration between UNEP and INECE to use indicators to improve implementation of and compliance with MEAs.

6.1 Proposed Phase II Activities in South Africa

The primary Phase II activity in South Africa will be the development of a strategy, in cooperation with DEAT and other national and provincial government stakeholders, to apply the input and output indicators and the lessons learned from the Limpopo pilot project in other provinces. This will involve preparing a work plan (including a fundraising plan) for a national workshop on the project.

INECE also proposes to work with Limpopo and DEAT officials to develop intermediate outcome indicators that build on the indicators developed in Phase I.

6.2 Proposed Phase II Activities in Kenya

The primary Phase II activity in Kenya will be the development of a set of intermediate outcome indicators that build upon and are complementary to the input and output indicators identified in Phase I.

INECE may also explore developing input, output, and intermediate outcome indicators that incorporate the role played by KWS prosecutors. Additionally, INECE may look into expanding the indicators beyond elephants and sea turtles to include other endangered flora and fauna. Phase II may also result in an expanded data inventory template.

INECE proposes to conduct the Phase II activities in cooperation with the Kenya Wildlife Service and other key stakeholders, including the Lusaka Agreement Task Force.

6.3 Next Steps for Costa Rica & Brazil

Phase II in Costa Rica and Brazil will have two components. INECE will test the indicators developed in Phase I in greater detail to determine their analytical value and explore whether the projects in Costa Rica and Brazil can serve as a model for baseline assessments of other countries' institutional capacity to implement biodiversity-related MEAs in an efficient and effective manner. It is envisioned that these baseline assessments could take the form of a peer review process involving both experts in the issues and regional academics.

INECE is recommending developing a peer review process for determining status of institutional arrangements and capacity for implementing biodiversity related MEAs efficiently within a country, as well as determining needs for further capacity building activities.