

Funding Governmental Tasks in Environmental and Social Impact Assessment and Environmental Approval

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1. INTRODUCTION

Environmental Impact Assessment (EIA) ensures that environmental, and where required, social and economic information is incorporated into decision making. EIA is designed to support decisions on project approval, and is often tied to decision-making on environmental licensing. In many countries, EIA also forms the basis for an Environmental (and Social) Management Plan (EMP) and licensing conditions. In combination, EIA, environmental licensing, and enforcement of the EMP and licensing conditions ensure timely identification and the continual management of environmental risks. In this way the EIA/licensing system helps to ensure that economic growth is achieved in an environmental, social, and economically responsible way.

For this EIA and licensing system to make a difference on the ground, sufficient resources need to be available. The costs associated with this system are typically partly covered by the proponent of the activity and partly by the licensing and licence enforcing governmental agencies. The resources required by the government agencies are related to their role in:

- Ensuring that the EIA report and EMP are accurate, complete and appropriate.
- Ensuring that well-informed and accountable project approval decisions are taken, and include suitable monitoring arrangements and mitigation measures.
- Ensuring that the licensed activity is implemented as has been approved.

The tasks related to the fulfilment of these roles include:

- Ensuring good quality guidelines for the EIA and EMP.
- Ensuring robust (independent) review for EIA reports and EMPs.
- Ensuring sound decisions on environmental licensing and licence conditions (in cases in which a licence is given).
- Regular monitoring to determine whether the activity is executed according to the licence conditions.
- Enforcing that the activity is executed in compliance with licence conditions.
- As a check on the effectiveness of EIA, monitoring of the state of the environment in area influenced by the project.

Executing the above tasks involves costs, and executing these tasks properly, requires non-negligible costs. The financial arrangements needed to secure adequate funding for these tasks deserve more attention within the field of EIA. This conclusion has been drawn by the team of the Netherlands Commission for Environmental Assessment (NCEA) based on their two decades of working with countries around the world to strengthen the practice of EIA. If governmental agencies do not have adequate resources to fulfil their role in EIA, performance of EIA will always be limited.

The NCEA has initiated the development of this resource on EIA financing mechanisms to bring together relevant insights on how funding for EIA tasks can be improved. A country that is developing a new EIA funding system, or strengthening its existing funding mechanisms, today has the benefit of observing financing systems that other countries have refined before them and can tailor their chosen mechanisms to integrate features that have proven to be effective. This publication aims to build on the lessons learnt from the implementation of previous EIA systems, identifying the mechanisms that offer the best way

to structurally secure funding. It is intended to be an information resource that will enhance improvement of EIA systems.

This publication has been developed in collaboration with the International Network for Environmental Compliance and Enforcement (INECE), who have provided much of the substance. While this resource was under development, its key principles were tested jointly with the Secretariat for Environmental Assessment in Central Africa (SEEAC), a network of national EIA associations. The national associations participated in an analysis of their countries financing mechanisms for EIA, using the approach described in this resource. In a separate publication the results of the analysis, and the recommendations can be found for the countries of Burundi, Cameroon, Central African Republic, Congo and Rwanda.

The following paragraph introduces the information on EIA financing mechanisms contained in this publication.

Chapter 2 informs people who want to change the financial arrangements for EIA within their country. We take the reader through the process of selecting and implementing one or more mechanisms to fund government's EIA tasks. This chapter first examines the principles, criteria, and conditions that must be considered in choosing a financial mechanism. It then covers the process of applying the principles, criteria, and conditions to country-specific facts in order to enable decision-making on how the financial arrangements for EIA can be changed. At the end of the chapter, we look at transitional financing mechanisms that can bridge any temporary gaps.

Chapter 3 outlines the procedural steps in the EIA process, including decision-making on environmental licensing, project implementation and follow-up. For each step, the resource needs for the tasks commonly delegated to governmental agencies are outlined. We also look at the possibilities for devolving tasks to the project proponent or to other parties during each step.

While chapter 3 helps to come to an understanding of resource needs, **Chapter 4** explains how to translate the resource needs identified into budgets.

Before we then move on to ways in which to raise revenues for governmental tasks, **Chapter 5** first outlines some options for optimising operations with limited resources. This chapter covers such topics as elimination of inefficiency, but also looks at ways in which to encourage compliance, thereby reducing inspection and enforcement resource needs.

In **Chapter 6** the financial mechanisms that can be used to finance governmental EIA related tasks are addressed. First, the mechanisms by which revenue can be generated are described, including taxation, fees, and fines and penalties. Secondly, the mechanisms are described that can be used to mobilise and channel the flow of the finances raised to the agencies that need the funds.

Throughout the publication examples are included of specific arrangements that countries have made to finance government tasks. At the very end of this resource, **Chapter 7**, a few country examples are presented in more detail. Here you will find, for example, a description of how the Netherlands has organised and funded independent EIA quality review, and an overview of the EIA fee system in Ghana.

2. DECIDING ON CHANGES TO EIA FUNDING

Seven steps towards revising an architecture for funding government tasks in EIA:

1. Identify tasks to be carried out in EIA implementation, environmental licensing and follow through.
2. List entities that (must) carry out these tasks, (re-) attribute tasks to individual entities.
3. Collect statistics on EIA application and environmental licensing;
4. Collect data on cost of actual, and top quality implementation of tasks attributed to government agencies (start estimating, then refine on basis of actual accounting data).
5. Calculate funding need per task and make budget per government agency involved.
6. Take decisions on applicable policies with regard to EIA system funding:
 - Applicable principles (e.g. the polluter pays principle a.o.)
 - Choice of funding mechanism(s)
7. Elaborate funding mechanism and revise legal and regulatory texts accordingly.

Principles, criteria, conditions, and the funding mechanism selection process

The combination of financial mechanisms that is best suited to support a country's EIA and licensing system will depend on contextual factors that include not only the country's legal and political institutions, and natural resources, but also the economic principles that each nation embraces as part of its national identity. Each country must pursue its own vision of how to mobilise funds in a way that is consistent with its objectives for EIA.

This section guides government planners and other users through the process of selecting and implementing one or more mechanisms to fund a government's EIA tasks. The text first examines the principles, criteria, and conditions that must be considered in choosing a financial mechanism. We then go through the process of applying the principles, criteria, and conditions to country-specific facts in order to enable decision-making on how the financial arrangements for EIA can be changed. At the end, we look at transitional financing mechanisms that can bridge any temporary gaps.

2.1 Economic principles that guide financing policies

In selecting an approach to fund an EIA system, policy makers in every country must consider a fundamental question: who should bear the burden of paying for environmental safeguards and pollution control measures? Each country has its own answer to this question and will develop policy differently according to its unique circumstances. Below we provide an overview of the predominant economic principles that countries have used in developing revenue sources to meet the needs of governmental EIA functions.

The first principle that will be covered is that of cost recovery. A few variations will be detailed here: recovering costs from users, from polluters, and from beneficiaries. Next, an additional principle is explained that addresses the role of the government agencies charging the costs: namely the principles of prevention of conflict of interest.

2.1.1 Cost Recovery

Many governments seek to recover the costs of administering and enforcing regulations from the parties who are regulated or who benefit from the regulated activities, either recovering costs partially or in full. The rationale for cost recovery includes increasing funding efficiency through the shifting of burdens associated with specific government services from the general taxpayer base to the parties that create those burdens, as well as providing incentives for specific types of behaviour on the part of the regulated community. The incentives provided by the implementation of cost recovery may be designed to achieve the following:

- Increasing domestic public awareness of environmental costs
- Making regulated entities assume greater ownership of measures to avoid pollution
- Internalisation of environmental costs by proponents rather than having the public at large bear these costs

In the context of an integrated EIA system, the application of this principle calls for governments to recover the project-specific costs of EIA review, licensing, monitoring, and enforcement activities. In the case of non-compliance, this principle calls for recovery of the costs of remediation for pollution or other environmental harms, including the costs of unplanned regulatory responses to non-compliance or accidents that pose immediate harms to the environment. Under this approach, fees and other funding mechanisms applied to the proponent can encompass all the costs associated with government services, including operational costs (e.g., staff time required to implement the regulation), capital costs (e.g., vehicles and equipment), financial costs (interest payments), and any environmental costs, as a result of damages, or depletion of a natural capital, such as the water supply.

Note that in the context of EIA, the proponents of development that requires EIA could be considered polluters, users, or beneficiaries, according to the principles described below. For example, proponents may be considered polluters if their projects cause pollution or create the need for pollution control activities. Likewise, proponents may be considered users if their projects consume natural resources, such as water, that are “public goods.” Finally, proponents may be considered beneficiaries if they indirectly benefit from the costs associated with protecting that resource, but do not directly consume the resource in a manner that can be measured in a tangible way.

There are no black and white lines between these principles, and the cost-recovery principles noted here can be interpreted differently. However, each approach is intended to deliver the same results: costs are matched as closely as possible to the parties who give rise to them.

Case examples: Cost recovery of EIA-related costs in Canada and Australia

Cost Recovery Regulations of Canada – SOR/2012-146 (November 18, 2012)¹

In 2012, Cost Recovery Regulations were introduced in Canada, to support the cost recovery provisions contained in the Canadian Environmental Assessment Act, 2012 (CEAA). The provisions in the Act allow for the Canadian Environmental Assessment Agency to recover expenses directly attributable to the responsibilities of the Agency as well as related services performed by third parties. This includes the cost incurred when engaging environmental assessment review panel members. The Cost Recovery Regulations prescribe what costs the agency can recover from

¹ <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2012-146/FullText.html>

project proponents.

When calculating the costs related to the time spent by government experts on environmental assessment related responsibilities, the agency works with per diem rates. These rates are calculated to recover federal government employees' salaries and benefit plans (EBP), and include overhead and overtime charges. The rates are based on a productivity rate of 220 days/year and an EBP of 20% of salaries. Recoverable travel related expenses for federal employees are defined in detail in Canada's Directive on the Management of Expenditures on Travel, Hospitality and Conferences.

Remuneration of environmental assessment review panel members are as follows:

- Panel chairperson: \$650 per day
- Panel member: \$500 per day

Direct and attributable review panel members' travel expenses also must be recovered.

Third-party expenses that must be recovered include: travel (regular and chartered travel services), publishing, editing and translation, distribution services by regular mail and courier, telecommunications (including telephone, internet, teleconferencing and video conference services) advertising and news wire services, and the cost of public meetings and panel hearings (including meeting facilities, equipment, and related services).

Proposed federal cost recovery fee system for EIA in Australia²

Australia's Department of Sustainability, Environment, Water, Population and Communities has proposed a cost recovery fee system for work undertaken by the Department, subject to bilateral agreements to be completed with Australian states and territories.

The proposed system recognises three types of costs that are part of undertaking an EIA:

- Base costs
- Technical and operational costs
- Complexity costs

Complexity costs are variable, reflecting increased time and resources needed by the Department as complexity increases. Complexity is driven by a range of factors including:

- Number of "controlling provisions" triggered by the proposal
- Level of certainty of the environmental impacts of the proposed action
- Comprehensiveness the information provided for the assessment

The Department has developed a complexity matrix reference to provide additional clarification on project characteristics that increase complexity. If this approach is adopted, the Department plans to work closely with proponents prior to the commencement of cost recovery to identify what costs will apply, to ensure that costs are clear at the start. The fees will need to be paid prior to the Department commencing the relevant EIA activity.

2.1.2 Recovering costs from the polluter: Polluter Pays Principle (PPP)

The polluter pays principle is an environmental policy approach that assigns the costs of preventing and controlling pollution to the party that causes the pollution. The governments of many OECD countries and European Union member states have used PPP to justify the imposition of certain EIA-related responsibilities, such as self-monitoring, on a project proponent. Although PPP has crept into the legal frameworks of a broader group of countries,

² Australian Government, Department of Sustainability, Environment, Water, Population and Communities, <http://www.environment.gov.au/epbc/publications/consultation-draft-cost-recovery.html> accessed July 2013)

the principle has been controversial in developing countries, where the burdens associated with the internalisation of environmental costs are sometimes considered unacceptably high.

Different countries have interpreted the scope of costs that are charged to polluters under the PPP differently. In some countries, polluters are only responsible for paying for their own pollution prevention and control measures and for the remediation of environmental harms they cause. In those countries (e.g., the Netherlands), the costs of regulatory oversight and compliance assurance by government agencies are covered through budget allocations derived from general taxation. Other countries (e.g. Australia) take a broader view of PPP, assigning directly to the polluter the responsibility for the full regulatory costs of environmental licensing, monitoring, inspection, and enforcement.

According to OECD publications on the topic, the application of the PPP can also be linked to the maturity of the environmental management system of a country. A narrow interpretation of PPP can be applied in the long-term (where the EIA system and capacity are well-established), but a broader scope may be applied on a short-term basis to offset a budgetary shortfall.³ In a separate context, the OECD Council has recommended that the PPP be applied in the case of accidental pollution, in two ways. First, the Council recognises that the operators of hazardous facilities should bear the costs of preventing and controlling accidental pollution, as well as the costs of limiting their consequences. Second, the OECD has suggested that authorities responsible for implementing policies for the prevention of accidental releases of hazardous substances, as well as responding to such accidents, be allowed discretion to impose specific fees or taxes (such as licensing fees) on installations that engage in hazardous activities in order to achieve a more economically-efficient allocation of resources.⁴

Case example: Polluter pays principle in the environmental law of South Africa

South Africa's National Environment Management Act (NEMA – 1998) calls for implementation of the polluter pays principle in two sections. Chapter 1, Section 2 (4)(p) incorporates the polluter pays principle into national environmental law, providing that “the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.”

Chapter 7, Section 28 (8)(a) further provides for authorities to recover costs incurred from “any person who is or was responsible for, or who directly or indirectly contributed to the pollution or degradation or the potential pollution or degradation.”

³ OECD (2005), *Funding for Environmental Compliance Assurance: Lessons Learned from International Experience*, 11, 29.

⁴ OECD (1989), *Recommendation of the Council concerning the Application of the Polluter Pays Principle to Accidental Pollution*, 7 July 1989 – C(89)88/Final (Stating that, as a general rule, the cost of executing these responsibilities for the broader regulated community should be covered by the general budget) Available at <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=38&InstrumentPID=305&Lang=en&Book=False>

2.1.3 Recovering costs from the user: User Pays Principle

Several countries utilise a variation of the polluter pays principle that imposes on the user of a natural resource the responsibility to bear the cost of “running down natural capital” (using up a portion of a natural resource). A fee or tax is based on an equivalent value calculated to reflect a given amount of a resource consumed. In order to provide a basis for such a calculation, the government charging the fee must have the capacity to make a determination of the approximate cost of using the resource.

Case examples: User pays principle in Australia and the European Union

Australia: Fees for waste disposal

In many countries, users pay to dispose of garbage in a landfill. These costs can be limited to the operational costs of the landfill, but could also include a component for the use of the land for land filling. By disposing of garbage in a landfill, a person is using this limited resource (land). In Queensland, Australia, the fees charged for disposing of waste in the landfill include the full costs associated with a municipality’s use of the land for a landfill. Including, for example, the costs of buying the land and constructing the landfill, as well as the opportunity cost of using the land as a landfill instead of using the land for an alternative use.⁵

European Union: Europe’s Water Framework Directive

Under the European Union’s Water Framework Directive, Member States must price water in such a way that there are adequate incentives to use it efficiently.⁶ All EU Member States must ensure that the principal groups of water users — industry, households, and agriculture — contribute to the recovery of the costs of water services. Water services are broadly interpreted to include water for irrigation in agriculture, the use of surface waters for navigation, flood protection and hydropower production, as well as industrial and private consumption. The Directive mandates that several elements be included in the recovery of costs. First, the directive requires that the cost of the use of water includes the operational and maintenance costs of water supply, treatment, and related infrastructure. The directive also requires that prices fully cover all environmental and natural resource costs.

2.1.4 Recovering costs from the beneficiary: Beneficiary Pays Principle

The beneficiary pays principle (BPP) takes the approach that those who benefit from an activity that incurs pollution prevention costs or causes environmental harm should bear the cost of pollution prevention or remediation.⁷ BPP embodies the proposition that those who benefit more than the rest of society from pollution prevention or the use of public goods, should pay more. Compared to the polluter pays principle, the BPP provide gives governments less possibility to influence the behaviour of polluters through costing. However, BPP can be appropriate when it is impossible to identify an individual polluter or group of polluters. The beneficiary pays principle may also be appropriate where a source of pollution cannot be eliminated and the operator of the polluting activity does not have funds

⁵ Queensland Consolidate Resources, Environmental Protection (Waste Management) Policy 2000 – SECT 12, Available at http://www.austlii.edu.au/au/legis/qld/consol_reg/epmp2000494/s12.html

⁶ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy. Available at <http://ec.europa.eu/environment/water/water-framework/>

⁷ OECD, *Funding Environmental Compliance Assurance: Lessons Learned from International Experience*, 26 (2005); US Environmental Protection Agency, *Financing Environmental Compliance and Enforcement Programs* (1996).

for environmental improvements. If beneficiaries are defined broadly as the general public, then general taxes that are paid by the public also fall under the beneficiary pays principle.

Case example: Beneficiary pays principle in nature reserves of Kenya and Australia

There may be many visitors to a nature reserve or park who cause little to no disturbance to the natural surroundings. Yet the minimal impact of these visitors may be offset by the actions of a careless few. It is often impossible to draw a one-to-one connection between beneficiaries and their impacts. Instead, all beneficiaries are charged, as in the examples below.

Kenya Wildlife Service park conservation fees

The government of Kenya charges fees for visiting its wilderness parks and for climbing Mt. Kenya. No tangible natural resource is consumed, but collectively park visitors create impacts that require ongoing park monitoring and maintenance.⁸

Great Barrier Reef Coast Marine Park commercial fees

To enter this marine park, permits have to be acquired at cost. The funds raised by these permits help marine park managers to:

- Limit impacts on high-use and sensitive areas.
- Separate potentially conflicting activities.
- Collect data for management plans.
- Monitor activities that may eventually damage marine parks.
- Provide guidelines for activities.

2.1.5 Recovering costs in case of uncertainty: Precautionary Principle

The precautionary principle or precautionary approach states if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action.

In the context of EIA, this principle can be applied to charge any costs associated with addressing uncertainty in impact prediction to the initiator of the activity concerned.

Case example: Monitoring natural gas production in the Wadden area of the Netherlands⁹

Natural gas production in the Wadden area of the Netherlands has been the subject of significant controversy because of the potentially adverse impact it might have on the environment. In 2006, after years of discussion on whether or not to extend natural gas production, the Dutch government granted the Nederlandse Aardolie Maatschappij (NAM) permission to produce natural gas from three existing locations in six gas fields under the Wadden Sea. The permit was granted under strict preconditions. Since the EIA was not sufficiently conclusive on the impacts, the stipulation was made that the dynamic ecology in and around the Wadden Sea would not suffer damage from the subsidence resulting from the gas production. Should such damage occur, then the gas production would be restricted or halted. In order to ascertain whether the precondition is

⁸ See e.g., *KWS Launches New Electronic Park Entry Fees Payment System*, 29 September 2009, Available at <http://www.kws.org/info/news/2009/29sep09.html>

⁹ Views and Experiences from the NCEA, 2009, http://www.commissiemer.nl/docs/mer/diversen/views_experiences_2009.pdf

being met, the NAM needs to undertake an extensive programme to measure the subsidence, monitor features of ecological value and reports on this to the government every year.

2.1.6 Prevention of conflict of interest principle

This principle (also known as the “integrity principle”) addresses the concern that a conflict of interest may arise if government departments that perform inspections or issue permits receive payments (permit and inspection fees) directly from the regulated parties. The principle recognises that perverse incentives may arise if environmental regulatory bodies associate higher levels of pollution with greater revenues (in the form of fines) and have a disincentive to promote practices that reduce environmental impacts.

A significant concern in connection with both fees and fines is ensuring the integrity of fee collection and the avoidance of conflicts of interest. In keeping with the prevention of conflict of interest principle, parties responsible for providing services (such as inspection) should not receive payments directly from the regulated parties. This principle has been embodied in the mechanisms for funding government EIA tasks in France and the Netherlands, where licensing fees are not paid to the regulatory agency, but to other government bodies. One study has proposed a system that would eliminate a feedback loop between revenue collection and the prioritisation of EIA tasks. Under the system, a government agency charged with oversight of the EIA process would have a significant role in establishing spending priorities and key operating rules, but would not be involved in the daily operations of any financial mechanism or exert pressure on resource allocation decisions outside of official channels and procedures¹⁰. As a general rule, revenues should be collected and disbursed within a strict framework that permits little discretion on the part of parties managing the funds.

Case example: Indirect payments of permit fees in Belgium, France and the Netherlands

In Belgium, France, and the Netherlands, regulated projects do not pay permit fees to the entities that issue the permits, but make payments instead to the general treasury. Inspectorates receive their funding through grants from the State, which appropriates funds for their operational needs.

2.2 Conditions and criteria that guide the selection of financing mechanisms

Here we discuss a selection of conditions and criteria that are important to consider when looking at new financing mechanisms for EIA related tasks. For the purposes of this toolkit, a condition describes the status of a particular characteristic of the country for which a funding mechanism is being evaluated. Criteria are attributes of potential funding mechanisms, the values of which can be used as a basis for decision-making. We first set out these conditions and criteria, and in the text below these are applied in a step-by-step process toward changing the financing mechanisms for EIA in specific jurisdictions.

¹⁰ USAID, Amélioration du système d'évaluation environnementale et financement de la gestion de l'environnement au Mali (November 2006).

2.2.1 Conditions that set the frame for financing mechanisms

Legal and political framework	Refers to the political and legal context in which a funding mechanism must be implemented. Relevant factors include customs and traditions as well as the legal and institutional framework for government financing.
Nature of the EIA system	The complexity and range of tasks the government must perform throughout all stages of a fully integrated EIA system, as well as the financial and technological resources needed to implement these task, will jointly determine the resource needs.
Coordination with other government entities	This condition relates to the way in which the relevant agencies involved in the administration of a country's EIA system interact with and coordinate with one another.

2.2.2 Criteria for considering financing mechanism

Adequacy, sustainability, and flexibility of the funding source	This criteria draws attention to the ability of a mechanisms to generate sufficient funds to cover the direct and indirect costs of carrying out all intended functions in a fully integrated EIA system, and its ability to provide a long-term, predictable, and consistent recurring revenue source. The mechanisms should be structural, to be insulated from shifting political priorities, yet at the same time flexible enough to be able to respond effectively to a variety of needs (based on the size, risk, complexity, and other project characteristics) and to deal with changes in needs and circumstances over time.
Administrative burden	A funding mechanism must be feasible, practical, and reasonably efficient to manage from a time and cost perspective. The administrative burden should not be unnecessarily high, and certainly not higher than can be borne by the administration in charge.
Political and social viability	A funding mechanism needs political support, given the priorities of lawmakers and other government leaders who have the ability to control the allocation of funds or implementation of the mechanism. It is also important that the mechanism will be accepted by the public, including the regulated community.
Transparency and accountability	The funding mechanisms selected should minimise opportunities for corruption and safeguards should be built into the system that discourage or prevent government officials and staff from diverting funds. A secure and transparent system enables government actors, the regulated community, lenders, and the public to have confidence in the system.

Autonomy of the implementing agency	A funding mechanism should not threaten the autonomy of an agency that needs to be able to function independently. The mechanism should permit sufficient discretion for government agencies involved in the EIA system to make management and spending decisions independently of the other government entities. ¹¹
Community profile	Community means the groups and individuals that are subject to the EIA regulations. Relevant characteristics include the geographical distribution of projects, the types of potential environmental impacts resulting from different projects, the complexity of oversight of the activities involved, the historical level of compliance by project proponents, and the frequency of recurring environmental problems.

2.3 Selecting and implementing funding mechanisms

A broad range of factors must be considered in determining what funding options are best suited for a country's EIA system. First, a thorough analysis is needed of the funding needs of the EIA system and the current financing mechanism(s) in use. If new financing mechanisms are indeed needed, these need to be selected keeping the appropriate principles, criteria and conditions in mind. Of course, the mechanism needs to be implemented so that its characteristics match with the resource demands associated with each stage of the integrated EIA process, and that capacity is in place to administrate it. Finally, an interim phase might be needed before a new mechanism can become fully operational. This chapter covers each of these considerations.

¹¹ See e.g., Angus Morrison-Saunders and John Bailey, *Transparency in environment impact assessment decision-making: recent developments in Western Australia*, Impact Assessment and Project Appraisal, volume 18, number 4, December 2000 (Stating that "The EIA process in WA has two unique features: the EPA's statutory guarantee of independence from political direction; and the primacy of the environmental decision by the Minister for the Environment, combined with the legal status of any implementation conditions").

2.3.1 Analysing the resource needs and financing mechanisms currently in use

It is difficult to determine whether new financing mechanisms are needed, or which to choose, without knowing the approximate costs of performing those government functions associated with EIA and the timing with which expenditures must be made. A prerequisite to a meaningful assessment of funding mechanisms, therefore, is having a good understanding of the resource needs involved. Chapter 3 provides a detailed overview of how to assess the resource needs of an EIA system. At the same time, insight is needed into the current financing situation, as well as into the anticipated revenue base, meaning the number of actors who could be required to make payments to the government through taxes, fees, fines, or other charges.

However, such an analysis requires some data on costs and expenditures for EIA-related tasks. If such data is not available, it is important to begin gathering this information as soon as possible. An interim phase might be needed in order to make preliminary changes to the financing of EIA tasks, collect data, and evaluate what further changes might be needed. See also the 2.3.6 transitional funding.

Key questions for this step:

- What are the resource needs for the EIA system under study?
- How are the EIA tasks currently financed?
- Is the current financing sufficient, or are new mechanisms or modifications to existing mechanisms needed?
- Is sufficient data available to make this analysis? If not, can an interim phase be introduced to experiment and build up sufficient insight for more structural changes?

2.3.2 Deciding on and implementing changes to financing mechanisms

An important factor to consider when contemplating changes in the financing mechanisms is which key economic principles policymakers wish to incorporate. These principles are relevant to policy decisions concerning who should pay for the costs of protecting the environment or correcting damages that have occurred. If domestic policy favours cost recovery and/or the polluter pays principle, then the funding mechanisms chosen should aim to raise all or part of the cost of government services provided (EIA review, monitoring, inspection, etc.)

from the regulated parties, as well as recover the costs associated with environmental damages or resources consumed. On the other hand, decision-makers may feel that it is appropriate for the general public (through taxation) to contribute to governmental EIA tasks, and choose to fund some or all of these from taxation income. The key here is to ensure that it is clear which principles underpin the financing choices made.

Note that sometimes principles conflict in certain areas. Implementing the avoidance of conflict of interest (integrity) principle may require the avoidance of direct payments of fees to the government bodies that incur the costs of providing services.

Key questions for this step:

- What are the economic principles and policy goals to be implemented?
- Which texts contain these principles and how are these mandates expressed?
- What do those principles and goals require of any proposed funding mechanism?

2.3.3 Analysing conditions for the selection of financing mechanisms

A. LEGAL AND POLITICAL FRAMEWORK

It is also important to determine which revenues sources are permitted under a country's laws. If a means of raising adequate funds is explicitly authorised by legislation or its implementation is within the discretionary power of the competent government authority, then it is easier to work within this framework. However, if important policy objectives cannot be addressed in the current framework, it may be necessary to consider the need for legislative enhancements to permit new funding mechanisms or modifications of existing ones. In assessing the possibility for changes in legislation, policy-makers and planners should consider where funds can be raised and where they will be deployed. In some jurisdictions, the administration of certain tasks may be decentralised or revenues may be derived from locally imposed fees or taxes.¹² In other cases, the legal basis for funding may be contained in sector-specific laws and regulations.

In some countries, it will be worthwhile to look at prior experiences with funding mechanisms, within EIA and well as outside. Have other agencies found effective ways within the current legal framework?

In addition to the legal framework, the actors in a country's political system and the dynamics between them can be an important factor in shaping the likelihood of success of any proposed mechanism. Without the support of government officials that are in a position to approve and prioritise a funding initiative, there is little chance that it will be implemented, let alone nurtured and sustained. It is also important to consider what distinctive perspectives the public may have on how the government should generate funds for its tasks. If some mechanisms are widely unacceptable, they may not be worth investing in.

Key questions for this step:

- Which laws, regulations, and decrees authorise the funding mechanism?
- Which fundraising powers are within the authority of the government bodies responsible for EIA?
- What funding mechanisms are authorised?
- Does the framework give sufficient possibility for financing changes? Or are changes to the framework needed?
- Is there sufficient political will and support amongst relevant government agencies to make the changes needed? Can political will be raised, if needed?
- What is the public opinion on financing mechanisms and how does this public opinion affect the potential for changes to the financing arrangements?

¹² For more information on taxes and fees, see chapter 6 Financial mechanisms for raising and distributing revenue.

Case example: Legal basis for environmental fees in Ghana

Ghana's Environmental Assessment (Amendment) Regulations 2002, LI 1703 prescribe the amount of processing and permit fees that project developers must pay when undertaking different types of activities that require environmental permits and certificates. There is a review mechanism for the periodic review that allows rate increases, based on changing economic conditions. The review requires Parliamentary approval.

Under the Environmental Protection Act of 1994 (Act 490), Ghana's Environmental Protection Agency is charged with imposing and collecting environmental protection levies. This has enabled the Agency to establish a fee system for EIA activities, which include Processing Fees, Environmental Permit Fees and Environmental Certification Fees.

B. NATURE OF THE EIA SYSTEM

An evaluation of potential new funding mechanisms (or options for restructuring existing ones) must take into account the range of tasks the government must perform throughout all stages of a fully integrated EIA system, as well as the financial and technology resources needed to implement these tasks. It will make a difference to the finances needed, for example, if authorities need to bring in independent experts for EIA review, or if authorities are charged with organising public hearings. See also chapter 3 detailing the EIA process further. It may also be relevant to consider the types of projects, applicable environmental standards and the types environmental concerns that are common in EIA practice, in case these give rise to specific technical needs that will be accompanied by associated costs.

Key questions for this step:

- What tasks in the EIA system are allocated to governmental agencies?
- Are there specific associated technological, transportation and facility needs associated with these tasks?
- Is there a specific focus in EIA practice in project type, or impact type, that gives rise to specific technological needs?

Case example: Separating EIA processing fees and licensing fees

The activities that environmental authorities will undertake to review an EIA report, are different from the activities that will be undertaken to monitor the effects on the ground once the project has been approved. Consequently, the time input from authority staff, and the technological needs, differ as well. To more precisely recoup the costs for each responsibility, some countries charge separate fees for EIA processing and for granting of the licence. In a survey of EIA fee regimes in a range of African countries, it was found that Mozambique, Zambia and Sudan follow this logic.¹³ See also the Ghana country example for a more detailed look at regime consisting of separate fees for separate steps in the EIA process.

¹³ Fishman, A, 2013, Restructuring Liberia's EIA Fee Regime.

C. COORDINATION WITH OTHER GOVERNMENT ENTITIES

The manner in which responsibilities are divided and coordinated between government entities may impact the selection and implementation of a financing mechanism, since fund distribution does not automatically follow departmental function. A government department that does not receive adequate funds to carry out critical tasks represents a potential point of failure in the EIA system. An important analysis, therefore, is how revenues from a financing mechanism can be appropriately distributed among the government entities that require these resources, or how revenues can be raised separately by each entity having a role in the EIA system, especially in a decentralised system.

Key questions for this step:

- Are responsibilities for EIA related tasks centralised at the national level or decentralised at a subnational or local level?
- Are responsibilities for regulatory oversight of any part of the EIA system distributed among government agencies by sector or function? If so, how do they coordinate tasks and share information?
- How is funding for EIA related tasks allocated among them?

D. REGULATED COMMUNITY PROFILE

The characteristics of the regulated community are important considerations in evaluating resource requirements for EIA related tasks. The size and characteristics of the regulated community, for example, and the size and types of projects that are common, play a part in determining the manner in which funds should be raised, allocated, and distributed. It is important to have a sense of the budgets that are spent on EIA studies and project realisation overall. This understanding is relevant if there is an interest in linking EIA fees to project size, for example. In many countries, it will be useful to distinguish between practices in different sectors within the regulated community. There may be sector specific examples of funding arrangements and accountability mechanisms that can provide inspiration, or can be directly used, for EIA financing.

Key questions for this step:

- What are the predominant sectors where EIA is applied?
- Approximately how many EIAs must be completed on an annual basis for each sector?
- How are projects in each sector distributed geographically?
- Are there relevant types of regulations, including taxes, fees, and penalties, and collection mechanisms used in these sectors, to consider for EIA financing?
- Are there relevant arrangements for enforcing the environmental and social obligations within the regulated community to consider for EIA financing?

Case example: Differentiating EIA fees according to project budget

In his study into EIA fee regimes of a range of African countries, Akiva Fishman identifies several environmental agencies that have tied EIA fees to project budget¹⁴. Zambia, for example charges different fees, depending on the project's total value. For example, when a project's value is between US\$100K and US\$500K, the fee is US\$10K. When a project's value is between US\$500K and US\$1M, the fee is US\$25K. These fees range from 0.3% – 1% of total project value. The full EIA fee schedule for Zambia is as follows:

Total value of the project (US \$):	Fee amount (US \$):
Less than \$100,000	\$1,000
\$100,000 – \$500,000	\$10,000
\$500,000 – \$1,000,000	\$25,000
\$1,000,000 – \$10,000,000	\$50,000
\$10,000,000 – \$50,000,000	\$100,000
Greater than \$50,000,000	\$150,000

In Uganda, the EIA fees are also differentiated. On comparison, the Ugandan fees are lower than in Zambia, ranging from 0.1% – 0.5% of the total project value. However, Uganda does not apply a maximum fee: above the maximum threshold, the fee is always 0.1% of the total project value. This means that while fees in Uganda may be lower than those in Zambia for smaller projects, they can become significantly higher for larger projects.

2.3.4 Applying criteria to the selection of financing mechanisms

A. ADEQUACY, SUSTAINABILITY, AND FLEXIBILITY OF THE FUNDING SOURCE

A mechanism for generating revenue to fulfil government resource needs at any stage of the EIA process should match the financial resource needs and cash flow requirements associated with those needs. Some mechanisms are more suitable for funding operating costs, while other mechanisms are more appropriate for capital costs. In general, mechanisms that are appropriate for funding recurring costs provide a stable and predictable stream of revenues, while mechanisms that are most appropriate for capital costs provide a significant quantity of funds at distinct points in time. If a stable stream of funds is necessary to support an EIA function, then it is likely that either user fees or a combination of user fees and taxes is most suitable. If a portion of the funds is received as allocations from the general treasury, they may be transferred only at certain times of the year and should be spread over the appropriate timeframe. If it is not critical to have a steady cash flow, or if funds are needed for capital expenditures, other funding mechanisms may be appropriate.

Key questions for this step:

- What are the cash flow needs associated with each government EIA task, in terms of consistency, adequacy, and frequency?
- Through what channels would funds go, before they are available to support EIA functions?
- Will the funds need to be shared with other government programmes?
- What safeguards can be put in place to ensure that funds are not diverted at the time of collection or later in the system?

¹⁴ Fishman, A, 2013, Restructuring Liberia's EIA Fee Regime.

Few funding mechanisms are entirely predictable. Some revenues do not, by their nature, provide consistent streams of revenue and complicate budgeting and planning. In particular, revenues from fines may be erratic, even though they may result in significant amounts of new funding when viewed over a long time horizon.

In addition, shifting political priorities can pose an enormous challenge to government agencies that are dependent on budget allocations. Depending on the relative priority level of environmental protection, it may or may not make sense to focus on obtaining larger allocations from the general budget or pursuing a dedicated funding mechanism that does not compete with other priorities.

Structural security refers to the ability to assure long-term consistency and predictability in the availability of funds and assure that programmes, policies, and priorities can be insulated from shifting political priorities.

While the frequency and stability of revenue sources are important considerations, it is also important to consider the dynamics of institutional mechanisms that distribute funds throughout the different levels and divisions of government. In order to provide predictable funding, internal financing systems must permit funds to flow in a timely fashion to the governmental EIA tasks that have continuous associated resource needs.

B. ADMINISTRATIVE BURDEN

Another important consideration is the ease with which funds can be collected, tracked, and managed. Without adequate capacity to perform these tasks (including secure, electronic financial management systems and qualified staff), the funding mechanism will not deliver its intended benefit. Funds may not be distributed efficiently within the system or may be diverted for other uses within or outside of the government. In addition, internal policies should ensure that taxes and fees are applied fairly and equitably to all proponents.

Key questions for this step:

- Who will collect and track the revenue and how?
- How can the funds later be distributed to their end use?
- What administrative tasks are involved and which skills are needed?
- Is there sufficient existing administrative capacity to manage the funding mechanism or will capacity need to be improved?

Each type of revenue source may require different administrative needs. A system of general taxation generally requires an institution-wide information management system with the capacity to track data on the incomes, purchases, or property values of the majority of a population. Similarly, information on fees and fines and should be integrated into a system that tracks the progress and compliance levels of project activities. Certain funding mechanisms may be simple in concept but pose significant challenges in terms of tracking and transparency. For all sources of funding, the manner in which funds are routed through the system will play a significant role in how efficiently they are ultimately deployed to their intended end use. For every mechanism, the measures that will be needed to safeguard each source of funds must be considered.

It is important that the administration of any new mechanism is proportional to the resources it generates in revenues. Any funding mechanisms considered should not be too burdensome, and should be sufficiently versatile and robust that multiple generations of new procedures do not need to be implemented.

C. POLITICAL AND SOCIAL VIABILITY

Any new mechanisms, such as a new tax, or fee system, will rely on general acceptance of the mechanism to work. This applies particularly to the regulated community, who may otherwise seek to avoid paying. It also applies particularly when any new mechanisms threaten revenue received by other government agencies. Targeted actions will be needed as part of the implementation to ensure sufficient support.

Key questions for this step:

- What must the government do to secure acceptance of the funding mechanism by the regulated community and the public, what expenses are involved, and what timeframe will be needed to accomplish this?
- What must regulatory agencies, such as environmental ministries and other bodies, do to secure political support from lawmakers for the proposed change?

D. TRANSPARENCY AND ACCOUNTABILITY

Funding mechanisms should permit clear disclosure of the distribution and use of funds, in order to permit government actors, the regulated community, lenders, and the public to have confidence in the system. Information systems that allow funds to be tracked, safeguarded from manipulation, and independently audited are key to securing this transparency. Rules for the management of funds should clearly specify procedures for distributing and disbursing (and sometimes investing) funds. Parties involved in the management of funds can only be held accountable if there are reliable systems in place that can accurately record the personnel involved in executing specific transactions.

Key questions for this step:

- Would the proposed change permit funds to be transparently tracked from the time the funds are raised or allocated, throughout the time they are held for EIA needs, and to the time they are disbursed for specific expenditures in a manner that can be audited and ascertained by outside parties?
- What means are available to identify persons involved in managing specific transactions and holding responsible parties accountable?
- Are fiduciary duties and fund management rules clearly articulated in laws and rules?
- What system for auditing and other safeguards will be employed?
- How are funds held for different purposes identified?

Case example: Avoiding the handling of cash—electronic payments in Kenya

The Kenya Wildlife Service (KWS) established an electronic card payment (smartcard) system to reduce revenue loss, facilitate the reporting of financial and tourism information associated with the use of protected areas and to minimise the risks associated with the handling of cash. The smartcard system largely avoids the handling of cash, and tracks all financial exchanges. In 2007, fee revenues offset 68 percent of KWS operating expenses.

In 2009, the smartcard programme transitioned to the new Safari Card, which is a more flexible card that allows park visitors to purchase services for an array of fee types. Fees are adjusted to match residency status, age, park type, season, vehicle type, and business concessions.¹⁵

The ability for on-site staff to process varying charges transparently, and without the risks inherent to cash transactions, could potentially provide utility in connection with certain types of EIA applications, such as inspections and fines. Used in conjunction with a dedicated account or environmental trust, cashless transactions involving special debit or smart cards could increase the transparency of revenue collection and reduce diversions of funds.

As with other innovations, a smart card system requires significant up-front investment and a sophisticated back-end information system, in addition to training for the staff that would administer the system. Yet this type of infrastructure investment is consistent with the types of safeguards that multilateral and bilateral lenders, as well as prominent donor countries, favour implementing. If a card system were implemented efficiently, it might even generate some revenue for the developer of the system – possibly a bank (as a percentage of transactional charges).

E. AUTONOMY OF AN AGENCY

A funding mechanism that impedes the ability of an agency to function independently threatens the agency's ability to prioritise tasks independently of politics and carry out those tasks efficiently. The mechanism selected should permit sufficient discretion for an agency to manage funds and make spending decisions independently of the other government entities.¹⁶

Key questions for this step:

- Are fund allocations through this mechanism dependent on approval by another government entity?
- Are expenditures of funds received through this mechanism dependent on approval by another government entity?
- Must the funds be shared with other government agencies or other environmental programmes?

¹⁵ UNDP, International Guidebook of Environmental Finance Tools: A Sectoral Approach, Chapter 4: Protected Areas 30–31 (August 2012).

¹⁶ See e.g., Angus Morrison-Saunders and John Bailey, Transparency in environment impact assessment decision-making: recent developments in Western Australia, Impact Assessment and Project Appraisal, volume 18, number 4, December 2000 (Stating that "The EIA process in WA has two unique features: the EPA's statutory guarantee of independence from political direction; and the primacy of the environmental decision by the Minister for the Environment, combined with the legal status of any implementation conditions").

2.3.5 Capacity development

Acquiring a secure system to manage the integrity of funds might be necessary when introducing a new funding mechanism, including safeguards implemented to ensure that funds are not improperly diverted and that a chain of responsibility can be traced throughout the management of the funds. Similarly, implementing a secure and efficient system for managing funds requires a sufficient number of staff members who are trained in its operation. For this reason, training and other capacity building efforts will be key up-front investments. Important areas of training include the use of information infrastructure – new information systems for managing financial data, project tracking, case management, as well as training for inspectors, auditors and enforcement officers.

Key questions for this step:

- What capacity does the financial mechanism require?
- What capacity development will be needed to get institutional arrangements and staff up to speed?

2.3.6 Transitional funding

No country can hope to establish a comprehensive system that incorporates adequate and sustainable EIA financing mechanisms overnight. In a transitional period capacity needed can be built up. Pilot exercises can be undertaken to test the viability of a system before the mechanism is implemented at scale.¹⁷ There may also be an information gap at the outset. There may not be sufficient historical data to which to refer and it may not be possible to have a clear picture of all the resources needed. During a phase-in period this knowledge can be built up. In addition, a participatory consultative process with the regulated community is necessary to secure buy-in with any new fee schedules or new procedures. Moreover, a substantial investment must be made in developing public awareness of new regulatory requirements. Finally, establishing certification and accreditation programmes may require significant professional staff time and outside assistance. All of these factors are likely to consume significant resources in the short-term.

During such a phase-in period there will be a demand for additional resources to invest in the development of the new approaches. In addition, it is unlikely that the revenues generated will adequately support day-to-day EIA functions or be available for capital investments during the phase-in. A transition plan must be developed to cover financing gaps that will exist during a phase-in period. The transition plan may also inform a strategy for covering continuing revenue shortfalls if it appears that critical components of the EIA system will remain underfunded for an extended period of time.

Key questions for this step:

- What are the interim needs in terms of information and funding?
- What is the timeframe needed for an interim phase?
- What tasks and costs are involved in securing a grant, loan, or other financing mechanism for the interim phase?
- In the case of a loan or bond issue, what resources will be required to service the interest payments?
- Is the government eligible for the funding mechanism?
- What ongoing commitments and conditions would the government need to satisfy in order to qualify for the funds?
- Do these conditions conflict with any national policy or infringe impermissibly on sovereignty in some way?
- Will additional debt adversely impact a country's credit rating?

¹⁷ Acknowledgment to Jonathan Allotey for comments on pilot programs.

Some countries rely on transitional funding mechanisms such as grants, loans and debt restructuring. Each will be discussed in more detail below. Note, however that these mechanisms are not intended to be long-term sources of funding for EIA related tasks, nor are they meant to cover day-to-day expenses.

A. GRANTS AND IN-KIND ASSISTANCE

During a start-up period, grants and in-kind contributions of capacity building and technical assistance may be available that require no up-front outlay of funds and do not cause a government to incur new debt. A number of multilateral and bilateral financial institutions, NGOs, and international networks have regularly provided this critical support, especially when the objectives have been well defined and there is a high probability that the efforts will lead to improved capacity for a self-sustaining EIA system.

A grant is an amount of money that is normally awarded by one government entity or a multilateral organisation to another government entity or to a non-government recipient. Developing countries often request international funding organisations for start-up funds to cover the cost of implementing new environmental programmes or undertaking major expansions of existing programmes, including EIA programmes. Donor organisations often offer grants to encourage the development of new regulation, capacities, and infrastructure.

The primary advantage of grants is that new resources are available to recipient countries and sub-national governments without any direct repayment obligations. There is no need to consume budget resources to pay for the costs of development of new projects, programmes, and capacities funded by the grant. The disadvantages are that the recipients may incur significant indirect costs, including the costs and time involved in applying for grants. In addition recipient governments must often agree to implement specific policies and measures, as well as observe additional mandates that may be costly to meet. Some grant programmes require the applicant to provide a share of the funds (a “matching grant”). The competition for grants is often intense, due to a limited pool of funding.

B. LOANS AND BONDS

A loan is the transfer of money from a lender to a borrower with an expectation of repayment over time at a negotiated interest rate. Loans have been used in the past to finance the implementation of new government EIA systems, expansions of existing EIA programmes, or large-scale equipment replacement programmes¹⁸. The first tier of financing typically comes from multilateral development banks or foreign governments (i.e., bilateral development banks). For countries that meet specific eligibility criteria, these loan programmes typically provide capital at either subsidised or market rates. However, meeting lender eligibility criteria for low interest rate loans may be difficult for some countries, especially if environmental and social safeguards or robust fiscal management frameworks are not fully developed.

Of course, loans will add to a country's debt. Too much debt creates significant repayment burdens and increases the risk of default, making future government borrowing more expensive and more difficult to obtain.

¹⁸ See e.g., U.S. Environmental Protection Agency, Financing Environmental Compliance and Enforcement Programs 2–7 (1996).

Bond issues represent the other possible source and are commonly used by municipalities and sub-national governments to finance specific infrastructure needs, and often consist of securities issued by local authorities. Bonds may be implemented to have a wide variety of characteristics, such as fixed or variable interest rates, short- or long- terms for repayment, and may be secured or unsecured.

Bonds are a good choice for raising capital when governments require a long time period to spread out repayment. Since there is significant competition for loans and grants offered by multilateral institutions and foreign government lenders, bonds represent a feasible alternative. Also, investors view bonds as more liquid than loans. However, bonds offer less flexibility, requiring borrowers to make payments of specific sums at regular, specified time periods. Also, the origination costs of bonds are often higher than those for long-term loans.

C. DEBT RESTRUCTURING VIA DEBT-FOR-ENVIRONMENT SWAPS

For countries that have significant sovereign debt, redirecting limited financial resources to productive domestic uses rather than servicing the debt may create opportunities. A debt-for-environment swap (DFES, also known as a debt-for-nature swap) is the cancellation of part of a country's sovereign debt owed to foreign creditors in exchange for the debtor government's commitment to dedicate financial resources (usually in the form of local currency or bonds) to carry out environmental objectives on terms agreed upon with creditors.¹⁹ The cancellation of the debt is usually at a steep discount off of the face value of the amount of debt involved in the exchange. Debt-for-environment swaps do not bring in new revenues, rather they represent the freeing up of existing government funds, coupled with binding government commitments to allocate predictable flows of funds toward a specified environmental objective.

A debt swap can be used to channel government expenditures directly toward state-administered EIA programmes, or the expenditures can be arranged as a stream of payments that feed into an environmental trust fund, where the funds will support the same EIA objectives. The latter arrangement has the added security that the funds are less likely to be diverted to other government uses. From the point of view of the creditor partner in the debt swap, this is often the preferred choice, since there are added safeguards that funds will be spent as intended. From the debtor country's perspective, this may seem like unnecessary interference.

A DFES is one of a limited number of financing structures that can provide a sustained infusion of funds into the local development while spurring domestic spending to protect the environment. DEFS can be employed to secure a steady stream of periodic payments over the long-term to support an environmental programme such as the management of an integrated EIA system. However, there are disadvantages. DEFS can result in the downgrading of a country's credit rating making it more expensive to borrow funds in the future. DEFS can also lead to inflation due to the sudden injection of significant amounts of local currency into the national economy. DEFS are also complex to manage. Therefore, it is an instrument to be approached with caution.

¹⁹ The words "swap," "exchange," and "conversion" are often used interchangeably.

According to a 2007 OECD report, there are three principal prerequisites a low-income country should meet before considering the possibility of a debt-for-environment swap²⁰:

- A thorough analysis of a country's debt portfolio is necessary to determine the amount of debt that could be eligible to be swapped and the amount of revenues that could result from the swap.
- Since planning, negotiating, and executing a DFES is a complex and tedious process, with preparation taking between two to four years, it is critical to secure the full and enduring commitment from the Ministry of Finance, which leads discussions with creditors and must be convinced of the benefits of the swap mechanism.²¹
- The country must have a demonstrated ability to service the debt (payments to the programme making environmental use of the funds). This means that it must be willing to make a long-term, legally binding commitment to dedicate a stable share of its budget to financing environmental projects.

In general, there are two prevalent forms of debt-for-environment swaps:

1. Commercial or trilateral debt-for-environment swaps: In this arrangement (also known as a "first-generation swap"), a non-governmental organisation (NGO) purchases a portion of the national debt of a debtor country from commercial banks on the secondary market. The NGO then transfers ownership of the debt to the debtor country in exchange for an agreement by the country to undertake certain environmental policies or to issue a government bond in favour of an environmental organisation to support specified conservation programmes.
2. Bilateral debt-for-environment swaps: A bilateral debt-for-environment swap is a transaction between two national governments. In this form of swap, a creditor country cancels a portion of the debt that it is owed by the debtor nation in exchange for commitments on the part of the debtor country to undertake certain environmental programmes, including the development of capacity for long-term environmental management functions. In general, bilateral swaps enable larger portions of a debtor country's debt to be reduced and resources redirected toward domestic environmental purposes. A multilateral debt-for-nature swap is a variation of this form and involves international transactions between three or more national governments.

In another variation on the bilateral swap, there is no discount off of the face value of the debt. Instead, a creditor government and a debtor government enter into an agreement where the debtor government is released from part of its obligation to repay the creditor in exchange for a commitment to direct the debt payments toward domestic programmes to protect the environment.

²⁰ OECD, *Lessons Learnt from Experience with Debt-for-Environment Swaps in Economies in Transition* (2007).

²¹ *Ibid.*, p. 8.

Case example: Madagascar debt-for-environment swap

Madagascar has undertaken several debt-for-environment swaps and provides a good example of how this type of arrangement has worked. After being declared eligible for debt relief under the IMF and World Bank Heavily Indebted Poor Countries (HIPC) Initiative in 2000, the government of Madagascar established the Sustainable Financing Corporation to develop a sustainable financing strategy for the country's Third Environmental Program. The programme's environmental goals included environmental impact assessments for all projects, management plans for coastal ecosystems, and sustainable financing for protecting sensitive areas.

In 2003, Madagascar entered into a DFES with Germany, which agreed to cancel €23.3 million in exchange for Madagascar government's paying €13.8 million into a special fund from which the government would disburse funds to finance environmental projects over a 20-year period. As a condition to securing the DFES, the Madagascar government agreed to establish the Madagascar Foundation for Protected Areas and Biodiversity—a conservation trust fund, and to create a management structure that was acceptable to the German government. The Madagascar Foundation was jointly established with the WWF and Conservation International in 2005.

In 2008, France announced a double DFES with Madagascar valued at €13 million, bringing the Foundation's total endowment to more than €32.5 million (US\$50 million).

3. THE EIA PROCESS: RESOURCE NEEDS AT EACH STEP

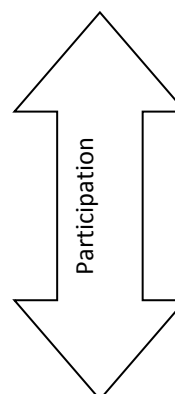
The EIA process offers different opportunities to minimise adverse environmental impacts to optimise sustainability. How these opportunities are utilised, and who should be responsible, will depend on the objectives for EIA in each context, and the resources available. Choices must be made concerning the most effective way to use resources, which are usually scarce, to accomplish the most important objectives.

This chapter presents an inventory of the tasks for government agencies, looking separately at each of the procedural steps in the EIA process, including decision-making on environmental licensing, project implementation and follow-up. Per step, the chapter outlines the specific tasks to be undertaken, as well as the associated resource needs. Depending on the available capacity and funding level, it may or may not make sense for a government body to carry out certain tasks itself or delegate these tasks to a project proponent or a third party. When considering such devolution, it will be necessary to ask if the risks of loss of quality and objectivity of delegation are commensurate with the benefits of delegating the task. For each step in the EIA process, this text sets out the possibilities for devolving tasks from government bodies to other parties. At the end of the chapter, we look briefly at the resource needs related to developing and maintaining capacities, guidance, and information systems that are needed to support government tasks in the whole EIA process.

Before addressing each of the steps separately, it is important to emphasise that we consider the EIA process to include not only the formal inquiry process which produces a study document (the “EIA report” or “Environmental Impact Statement [EIS]”), but also the process of environmental licensing by government authorities, a follow-up process for environmentally approving projects that includes monitoring and inspections, and enforcement of requirements that are established as conditions to the environmental licence. Depending on the country, the result of the review process is a decision on (conditional) approval or rejection of the EIA-report followed, if approved, by a decision on environmental licensing of the proposed project or, directly, a decision on environmental licensing of the proposed project, implicitly approving the EIA-report. In the former case the entity competent to provide the environmental licence uses the approved EIA-report to make a decision on e.g. the alternative to be implemented and/or the conditions to be met while implementing the project.

Countries differ in how they articulate specific steps in the EIA process, but in most cases the process includes the steps that are described under the following headings:

- Proposal identification
- Screening
- Scoping
- Impact assessment and EIA report drafting
- Mitigation and management of impacts
- Review
- Decision making on approval of the EIA report
- Decision making on Environmental Licensing
- Project implementation
- Monitoring
- Inspection and enforcement



Each of the steps will be addressed in detail below. First, however, we look at public participation. It is covered separately from the series of steps, because participation can be relevant for several of the steps in the series described.

3.1 Participation

3.1.1 Reasons and rights

The impacts that a project has on the interests, health, and social welfare of local communities and other public stakeholders is a central concern throughout the full life cycle of a project. Different types of stakeholders may experience impacts in different ways, directly and indirectly. The EIA process should seek to integrate stakeholder input at each stage where doing so will increase the likelihood of achieving outcomes that take stock of knowledge and creativity within stakeholder groups and create consent of the majority of them. Most countries have established a right of some form of public participation in connection with the EIA process, although this is implemented in a wide variety of ways with reference to the moment in the process at which the public is involved (scoping, EIA report formulation, review, decision making on EIA approval or environmental licensing) and the potential level of influence given to the public (consultation or participation). Public consultation may be required not only by EIA regulations and general administrative law, but also by bank lending policies.

In order for public input to be able to inform the EIA process in a meaningful way, public participation must be sought early enough so that it is possible for proponents to address concerns while it is still practical to implement project modifications and to resolve disputes before it becomes excessively difficult or expensive to do so.

3.1.2 Public disclosure

Public participation presupposes preparation and public disclosure of detailed information that enables stakeholders to form an opinion of the proposal at stake, its alternatives and the potential impacts thereof.

3.1.3 Solicitation of public comments and adequate notice

The public must be given timely notice of hearings and other meetings that involve the discussion of project proposals. Poorly publicised information concerning the timing and location of a public hearing or other solicitation of public input will not allow relevant stakeholders with sufficient time to consider the facts and prepare a meaningful response.

3.1.4 Consideration of public comment

While there is usually no requirement that project proponents and the licensing authority accept every comment received from members of the public, there is usually an obligation to consider these comments. The degree to which proponents and government authorities objectively weigh public input is difficult to measure and harder to prescribe. Nevertheless, some jurisdictions employ a requirement to record, acknowledge, and respond to public comments as a proxy for considering public input. They may require that the final EIA document includes information on the means used by the proponent to engage stakeholders, the comments received, and responses to these comments.

3.1.5 Devolution considerations

A. MAXIMUM DEVOLUTION SCENARIO:

- The proponent or a third party undertakes all efforts to identify stakeholder groups, provide notice of the existence of the project and project hearings, solicit stakeholder comments, keep records, actively consider and respond to public comments.
- The government provides rules and guidelines concerning how public consultation should be undertaken (see for example the box below that details the South African and Chilean guidance).

Case examples: Public Participation Guidance in South Africa and Chile

Public Participation Guidelines in South Africa

The Department of Environmental Affairs and Tourism of the Republic of South Africa has published guidelines describing the procedures that project applicants, stakeholders, the government and other parties should follow in undertaking the public participation process. The guidelines explain which scenarios require public consultation and spell out the specific roles and responsibilities of each group. In addition, the guidelines specify specific requirements for providing notice, for the registration of interested and affected parties, for public access to and the opportunity to comment on project proposals, and for reporting on comments and responses.

Public participation requirements in Chile

Chilean law N° 19.300 of the LBGMA – Bases Generales del Medio Ambiente (“General Environmental Foundation”), recognises that active and responsible participation from all the members of society is necessary to achieve adequate environmental protection and calls for the State to act as a guarantor, providing opportunities for public participation, ensuring public access to information on projects or activities under evaluation, and allowing members of the public to submit observations.

B. MINIMUM DEVOLUTION SCENARIO:

- The government identifies stakeholder groups, provides notice of the existence of the project and project hearings, solicits stakeholder comments and records, actively considers, and responds to public comments.

3.1.6 Resource needs

The resource needs will differ according to the public participation policies in place. However, the following resources need to be considered:

- Staff time to:
 - Prepare and disclose information material
 - Organise and hold public hearings
 - Review and report on proponent records on notice, public comments, and responses
 - Enforce public participation if public consultation efforts are inadequate, including the need to organise additional public hearings or delay or deny a project environmental licence
- Financial resources to cover public hearing expenses, including venue and facilitation
- Means of electronically recording and storing public participation information

3.2 Proposal Identification

A project begins when a public or private sector proponent conceives of a set of activities that it wishes to implement and initiates the process of formally proposing a project that encompasses these activities under the applicable legal framework of the jurisdiction where the project will take place. A proponent may take preliminary steps to initiate the project, such as identifying a site for acquisition, arranging financing as well as obtaining expert and technical advice on project design and measures for avoiding or minimising project impacts. However, no physical work on a project may begin (including site clearing or site preparation) until the relevant authorities have approved or given conditional approval to the proposed project. This approval may, amongst others, depend on an approved EIA report and/or an obtained environmental licence. Relevant authorities may include not only government authorities, but also creditors, such as banks, as well as members of the public, whose rights to participation must usually be satisfied.

3.3 Screening

Many countries know a diversified level of EIA: full-fledged EIA for projects with significant impacts and a lighter form of EIA for projects with less significant impacts. Screening is the first step in an EIA process. It determines whether an EIA is applicable to a project proposal and –if the country applies a diversified level of EIA– which level of EIA.

There is a multitude of forms in which screening takes place. Some countries use positive or negative lists or a combination of the two. These lists usually provide threshold values, determining whether an EIA is applicable or not and, if so and relevant, which level of EIA is required. In these countries, screening is done by the proponent. In other countries screening is conducted by government authorities. Other countries, again, use both lists and government screening.

Screening generally involves two important inquiries: whether a project is subject to the requirement of an EIA (application) under the laws of the jurisdiction or lending rules and, if so and applicable, how the project is classified under the applicable legal framework in terms of the extent of its environmental impacts (categorisation). Screening enables governments to prioritise time and resources for scrutinising project proposals, focusing more rigorous attention on projects that have the greatest potential for significant adverse impacts. Many jurisdictions, as do many banks, categorise projects according to whether the project is likely to have a low, medium, or high impact on the environment, and differentiate the EIA requirement accordingly. In some cases, a preliminary assessment is required to make this determination. In those cases, the screening process results in one of three determinations:

1. The nature of the project requires a full or light EIA process.
2. The project characteristics show that it is unlikely to have any significant environmental impacts and should not be subject to an EIA process.
3. A preliminary assessment is needed to determine whether the project requires an EIA process.

If a preliminary assessment is required, government authorities will perform a streamlined evaluation of this preliminary assessment done by the proponent to resolve whether the project is subject to a full EIA process.

In some cases, the government does the preliminary assessment itself. A preliminary assessment may require less than a week of one person's time or an entire month, depending on the need for background studies and site surveys.²² The parties performing a preliminary assessment often use simple analytical tools, such as checklists and matrices, which are also used in the more comprehensive process of a full environmental impact assessment.

3.3.1 Devolution considerations

Since screening is the government's first and best opportunity to determine if a project should be subject to the EIA process, some governments do not rely solely on the project proponent's analysis. Nevertheless, since many routine human activities have impacts, it may be burdensome for authorities to identify and track every case. Governments may instead impose responsibility for screening on the project proponent. In order to ensure that applicability criteria are followed, it is necessary to provide guidance as to which activities are subject to the EIA process and oblige the proponent to publish its motivated screening result. By providing clear, widely-published criteria, governments can avoid unnecessary burdens on proponents and can minimise government administrative costs.

A. MAXIMUM DEVOLUTION SCENARIO:

- The government provides clear guidelines for applicability of EIA process, e.g. positive and/or negative lists.
- The government provides early advisory services to project proponents and consultants.
- A proponent makes an initial published determination of the applicability of the EIA process.
- The government responds if a proponent improperly avoids EIA applicability.

Case example: Screening guidelines in France

In France, the Ministry of Land Use Planning and Environment has prepared a clear set of three criteria to help project proponents and developers determine if their proposed activity is subject to EIA requirements:

1. The project is mentioned in a specified list with types of project activities.
2. The overall cost of the proponent's planning and work meets or exceeds a threshold of 1.900.000 Euros.
3. The project activity is not subject to one of a number of listed exemptions.

B. MINIMUM DEVOLUTION SCENARIO:

- The government determines the EIA applicability based on project information provided by the proponent.

3.3.2 Resource needs

Screening requires sufficient government expertise to determine on the basis of project information provided by a proponent whether the proposed project is subject to the EIA

²² Cite USAID, Topic Briefing: An Introduction to Environmental Assessment, Mark Stoughton.

process. While the process may sometimes be short, specifically when screening lists are available, it may also require follow-up communications involving the time of experienced government environmental staff. According to a UNEP training manual, the time required to complete the screening process depends on the type of proposal, the environmental setting and the extent of knowledge concerning its potential effects.²³ Many proposals can be screened in an hour or less, but some will require an extended screening or an initial assessment.

Resource needs will include:

- Government staff time to provide early advisory services and respond if proponents improperly avoid EIA applicability
- On-going costs associated with tracking project progress and activities

3.4 Scoping

Once authorities have decided that an EIA study is required, proponents and the authorities must jointly undertake a scoping process to determine which impacts, risks, and stakeholder interests will be considered in the process.

The objective of the scoping process is providing focus to the EIA-study. The better the scoping document, the more focused the EIA-report. The scope of an EIA inquiry may include project and project implementation alternatives, factors relating to site characteristics and to geographic boundaries, timeframes, direct and indirect environmental impacts and risks, stakeholder interests, budgetary limits, and other issues. In addition, scoping includes identifying which types of expertise, including areas of engineering and scientific specialisation, will be required for implementing the EIA. In some countries government or an independent entity is involved in scoping, in others the proponent drafts a scoping document that is then verified and validated²⁴ under the responsibility of government.

Many governments require a Terms of Reference to be drafted in order to formally define the scope and level of detail to be implemented in preparing the EIA report. Although scoping is completed once the terms of reference document is prepared, its provisions should be sufficiently flexible to respond to new issues that emerge.

3.4.1 Devolution considerations

Like the screening process, scoping is an important step that allows the government to verify that all the important potential impacts of the project will be considered and that the relevant stakeholders have been identified. Leaving this task to the project proponent presents a risk that information considered in the decision making process could be incomplete, inaccurate or biased and viable alternatives are not included in the study. However, where adequate safeguards are implemented to verify the accuracy and objectivity of the proponent's own findings with respect to scoping, the competent government authority may devolve parts of the scoping process. In that situation, the government authority could either review and verify the scoping document or delegate this task to a government-hired and accredited independent consultant. The costs of employing (a) third party expert(s) could be passed on to the proponent under a system that implements the cost recovery principle.

²³ UNEP Training Manual – Screening, Available at http://www.unep.ch/etu/publications/EIA_2ed/EIA_E_top4_body.PDF.

²⁴ European Commission, Study concerning the report on the application and effectiveness of the EIA Directive, Final report, June 2009.

A. MAXIMUM DEVOLUTION SCENARIO:

- The government provides early advisory services to project proponents and consultants.
- The government provides information resources to the public concerning scoping issues.
- The government provides a model and/or clear guidelines for the terms of reference.
- The proponent undertakes the scoping analysis.
- The proponent or proponent's consultant drafts the terms of reference with the aid of a government-provided template and guidelines. The terms of reference are reviewed, amended and approved by government staff.

B. MINIMUM DEVOLUTION SCENARIO:

- The proponent and government each have mandatory scoping roles.
- The government determines the scope of the EIA study with minor interaction with the proponent.
- The government drafts and approved the terms of reference.

Case examples: Scoping done by project proponentsOptional scoping by the proponent in Portugal

Under Portugal's national EIA procedures, the proponent may undertake scoping as a non-mandatory first step, which allows the proponent the opportunity to identify important aspects of the project that have the potential for significant environmental impacts. In doing so, the proponent determines the content and extent of matters that will be evaluated in the EIA report. Although optional, this is an important step for facilitating the remainder of EIA process.

After submitting a proposal for the scope to the EIA authority, the state appoints an Assessment Committee that analyses and deliberates over the scoping proposal. A 20-day public consultation period may take place if suggested by the proponent or at the decision of the Committee. The Committee then deliberates and defines the scope of the information to be submitted in the next phase and the terms of reference for the environmental studies to be undertaken. The results of the scoping deliberation then become binding on the proponent.

Three-level Scoping in the Philippines

In the Philippines, project proponents must perform a three-level scoping activity for specified project categories that should be done on site or in the region where the project takes place:

1. The proponent conducts a project briefing in conjunction with a review team, during which the proponent presents a project overview, the key issues and the proposed TOR of the EIA study.
2. The proponent must undertake a public scoping process with members of the local communities in accordance with a published set of guidelines.
3. The proponent performs technical scoping with the review team, during which the proponent's EIA scoping/procedural screening checklist is reviewed, finalised and signed by the team and the proponent.

3.4.2 Resource needs

The scoping process requires organising a site visit, meetings and facilitating consultation between a number of important parties, including the proponent, members of the public, local experts, and the representatives from the competent government authorities. Since the types of expertise that will be required for conducting an EIA study must be defined during the scoping process, representatives of the responsible government agencies must be sufficiently knowledgeable for managing this process. This implies in many cases a need to hire suitable experts to formulate the scoping document.

Resource needs will include:

- Staff time in conducting site visits, scoping meetings and performing scoping tasks
- Recurring costs relating to hiring experts, consultations and site visits (if applicable)
- Maintenance of information resources

3.5 Impact assessment and EIA report drafting

The EIA study is a comprehensive document created by the project proponent that includes information concerning the full life cycle of the project, from site preparation and construction impacts to final decommissioning and closure. In order to enable accurate predictions of potential impacts, the proponent must first conduct a baseline study. The baseline serves as a reference point that shows the future conditions that would exist if the project were not undertaken, including the environmental and socio-economic conditions.²⁵ For the EIA study to provide meaningful information, the accuracy of the baseline must be established and should be reviewed by government authorities.²⁶

3.5.1 Devolution considerations

In most countries, the EIA study is the responsibility of the project proponent. Nevertheless, governments may take an active role at this stage in encouraging the development of well-executed reports that will avoid unnecessary burdens on government resources during the review stage. Governments may also encourage self-imposed quality control through deterrents: negative consequences, including the threat of rejection of incomplete documents, denial of approval, delays, or penalties for providing false information. In order to avoid these consequences, project proponents and developers are likely to take steps to ensure the accuracy of their information, including the use of accredited consultants to prepare and certify their study documents.

3.5.2 Resource needs

The provision of advisory services, information resources and accreditation schemes have significant associated costs. However, investments in proactive quality control measures may minimise government costs later in the process. Governments may also fund services provided to proponents through fees or other mechanisms.

²⁵ Cheryl Wasserman, *Enforcement of EIA Requirement*, Ninth International Conference on Environmental Compliance and Enforcement, 5 (2011).

²⁶ Mark Stoughton, Topic Briefing: An Introduction to Environmental Assessment, USAID 13 (January 2005), (Stating that when compared against the projected project benefits, there are times when the no-action scenario may be the preferred option).

Resource needs will include:

- Government staff time to perform advisory services
- Maintenance of information resources

3.6 Mitigation and management of impacts

A plan for mitigating and monitoring the impacts of a project is usually developed in parallel with or as part of the preparation of an EIA report. The Environmental Management Plan (EMP) is usually a separate document, but in some cases it can be included or integrated in the EIA report²⁷ or added to it as an annex. This plan describes the specific actions that the proponent will implement to mitigate (or, if mitigation is not an option, manage or compensate) predicted impacts. Once a project has been approved, it may be necessary to modify the plan to integrate legally binding terms and conditions that are part of the licensing provisions. In some cases the EMP may be integrated in the EIA report. In those cases the EIA describes the residual environmental impacts of the proposal after application of the mitigating measures. Different levels of mitigation may then lead to alternatives and residual impacts can give rise to inclusion of compensatory measures.

One of the important objectives of an Environmental Management Plan is to eliminate, to the maximum extent possible, negative impacts through project design.²⁸ This goal is pursued through a process of revisions and refinements throughout the project planning stage. However, certain impacts can only be mitigated during project construction and operation phases. Specific actions and procedures for mitigation must be defined in this plan, including contingencies that permit flexibility to respond to unanticipated impacts. The plan should also clearly define a monitoring plan, which is critical to ensuring strong environmental performance throughout the project life cycle. The plan should include an explicit recognition of, and an enforceable commitment to pay for the ongoing internal costs (mitigation and compensation, self-monitoring, reporting, and remediation) as well as external costs (external monitoring and inspections).

3.6.1 Devolution considerations

The Environmental Management Plan is normally developed by project proponents or their consultants. Due to the risk that the EIA will not always accurately and objectively predict all adverse impacts and, hence, the Environmental Management Plan will not always prescribe appropriate actions to mitigate and compensate them, it is important to have a system of safeguards to ensure that proposed mitigation plans are sound. Two types of mechanisms help to fill this role:

²⁷ In this case the EIA describes the residual environmental impacts of the initiative after application of mitigating measures. Different levels of mitigation can constitute separate alternatives. Residual impacts can give rise to compensatory measures.

²⁸ UNEP, Hussein Abaza, Ronald Bisset, Barry Sadler, *Environmental Impact Assessment and Strategic Environmental Assessment*, 55 (2004).

A. FORMAL FRAMEWORKS AND PRINCIPLES GOVERNING ENVIRONMENTAL MANAGEMENT PLANS

Many public and private sector organisations have developed frameworks to specify how Environmental Management Plans are to be implemented. These include development banks, commercial finance groups, other international organisations and national governments. An example for such a framework is the African Development Bank's Environmental and Social Assessment Procedures for African Development Bank's Public Sector Operations.²⁹

B. STANDARDS AND METHODOLOGIES

Public and private organisations have developed a broad range of standardised methodologies and procedures for implementing environmental and other safeguard measures, including those incorporated into environmental management plans (see the section on accreditation, paragraph 5.4.1.b). While many projects have unique characteristics that require a non-standardised approach, activities conducted within a particular sector often share many common attributes. In many cases, sector-specific management standards have been developed. The most widely recognised certification standard for Environmental Management Systems is the ISO 14000 series of guidance and procedures, which was developed by the International Standards Organisation. The ISO 14000 series can be used to evaluate many aspects of the environmental performance of a project facility and to certify that the operation complies with all legal requirements and voluntary standards. In the European Union, the ISO 14001-2004 standard is integrated into the Eco-Management and Audit Scheme (EMAS) – a voluntary environmental management tool for facility operators to evaluate, report and improve their environmental performance (see also the text on co-regulation, paragraph 5.4.1.c.).

3.6.2 Resource needs

Resource needs will include:

- Maintenance of information resources
- Staff time to provide advisory services

3.7 Review

After the proponent has completed the EIA report, the document is subjected to a formal, (if required, independent) review before being submitted to a decision-making body. The purpose of the review is to ensure that the EIA report contains all the information that the decision-making body on environmental licensing needs to approve or deny the environmental licence to the project (or to a project alternative).

In many countries, the persons undertaking the review are government staff from the responsible agency or staff of an independent review body, who must evaluate the EIA document's accuracy and completeness, the significance of impacts, the adequacy of proposed mitigation measures and monitoring plans, and whether the report complies with the Terms of Reference (adopted at the completion of the scoping stage) and/or other requirements. The composition of the review teams must reflect a range of skills and include experts on both core EIA topics as well as expertise that is specific to the type of activities

²⁹ African Development Bank, <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-related-Procurement/ESAP%20for%20Public%20Sector%20Operations.pdf>

and ecosystems involved.³⁰ The most comprehensive review would examine alternatives to the activity proposed and would actively consider comments provided by public stakeholders. Finally, the review should identify any deficiencies in the report and articulate ways to improve the document. Depending on the country, the result of the review process is a decision on (conditional) approval or rejection of the EIA-report (see 3.8) or a straightforward environmental licensing of the proposed project (see 3.9).

3.7.1 Devolution considerations

As the label “independent review” implies, this process is intended to be independent of the proponent and an important check on the accuracy and objectivity of the proponent’s work. While the review of the EIA report should be independent, some or all EIA reviews could be outsourced to independent third parties that are qualified to perform this task if sufficient measures are in place to preserve the independence and objectivity of the reviewer. To safeguard integrity, the reviewer should be paid by the responsible government authority and not by the proponent. If the proponent is the government, a construction must be developed to avoid direct payment of the reviewer by the proponent.

A. MAXIMUM DEVOLUTION SCENARIO:

- The proponent selects an independent reviewer from a government-approved list of independent review bodies or consultant groups who are qualified to perform this task.
- The responsible government agency contracts with the selected reviewer to perform the review.
- The government or a technical assistance partner creates and provides checklists, interaction matrices, guidelines and other tools to assist proponents or their consultants in providing complete and accurate EIA documents.
- The government or a technical assistance partner develops guidelines for EIA review.

B. MINIMUM DEVOLUTION SCENARIO:

- The government performs all review tasks.

3.7.2 Resource needs

The EIA review does not accomplish its critical function if the reviewers do not fully understand the risks posed by the specific activities involved, as well as the effectiveness of measures proposed to address them. For this reason, the review team should be as qualified as the consultants and engineers who prepared the EIA report. In general, the competent authorities cannot be expected to possess the full range of expertise needed to evaluate the adequacy and completeness of EIA reports.³¹ Therefore, the competent authority will need funds to involve external expertise.

According to a 2007 report commissioned by the European Commission, most of the costs associated with EIA review are staff hour costs³². The report states that costs to the government of EIA review are difficult to determine, since review is often undertaken in

³⁰ Mark Stoughton, *Topic Briefing: An Introduction to Environmental Assessment*, USAID 16 (January 2005).

³¹ Obaidullah Nadeem and Rizwan Hameed, *A Critical Review of the Adequacy of EIA Reports—Evidence From Pakistan*, *International Journal of Human and Social Sciences* 1:1 (2006).

³² European Commission, Frans Oosterhuis, *Costs and Benefits of the EIA Directive*.pdf 8 (May 2007).

parallel with other administrative tasks relating to the same project. Studies cited by the report indicated staff-hour ranges from 4 to 5 hours for average reviews to 6–8 months of staff time for highly complex projects.³³

Direct staff hour costs are not the only consideration. One hidden cost is the indirect cost government EIA authorities incur if there are unnecessary delays. Repeated requests to the proponent for supplemental information is likely to increase the number of staff hours involved, and proactive efforts to avert the submission of incomplete EIA documents through checklists and other tools may be worth the cost of these measures. An EIA Information System can be instrumental to determine average staff time needed per project.

Resource needs will include:

- Hourly costs of expert staff time
- Ongoing training needs for existing staff and maintenance of information systems
- Costs of hiring expertise, not available in the competent authority

Case example:

Internal peer review cost model – Offshore hydrocarbon exploration in Mozambique

Sasol Petroleum Sengala Limitada (Sasol), a Mozambican oil and gas company, wished to drill exploratory wells in two concessions off of the Mozambique coastline. Licences for the offshore exploration were issued by the National Petroleum Institute (INP). The Ministry for Coordination of Environmental Affairs (MICOA) issued the environmental licence. An EIA study was required to evaluate the potential environmental effects of the planned drilling programme, to identify and recommend measures to mitigate potentially harmful effects of the operation, and to compile an Environmental Management Plan.

In order to ensure that the EIA met internationally accepted standards, Sasol commissioned the Southern African Institute for Environmental Assessment (SAIEA) to undertake an internal review of the draft EIA and EMP. The review concluded that the EIA was satisfactory and met acceptable standards for decision making. Because Sasol commissioned the internal review, the costs of the review process did not have to be borne by the Mozambican government. This model has been used at several occasions in the Southern African region.

3.8 Decision making on approval of the EIA report

The decision that follows the completion of the final EIA review is an approval, conditional approval, or a rejection of the EIA report. In deciding, the competent authority uses the results of the review process. The legislation and procedures of the country or jurisdiction where the decision takes place will determine the number and type of decision makers involved and the amount of discretion they have in making this decision.

3.8.1 Devolution considerations

The decision on approval of the EIA report is the most important check on the quality of the EIA report and one of the most important checks on the quality of the proponent's proposal. While it would not make sense to devolve this task to the project proponent, a country could consider the use of accredited outside consultants to cover short-term shortages of qualified staff.

³³ *Ibid.*, p. 15.

A. MAXIMUM DEVOLUTION SCENARIO:

- The government outsources EIA approval to independent consultants who are accredited to perform this task.

A. MINIMUM DEVOLUTION SCENARIO:

- The government performs all decision making tasks.

3.8.2 Resource needs

Depending on the types of expertise required to make an informed decision and specific credentials mandated by law, the qualification requirements for decision makers will be comparable with those needed for EIA review. Depending on the type of project application, a decision may require the use of at least one decision maker with specialised knowledge of issues relating to the character of the proposed project.

Resource needs may be:

- Outside experts to participate in the decision making process
- Staff time of internal experts participating in the decision making process

3.9 Decision on environmental licensing

In granting an environmental licence to a project, the government body that oversees the licensing process indicates for which alternative of variant (if any) of the proposed project it grants the licence, and incorporates in the licence the commitments to be made by the proponent. These conditions may be the same as those proposed in the EIA report or Environmental Management Plan or may include modified requirements based on weaknesses the reviewers find in the proponent's proposal.

The commitments may also include the securing of adequate financing or other guarantees to ensure that mitigation, remediation, or decommissioning costs will be covered in the future. This important process ensures that government entities can enforce requirements that were conditions to the granting of the environmental licence. All too often, licensing is viewed as a final step – a formality that marks the end of a burdensome process. The licensing process, however, should not be viewed as an end, but as a transition from project planning responsibilities to project implementation responsibilities.

Enforceable commitments are provisions that make clear who is responsible for which tasks, the timeframe for implementing these tasks, and how compliance is to be determined.^{34,35} In order to be enforceable, the language in the documents must describe in sufficient detail performance expectations that are to be stated in measureable, quantitative terms. Requirements can be enforced only if they are capable of being interpreted objectively by others and if the specific performance provisions can be audited by third parties. The licensing body may also wish to use the services of the environmental inspectorate to help draft the licence conditions.

³⁴ Cheryl Wasserman, *Enforcement of EIA Requirements*, Ninth International Conference on Environmental Compliance and Enforcement, (2011).

³⁵ INECE Principles of Environmental Compliance and Enforcement, Chapter 5: designing effective requirements 29 (April 2004).

3.9.1 Devolution considerations

Leaving the drafting of licensing terms to proponents creates a situation where they may avoid responsibility for environmental performance by drafting provisions that are ambiguous or cannot otherwise be enforced. Hence, devolution of the drafting of licence conditions is not recommendable. If the competent authority that administers the EIA process does not have the capacity to draft the documents that incorporate environmental performance commitments into legally binding terms, it is essential that the authority secures the services of outside legal professionals to review all provisions and make corrections as needed.

A. MAXIMUM DEVOLUTION SCENARIO:

- Permit the proponent to draft the documents that contain environmental performance requirements.
- Provide “boiler plate” templates or other guidelines that incorporate binding commitment language and include auditable, quantitative performance indicators.
- Utilise government or outsourced legal services to review and amend the provisions.

B. MINIMUM DEVOLUTION SCENARIO:

- The competent authority drafts legally binding terms using competent legal staff or templates that are adequate for ensuring that environmental performance provisions are binding.

3.9.2 Resource needs

Drafting legally binding provisions requires specialised legal skills. The ability to compel project operators to follow through on their commitments requires that key provisions and expectations are adequately described. If it is not possible to secure the services of an experienced legal professional within the relevant department administering the licence, one option is to consider using standard conditions (“boiler plate language”) to clarify important terms relating to certain types of requirements for monitoring and mitigation.³⁶

Resource needs will include:

- Government legal practitioner and inspectorate staff time

Case example:

CAFTA–DR Regional EIA Technical Review Guidelines and Example Terms of Reference

Experts from ministries for the environment and ministries for several sectors in Central American countries, the Dominican Republic, and the United States have developed EIA Technical Review Guidelines and Terms of Reference for mining, energy and tourism. These resources were developed with the support of U.S. AID’s Environment and Labour Excellence Programme and the Central America Commission on Environmental and Development. These guidelines address frequently encountered challenges in drafting auditable and enforceable commitment language. The guidelines aim to facilitate the drafting of enforceable terms by providing advice for:

- Sufficient detail on the proposed project and its impact mitigation to support follow up

³⁶ Cheryl Wasserman, *Enforcement of EIA Requirements*, Ninth International Conference on Environmental Compliance and Enforcement, (2011).

- Auditable commitment language in an appropriate vehicle to capture EIA commitments
- Emphasis on quantitative performance standards
- Linking mitigation commitments to monitoring
- Required contents of a monitoring plan³⁷
- Contingency plans for actions that will be taken if monitoring results show that a quantitative limit has been exceeded

Available at: <http://inece.org/resource/eia-review-guidelines/>

3.10 Project implementation and impact management

In almost all cases, the proponent is responsible for undertaking the construction, operation, and completion or decommissioning of a project. The proponent must carry out these steps according to the requirements of all legally binding commitments. Mitigation and compensation are integral parts of project implementation and consists of taking measures for preventing, controlling, offsetting or compensating adverse environmental impacts that could occur during the construction, operation, or decommissioning of a project.

Because it is impossible for proponents or government staff to accurately predict all possible environmental impacts, proponents must be capable of responding to impacts that differ from those anticipated. Project operators should give particular attention to new methods or technologies.³⁸ Good mitigation and compensation practice requires appropriate technical knowledge of project impacts and the measures that are likely to work under the specific circumstances involved. When unexpected environmental harms do occur, proponents must undertake remediation to restore the environment to a state that is acceptable under the terms of the EMP and in accordance with the regulations of the jurisdiction. The appropriateness of the project implementers' organisation must be documented in the EMP and reviewed in the review process.

3.10.1 Devolution considerations

Although project owners have primary responsibility for impact management relating to the operation of their projects, government can play a role in helping them carry out their tasks effectively. Government services may include the provision of advice, site visits for consultation, help desks and other information resources online, and other resources. In addition, government authorities may foster best practices for environmental management by promoting the adoption of voluntary sustainability policies by the proponent.

3.10.2 Resource needs

Providing ongoing advisory services requires staff time and sufficient levels of qualified staff to meet requests for assistance. While some of these costs may be recovered through advisory fees or other charges, some costs would likely be dependent on general budget allocations to the government authority providing the advice.

³⁷ Cheryl Wasserman, *Enforcement of EIA Requirements*, Ninth International Conference on Environmental Compliance and Enforcement, 9 (2011).

³⁸ UNEP, Hussein Abaza, Ronald Bisset, Barry Sadler, *Environmental Impact Assessment and Strategic Environmental Assessment*, 59–60 (2004).

Government's resource needs will include:

- On-going maintenance of information resources
- Staff time in providing advisory services

3.11 Monitoring

Monitoring provides information that is necessary for managing project impacts and adjusting mitigation practices to respond to unanticipated conditions. Monitoring is critical for the early detection of safeguards that have been breached and unanticipated risks that may affect local stakeholders. In general, project implementers apply monitoring during project implementation to avert the risk that they do not comply with legal and licence requirements. Three types of monitoring are undertaken by government authorities:³⁹

1. **Compliance monitoring** is undertaken to confirm that a project complies with screening requirements and, if eligible to go through EIA, is constructed, operated, and decommissioned according to the description in the EIA documents.
2. **Performance monitoring** assures that mitigation actions are being carried out in accordance with the standards and methods specified in the environmental management plan.
3. **Impact monitoring** aims to assess the scale and extent of project impacts and to evaluate the adequacy of impact prediction methods.

Monitoring must be consistent throughout a project life cycle to ensure that environmental performance goals are met. The monitoring actions taken must be clearly related to the baseline information established during the EIA study and review process. Monitoring is only cost-effective if government authorities and project proponents gather information that is directly relevant to assess the character and extent of impacts and if they are able to act upon these indicators.⁴⁰

There are several ways in which monitoring is carried out. These are all mutually reinforcing⁴¹:

- Self-monitoring, reporting and record-keeping by the project proponent
- Citizen-monitoring and reporting in the form of complaint
- Government monitoring
- Third party auditing

3.11.1 Devolution considerations

In many countries, the government imposes primary responsibility for day-to-day monitoring on the project proponent, augmenting this delegated task with periodic government-performed inspections as a check on the integrity of the proponent's work. Requiring the proponent to bear the burden for the majority of the monitoring tasks fosters a sense of responsibility on the part of the proponent and implements the polluter pays principle.

³⁹ UNEP, Hussein Abaza, Ronald Bisset, Barry Sadler, *Environmental Impact Assessment and Strategic Environmental Assessment*, 26 (2004); Mark Stoughton, *Topic Briefing: An Introduction to Environmental Assessment*, USAID (January 2005).

⁴⁰ UNEP, Hussein Abaza, Ronald Bisset, Barry Sadler, *Environmental Impact Assessment and Strategic Environmental Assessment*, 26 (2004).

⁴¹ Cheryl Wasserman, *Enforcement of EIA Requirements*, Ninth International Conference on Environmental Compliance and Enforcement, (2011).

The accuracy and thoroughness of proponent's monitoring performance is enhanced through record-keeping and reporting requirements. These obligations are usually specified in environmental management plans. Requiring proponents to systematically make and record quantitative observations of specified environmental performance indicators forces the proponent to employ a certain level of diligence. Periodic reporting requirements ensure that government entities can audit and spot-check the accuracy of the proponent's work.

Case examples: Self-monitoring in the Dominican Republic and in Canada

Compliance monitoring in the Dominican Republic

For project permits or licences to remain valid, proponents must submit periodic reports on self-monitoring compliance, as well as a Report on Environmental Monitoring to obtain a Compliance Certificate. The Ministry of Environment and Natural resources conducts inspections and environmental audits.

Sector-specific self-monitoring requirements in Canada

Canada requires self-monitoring for pulp and paper manufacturers and metal mining operations. The frequency of monitoring specific indicators may vary from continuously to monthly. Pulp and paper mills are required to monitor Biochemical Oxygen Demand three times a week. Total Suspended Solids must be monitored daily, acute lethality weekly and monthly, and pH, flow, and electrical conductivity continuously.

If a facility fails the monthly acute lethality test, the test frequency is increased to weekly. In addition, pulp and paper facilities are required to self-monitor the chemicals 2,3,7,8-TCDD and 2,3,7,8-TCDF during each month in which its chlorine bleach plant is operating. If no measurable concentrations are detected for three months, the frequency is dropped to quarterly. The regulated facility may have a qualified laboratory onsite to collect and analyse the samples, or it may hire outside contractors to collect or analyse the samples.⁴²

A. MAXIMUM DEVOLUTION SCENARIO:

- Proponents perform all monitoring tasks.
- Accredited third-party auditors are used.
- Project proponents are required to record quantitative data on performance indicators at an appropriate frequency, as determined by competent government authorities or consultants acting on the government's behalf.
- Proponents report data to the government according to a timetable that was established by the government.
- The government outsources the evaluation of the proponents reports.

B. MINIMUM DEVOLUTION SCENARIO:

- The proponent performs self-monitoring, which is supplemented by monitoring by the government staff.

⁴² International Network for Environmental Compliance and Enforcement, *Principles of Environmental Compliance and Enforcement Handbook*, Chapter 7: Monitoring Compliance 60 (April 2009).

3.11.2 Resource needs

At maximum devolution, resource needs will include:

- Funds for outsourcing evaluation of monitoring reports

At minimum devolution resource needs will include:

- Operating costs (including staff hours, office supplies, information resources, vehicle/fleet operation and maintenance, maintenance for computers and publication equipment)

3.12 Inspection and enforcement

Inspection and enforcement comprise the phase of an integrated EIA system that gives teeth to the legally binding terms and requirements a proponent agrees to as a condition for receiving a licence to begin and operate a project and its associated activities. Inspection and enforcement are on-going, and often involve significant recurring costs.

A. INSPECTION

In the context of environmental impact assessment, inspections are procedures undertaken to gather facts, collect and analyse documentation, and record observations that are used to determine if a project facility is in compliance with its environmental performance commitments. The inspections themselves do not make final determinations concerning whether a project facility is in compliance, but inspectors may make independent judgments concerning whether a violation has occurred.⁴³ Inspectors must organise their observations and any supporting documentation into a report, to be used in a review that authoritatively compares the facility's performance against the requirements contained in the environmental management plan, in licence conditions and in broadly applicable laws and regulations.⁴⁴

The types of activities involved in an environmental inspection may include⁴⁵:

- Preparation:
 - Consideration of environmental audit reports and statements
 - Consideration and verification of any self-monitoring carried out by or on behalf of operators of classified installations
 - Monitoring compliance with specific environmental quality standards
- Site visits:
 - Assessing the activities and operations carried out at the classified installations
 - Checking the premises and the relevant equipment (including the adequacy of maintenance)
 - Checking the adequacy of the environmental management at the site
 - Checking the relevant records kept by the operators of controlled installations

⁴³ *Ibid.*, p. 3–4.

⁴⁴ *Ibid.*

⁴⁵ IMPEL, Input to the further development of the RMCEI 20 (2007), Recommendation of the European Parliament and of the Council of 4 April 2001 providing for minimum criteria for environmental inspections in the Member States ((RMCEI) 2001/331/EC).

B. ENFORCEMENT

Enforcement deters prohibited conduct by creating negative consequences for those who violate the law or violate legally binding provisions contained in agreements between an actor and the state such as commitments contained in environmental management plans and licence conditions.⁴⁶ Enforcement actions related to EIA requirements are undertaken by government entities that have been delegated the responsibility to do so.

The enforcement process operates in concert with compliance incentives to influence proponent behaviour. Without compliance and consistently applied enforcement measures, all of the steps taken earlier in the EIA process to ensure desirable environmental outcomes may amount to an expensive formality.

Authorised actions related to remedial measures include such options as entering a facility, taking samples and documents, questioning personnel, imposing a schedule for compliance, temporarily or permanently shutting down all or part of a facility, and denying or revoking a permit. Additional authorised actions include requesting information on industrial processes, requiring specialised training for facility operators, and requiring a facility to undergo an environmental audit. Authorised actions may also relate to sanctions, such as imposing monetary penalties, seizing property, seeking reimbursement for government clean-up expenses, seeking criminal penalties, and placing limits on a polluting entity's ability to seek financial assistance.

3.12.1 Devolution considerations

A. THIRD-PARTY AUDITING AND INSPECTIONS

Government capacity for auditing and inspection can be extended through the use of independent third parties whose skills are validated through an approved accreditation process and whose reports will be recognised by both the proponent and authorities. The use of auditors allows the government to delegate some of the responsibility for observations and evaluations of project impacts. An auditor accreditation process is used to ensure that auditors are competent to perform auditing and inspection services and their skills meet a minimum specified standard. Audit results can be certified and serve as evidence that the proponent has fulfilled environmental performance requirements (see also the section on accreditation in this publication paragraph 5.4.1.b).

Case example: Citizen involvement in inspections in Estonia

In certain countries, government agencies may enter into agreements with local citizen groups or individuals to procure their assistance in carrying out inspection efforts.⁴⁷ Under Estonia's Nature Protection Act (1990), the Minister of the Environment and the 17 local district environmental protection departments, which serve as the local administrative units, have responsibility for protecting the environment. According to the Act, environmental monitoring data must be made available for any interested party. Private citizens may not ordinarily take actions individually, but may make complaints to the competent authority. However, citizens can be deputised as "public inspectors" to monitor compliance with certain environmental laws, regulations, and permits. These citizens, however, are barred from receiving payments for their services.

⁴⁶ International Network for Environmental Compliance and Enforcement (INECE), *Principles of Environmental Compliance and Enforcement Handbook*, Chapter 8: Enforcement, 2 (April 2009).

⁴⁷ INECE, *Supra* note 27, at 62; Status of Public Participation Practices in Environmental Decision-making in Central and Eastern Europe, Estonia, Maret Merisaar, 138 (September 1995).

B. DELEGATING ENFORCEMENT TASKS

Although the delegation to private sector entities of police-like authority is widely discouraged if it involves the use of force, there are a few cases where local government authorities have experimented with outsourcing certain environmental enforcement tasks to private actors, including the imposition of fines. Since the potential for misuse is very high in any activity involving the collection of funds, robust safeguards must be implemented. In order to minimise the risk of diversions of funds or other types of abuse, a system must be transparent and supported by an infrastructure that permits close tracking of revenues from the collection point to all other areas of the financial system.

Case example: Privatised enforcement of anti-littering laws in the United Kingdom

In July 2010, the Maidstone Council (the local government authority in Kent, England) began a 1-year trial initiative with the Xfor Group, a private sector company, to supplement the Council's existing environmental enforcement team's capacity to enforce anti-littering laws. Littering, particularly cigarette litter, was a significant problem in the area. The Council needed to deploy a "firm-but-fair" enforcement team that could handle the pressures associated with litter enforcement. The primary role of the deputised staff was to issue fixed penalties to members of the public who were caught dropping litter. The officers also had a secondary role in educating members of the public about the impact litter has on the environment, and the benefits of disposing of their litter in a sustainable manner. All of the Xfor environmental officers are trained in the applicable laws and regulations and were subject to vetting processes prior to their deployment. The programme was entirely self-financing and was funded solely through the penalties paid by citizens who committed litter and dog fouling offenses. The programme was successful and Xfor is now performing the same service on behalf of other municipalities in the United Kingdom.⁴⁸

For certain types of violations, governments have devolved enforcement tasks all the way down to the proponent. An example of self-enforcement is the US Environmental Protection Agency's Audit Policy, which was established in 1995.⁴⁹ Formally titled "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations," the Audit Policy applies to violations of federal environmental requirements and permits regulated entities to self-audit.⁵⁰ If violations are detected, the regulated entity then reports the violations to the EPA in return for significantly reduced penalties. In order to qualify for reduced penalties, the regulated party must discover the violations as a result of a voluntary, self-performed inspection, must expeditiously correct the violation, and prevent recurrence of future environmental violations. Disclosures often occur after consultation between the EPA and a regulated entity, where the parties discuss mutually acceptable disclosure details, compliance requirements, and audit schedules.

A. MAXIMUM DEVOLUTION SCENARIO:

⁴⁸ GPSI Online Government and Public Sector journal, Environmental Enforcement ' Looking to the Private Sector, (31st May, 2011) <http://www.gpsj.co.uk/view-article.asp?articleid=421>;
http://article.wn.com/view/2012/08/15/XFOR_targets_litter_louts_in_Vale_15_August_2012/.

⁴⁹ US EPA Audit Policy, <http://www.epa.gov/compliance/incentives/auditing/auditpolicy.html>.

⁵⁰ Stafford, Sarah L., Private Policing of Environmental Performance: Does it Further Public Goals? (February 2, 2011). Available at SSRN: <http://ssrn.com/abstract=1721022>.

- Self-policing is permitted for certain violations, supplemented by government enforcement action.
- Accredited third-party auditors perform all routine inspections.
- The government provides incentives such as fine reductions for voluntarily disclosed violations.
- Some enforcement tasks for minor violations are outsourced to private sector entities.

B. MINIMUM DEVOLUTION SCENARIO:

- The government conducts all inspection and enforcement tasks, including the imposition of fines and sanctions, injunctions, and criminal prosecutions.

3.12.2 Resource needs

Inspection involves significant staff time and often involves site visits to sometimes distant locations. The quantity of resources required is dependent on the size, complexity, and level of impacts associated with each project, a profile of the sectors in the regulated community, the geographic distribution of the projects, and the relative proportions of low, medium, and high impact projects. The relative levels of knowledge and experience of the inspectors is an important factor.⁵¹

Other factors affecting the aggregate resource intensity of inspection include:

- Standards and enforcement actions mandated by domestic and international environmental legislation
- Priorities established by political leaders
- Responses to unexpected burdens, particularly major accidents
- The time required for coordination with other regulatory bodies
- The management approaches and tools available to facilitate government tasks⁵²

Just like inspection tasks, an enforcement response to an environmental violation may involve substantial costs if an agency must resort to the court system to authorise an injunction or compel corrective action by a project proponent. In order to follow through with enforcement actions with sufficient regularity to ensure compliance, an agency must have an adequate team of legal staff who have specialised training in environmental law and regulatory issues.

Resource needs will include:

- Operating costs, including staff, office supplies, information resources, vehicle/fleet maintenance, fuel, laboratory and testing supplies, maintenance for computers and publication equipment
- On-going costs associated with auditor accreditation
- Legal and procedural costs associated with prosecution of cases

The case example presented on page 55 illustrates how human resource needs for inspection in Croatia are calculated.

⁵¹ European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL), Best Practices Concerning Training and Qualification for Environmental Inspectors, Final Report, IMPEL Network, 18–19 (2003), Available at <http://impel.eu/projects/best-practices-concerning-training-and-qualifications-for-environmental-inspectors/>

⁵² INECE workshop_f2 Defining Resource Needs, p.8

3.13 Resource needs for capacities, guidance and information systems

In the above text, the resource needs have been discussed per step in the process leading up to the EIA report, the environmental licence and implementation that follows. However, there are also resources involved in developing and maintaining the capacities, guidance, and information systems that are needed for multiple steps in this series. The costs of maintaining and regularly upgrading capacities and information systems need to be factored into annual budgets (see the section on budgeting which also covers costs associated with physical facilities, chapter 3). The costs of setting up such systems and facilities are not addressed here.

A. CAPACITIES

For the various tasks listed in this chapter, trained staff will be needed. Training is not usually a one-off activity, but will need to be regularly undertaken, for example to train new staff, or re-train staff after responsibilities have shifted and staff are faced with new tasks. Training may also be necessary for external experts who are regularly engaged in EIA related tasks. For example for external reviewers. Regular training for government staff will commonly need to be included in the budgets of the agencies involved.

Training does not necessarily take place in-house. There is a wide range of programmes for ensuring that environmental consultants and other planning professionals have the minimum experience and skills needed to competently carry out their tasks. For example, the required level of expertise may be obtained through completion of a specialised degree or certificate programme offered by a university or through a trade-specific accreditation process. Examples of trade-specific accreditation include the US Certified Environmental Professional (CEP) credentials, and the UK IEMA membership⁵³.

Obviously, if such an accreditation system does not exist, and a country chooses to introduce such a system, then significant resources will need to be available to develop and manage the system. The investment costs will need to be accounted for by the actors involved. Countries may also consider investments in scholarships and internship programmes to provide incentives that will build a base of local, skilled staff.

B. GUIDANCE

For various steps described above, guidance will be needed to explain the procedural requirements, and to set out good practice advice. This will be especially important where governments choose to devolve responsibilities to proponents or third parties. It is quite common for countries to prepare sectoral guidance, as well as guidance on specific steps, such as screening and scoping. Public participation guidance is a regular feature as well. Such guidance will need to be regularly updated to reflect changes in procedure or practical insights. Internal guidance, such as decision support tools, checklists and instructions on working procedures, will be helpful support and the resource needs

⁵³ See also Academy of Board certified Environmental Professionals, http://www.abcep.org/certification_program.html; Institute of Environmental Management & Assessment, Special report – The State of Environmental Impact Assessment Practice on the UK, (2011). Available at <http://www.iema.net/system/files/iema20special20report20web.pdf>.

associated with developing and updating such guidance material also needs to be factored in. Another type of guidance that could be used both within relevant agencies and outside, are “boiler plate” templates for permitting conditions or other relevant formal documents.

C. INFORMATION SYSTEMS

EIA information systems are essential to track EIA cases and documentation, making them easily available for government staff working on a specific EIA. Information systems can also function as a knowledge repository to refer back to, when dealing with a new EIA that has similarities to earlier cases. Depending on the technological possibilities, information systems can exist in a hard copy reference library, or digitally. Information systems can also be set up to provide the means to record and store, for example, public participation submissions, monitoring data, and enforcement actions. Finally, information systems may have an internal as well as an external interface, where the external interface provides the means by which government agencies give access to information for public participants.

4. BUDGETING FOR EIA RELATED TASKS

A precondition to designing and implementing effective funding mechanisms is having accurate data on the actual costs for government agencies to carry out EIA-related tasks. The cost components are many and varied. An effective EIA system requires the use of a significant number of staff, representing different areas of core and specialised expertise. There are costs associated with site visits and inspections. There is also the need for specialised equipment and supplies, as well as the need to periodically secure the services of external experts or auditors to supplement locally available skills. Chapter 2 has already described the resource needs of each activity in the process of EIA and project licensing and licence enforcement. In this section more detailed information is given on how to budget for EIA –related governmental tasks.

Budgeting for EIA system expenditures is an important part of assuring that governments can carry out their responsibilities and meet their objectives. In the following section, the resource needs to consider when budgeting are described. The relevant types of costs are outlined and costs are subsequently separated into costs for (1) EIA review; (2) Drafting licensing terms; (3) Monitoring and inspection; (4) Prosecution. Some examples of budgeting approaches are given.

4.1 Resource needs assessment

For each stage in the process of EIA, licensing and enforcement, government resource needs will depend on the complexity and level of risk presented by each type of project and the tasks the government must carry out at each stage. In many cases, government costs will be calculated across a range of project types. A three-tiered logic is common, with separate calculation for projects or activities that classify as low, medium, or high impact.

Budgeting requires that the operating (recurring) and capital costs associated with oversight of these projects are understood. The costs are usually broken down into an annualised basis. The following expenditures are generally recognised for EIA-related government tasks:

- Operational (recurring) expenses:
 - Personnel, including salaries, insurance, and training costs
 - External consultants
 - Office supplies, communications, and publication costs
 - Leased office space
 - Laboratory supplies
 - Field sampling materials and services
 - Vehicle/fleet maintenance, maintenance for computers, laboratories, etc.
 - Depreciation
- Capital expenses:
 - Vehicles for on-site visits or aerial monitoring
 - Government-owned office space and laboratories
 - Computers and communications equipment
 - Laboratory and field sampling equipment
- Libraries and furniture

4.1.1 Costs of EIA review

The principal government cost for EIA review is the hourly cost for staff experts and external experts.⁵⁴ A 2007 study commissioned by the European Commission found that most EIA reviews for routine projects consumed roughly four to five hours of expert staff time, with review times and associated consultation ranging from six to eight months for highly complex projects.⁵⁵ The average time input for review can be superimposed over projections of the number of expected projects, which could be estimated based on historical data and forecasted increases in activities.

The following chart illustrates one approach to estimating costs of review and administrative overhead. A proportion of the running costs will have to be allocated to reviewing, to be able to complete a review cost estimate.⁵⁶

Running costs administration of EIA	
<i>Task or function</i>	<i>Basis for estimation of costs</i>
Professional staff– EIA unit	Number of professional staff, the average cost of wages and benefits
Information technology costs	Computers, website, EIA database, and phone

EIA review	
<i>Task or function</i>	<i>Basis for estimation of costs</i>
Initial site visits	Daily allowance, cost per km of vehicle travel (fuel, depreciation, driver)
External experts	Number of consultants per day (and for major projects, certified financial analysts per day) and daily fee
Personnel	Various governmental staff – per hour costs
Costs of technical meetings	Per diem transportation costs, use of meeting facilities, coffee and refreshments, pre-meeting mailings, photocopies, use of video projection equipment, and other miscellaneous expenses

4.1.2 Costs of drafting licensing terms

Within the EIA process the environmental (and social) risks are identified and assessed, and measures to monitor, mitigate, manage and compensate these impacts are proposed in the EIA report or in an accompanying environmental management plan. These and possibly additional measures brought up by the licensing authority need to be converted to legally binding and enforceable permitting or licensing conditions. The estimation of the cost of converting proponent-provided plans into such terms is generally based on the hourly costs of utilising qualified staff members.⁵⁷ The relevant government staff members may need to

⁵⁴ European Commission, Frans Oosterhuis, *Costs and Benefits of the EIA Directive*, 9 (May 2007) Available at <http://ec.europa.eu/environment/eia/pdf/Costs%20and%20benefits%20of%20the%20EIA%20Directive.pdf>

⁵⁵ *Ibid.*, p. 9.

⁵⁶ Largely based on analytical method cited in USAID, *Amelioration du systeme d'évaluation environnementale et financement de la gestion de l'environnement au Mali* (November 2006).

⁵⁷ INECE Principles of Environmental Compliance and Enforcement, Chapter 5: Designing effective requirements 29 (April 2004).

work in consultation with one or more experts with specialised technical training, which they might draw from other government departments or agencies, or engage externally.

The following chart illustrates one approach to estimating costs of drafting licensing terms:

Drafting licensing terms	
<i>Task or function</i>	<i>Basis for estimation of costs</i>
Professional staff – technical permit writers	Number of professional legal staff, the average hourly or daily costs of wages and benefits
External experts	Number of consultants per hour or day and their fee
Personnel	Relevant staff from environmental or other line ministries – hourly costs

4.1.3 Costs of monitoring and inspection

Monitoring and inspection require significant resources. The quantity of resources required is dependent on the size, complexity, and level of impacts associated with projects subject to EIA, as well as the profile of the sectors in the regulated community, and the geographic distribution of the projects. Other factors affecting the aggregate resource intensity of monitoring and inspection include:

- Standards and enforcement required by domestic and international environmental legislation
- Priorities established by political leaders
- Expected level of non-compliance
- Desired ratio of inspectors to the number of facilities that require inspection
- Responses to unexpected events, particularly major accidents
- Time required for coordination with other regulatory bodies
- Management approaches and tools, such as information systems, available to facilitate government tasks ^{58 59}

According to a United Nations Environment Programme report, the cost of monitoring an *individual* project will generally depend on:

- Number of impacts that must be monitored;
- Characteristics of the project specific monitoring plans;
- Duration of the life cycle of the project;
- Type of institutional system that is required to manage the data.⁶⁰

There is no “best” method for calculating inspection costs and the method used may follow function, such as the need for standardised comparisons in a particular context. The analytical method below was originally developed by UNEP in 1996.⁶¹ This method calculated resource needs with the use of three different project categories, classified according to

⁵⁸ INECE workshop_f2 *Defining Resource Needs*, p.8.

⁵⁹ OECD (2004), *Assuring Environmental Compliance, A Toolkit for building better environmental inspectorates in Eastern Europe, Caucasus, and Central Asia*, 239.

⁶⁰ UNEP, Hussein Abaza, Ron Bisset, and Barry Sadler, *Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach*, 61.

⁶¹ Based on UNEP (1996), *Industry Environmental Compliance: Training Manual, Technical Report Nr. 36*, UNEP: Industry and Environment, Paris.

impact level (high, medium, low). The method was refined in 2007 to support comparisons of human resource needs for inspectorates in eastern Mediterranean countries.

UNEP model analytical framework for preparing standardised country reports on the costs of staffing environmental inspectorates

Sample human resources calculation scheme⁶²:

Calculation of numbers of inspectors				
	Impact level*			Total
	High	Medium	Low	
Number of facilities (A)	a1	a2	a3	A=a1+a2+a3
Frequency of “on-site inspection” (B)	b1	b2	b3	–
Frequency of “administrative inspection”(C)	c1	c2	c3	–
Days per “on-site inspection” (D)	d1	d2	d3	–
Days per “administrative inspection” (E)	e1	e2	e3	–
Total staff-days (F)	f1=(a1*b1*d1)+(a1*c1*e1)	f2=(a2*b2*d2)+(a2*c2*e2)	f3=(a3*b3*d3)+(a3*c3*e3)	F=f1+f2+f3
Effective days per inspectors** (G)	–	–	–	G**
Number of inspectors required (I)				F ÷ G
Additional staff requirement				
Management	e.g. average ratio of one management level staff member to 10 to 15 inspectors			M
Administrative staff	e.g. on average 4 to 5 inspectors to one administrative support			AS
Judicial support	e.g. on average one judicial person to 30 inspectors			JS
Staff turn over	e.g. on average 10% turn over			X
Total additional staff (TAS)				M + AS + JS + X
Total human resource costs for inspection				
Total of inspectors and additional staff				I + TAS

* Estimate based on historical data and knowledge of sectors.

** G = (Working days per year) – (training days per year) – (meeting days per year, including internal and external meetings) – (annual leave and average duration of sick-leave per person per year) – (national holidays) – (any other non-inspection time employment).

In this example, the hourly compensation for time input is determined by multiplying hourly labour rates by the staff-day figures above.

⁶² Modified from OECD (2004), *Assuring Environmental Compliance, A Toolkit for building better environmental inspectorates in Eastern Europe, Caucasus, and Central Asia*, 239 and UNEP, *Mediterranean Action Plan, Meeting of the Network on Compliance and Enforcement*, Athens, 24–25 October 2007 (discussing performance indicators and human resource needs assessment for inspection implementation and sizing).

The chart below shows an example of results produced by the application of the method above:⁶³

Case example: Human resource needs for inspection in Croatia (estimated figures for 2006)⁶⁴

Human resources calculation scheme:

Calculation of numbers of inspectors				
	Impact level			Total
	High	Medium	Low	
Number of facilities (A)	250	9000	25 000	34,250
Frequency of “on-site inspection” (B)	2	0.5	0.2	–
Frequency of “administrative inspection”(C)	3	1	0.2	–
Days per “on-site inspection” (D)	2	1	0.5	–
Days per “administrative inspection” (E)	1	0,5	0.2	–
Total staff-days (F)	1750	9000	3500	14,250
Effective days per inspectors (G)	–	–	–	150
Number of inspectors required (I)				95
Additional staff requirement				
Management	e.g. average ratio of one management level staff member to 10 to 15 inspectors			9
Administrative staff	e.g. on average 4 to 5 inspectors to one administrative support			19
Judicial support	e.g. on average one judicial person to 30 inspectors			4
Staff turn over	e.g. on average 10% turn over			10
Total additional staff (TAS)				42
Total human resource needs for inspection				
Total of inspectors and additional staff				137

4.1.4 Costs of prosecution (enforcement response)

In the context of EIA and environmental licensing, it may also be necessary to budget for the costs associated with prosecution of non-compliers. The costs of bringing a civil case to court, obtaining an injunction, or prosecuting criminal violations of environmental laws are significant and vary widely from jurisdiction to jurisdiction. In addition, the costs of prosecution are highly unpredictable. Yet, it is important to consider this type of expense and ensure that funds are available if needed. An estimation of financing needs may be partially based on a historical average of costs, supplemented by an additional allowance or fund to

⁶³ UNEP (October 2007), Note that the UNEP figures do not address transport or other costs associated with inspections.

⁶⁴ UNEP Mediterranean action plan, p.33

cover deviations from the average. Some costs may be recovered through civil and criminal fines, but these revenues do not occur in a consistent and recurring stream and a buffer could be built into the budget to cover variability in resource needs over time. It may not be necessary to reserve resources at the level of an individual agency. In some jurisdictions government-wide reservations are made and can be called upon to prosecute environmental non-compliance, see also box on this page.

Case example: Budgets for prosecution costs in the US

In many jurisdictions in the US (and not just for environmental matters), there are schemes involving monetary sanctions and restitution to government agencies of prosecution costs (as determined after the fact). For example, Muskegon County in the State of Michigan, defines 'cost of prosecution' as "the salaries, wages, or other compensation, including but not limited to, overtime pay of personnel of the Muskegon County Prosecutor's Office for the time spent investigating and prosecuting the crime or crimes resulting in conviction, and the actual costs and expenses incurred by the Muskegon County Prosecutor's Office in the prosecution of a case."⁶⁵

4.2 Correlating expenditure to EIA tasks

Note that if there is no existing EIA related budget to start from, administrators of EIA systems can model task resource needs around already existing guidelines and standards, such as the European Union's Eco-Management and Audit Scheme (EMAS). In the short-term, these tools can provide the basis around which to develop cost estimates that serve as a starting point for determining funding needs. In the long-term, however, there is no substitute for a systematic and organised study of actual tasks and resource needs, since there are likely to be substantial variations that are based on local institutions, procedures, levels of expertise, and other circumstances.

If a government agency's actions are directed toward multiple environmental objectives, such as nature conservation, biodiversity protection, public health, and climate, it may be difficult to correlate certain expenditures with specific EIA tasks. Nevertheless, the more closely these costs can be ascertained, the more likely it is that adequate funds can be directed toward EIA-related activities. The guidance given below should help in developing a detailed budget for these activities.

4.3 Making up the balance

The budget represents the expenditures side of financial planning. To prepare a balance sheet the costs need to be compared with anticipated revenues from the financial mechanisms that are used. The case example in this paragraph shows an example where expenditures and incomes are balanced. Financial planners must harmonise the prioritised expenditures with projected revenues so that all planned expenditures are covered, or make a claim on supplementary resources from elsewhere, such as the treasury.

⁶⁵ Muskegon County Board of Commissioners, Ordinance No. 2011-393, Prosecutor Recovery Costs, available at http://www.co.muskegon.mi.us/boardofcommissioners/ordinances/prosecutor_ord.pdf

Case example:**Statement of Comprehensive Income for the Environmental Protection Agency of South Australia⁶⁶**

(Year ending 30 June 2011)*

Expenses	2011	% of total
Employee benefits expenses	19.953	48,3%
Supplies and services	6.925	16,8%
Depreciation and amortisation (loan repayment)	940	2,3%
Grants and subsidies	13.210	40,0%
Other expenses	270	0,7%
Total expenses	41.298	–
Income	2011	% of total
Fees and charges	37.398	94,9%
Grants and contributions (from government programmes)	1,696	4,3%
Interest revenue	232	0,6%
Net gain from the disposal of non-current assets	8	0,02%
Other income	58	0,01%
Total Income	39.392	–
Net cost	2011	% of total
Net cost of providing services	1,906	–

*Figures stated in (thousands) Australian Dollars.

⁶⁶ South Australia Environment Protection Authority, Annual Report (1 July 2010 to 30 June 2011).

5. MINIMISING RESOURCE NEEDS

Most government regulatory bodies face varying degrees of funding constraints and have to compete for the funding allocations they receive. There are a number of measures government entities can take to minimise the strain on their own resources and maximise the ability to accomplish tasks with what is available. This section explores ways in which resource needs can be minimised, for example by prioritising objectives and devolving responsibilities to the private sector.

5.1 Eliminating inefficiency

This is rather an obvious consideration in the context of minimising resource needs, but it is outlined here for the sake of completeness: A government agency can implement a number of steps to reduce any inefficiencies in the way it carries out its tasks. Although the comprehensiveness of some aspects of these tasks may be dependent on the level of expenditures, it is worth exploring if resource needs may be reduced without diminishing the quality.

Efficiency improvement can be achieved in a number of ways, including the elimination of duplicative tasks and expenditures, coordination of staff, avoiding unnecessary steps, and the coordination of site visits to minimise trips. Integrated training is another option, and refers to a management approach that seeks to make staff skilled in a number of related tasks, reducing the need to retain a large number of highly specialised staff. In the context of EIA, this is relevant, since monitoring, inspection, and enforcement activities often require interdisciplinary skills. Efficiency increases require better coordination and cooperation between government departments. As an added bonus, this often results in faster response times. Other ways that government entities can increase efficiency include the standardisation of procedures and the sharing of resources among departments. By sharing personnel, skills, and other resources, government agencies can extend and leverage existing resources and avoid duplication of effort.

Case example: Minimising resource needs by coordination across institutions in Ghana⁶⁷

The Environmental Protection Agency (EPA) of Ghana has made efforts to mainstream environmental responsibilities into the work of sector authorities. Environmental units have been set up in different governmental institutions in order to support the EPA in achieving their goals, for example by contributing their staff and financial capacities to EPA activities.

The arrangements made in the case of the Bui hydro-electric project illustrates how such a liaison of the EPA with relevant sector agencies can positively influence the resource needs of the EIA authority. For this project, the EPA closely cooperated with the Energy Commission, which grants the construction and operation licence for the hydropower plant. The Commission has its own Environmental and Social Impact Assessment division, that ensures energy projects comply with the environmental regulations. This division assisted the EPA throughout the EIA process for the Bui project, in particular with the review process and with EIA follow-up. In general, the EPA does not have sufficient resources to monitor activities. In the case of the Bui project, the collaboration of the EPA with the Energy Commission helped to address this challenge. Joint monitoring visits to the project location were organised together with the Energy Commission and reporting responsibilities were divided between the members of the combined monitoring team. This approach reduced the Ghana EPA's resource needs and helped to increase the quality of the EIA process.

Both the Energy Commission and the EPA were pleased with the approach followed in the Bui case. "The EPA itself, have enough funds, they also depend on the government budget. And the government budget is not enough for their operational activities. So some support is supposed to be gotten from the sectors to enable the EPA perform their functions." (Quote from an experts at the Energy Commission). "They send stuff, they pay bills, they lead the process and it is usually better." (Quote from an expert of the EPA Ghana). Joint EIA activities with sector authorities are not yet common in Ghana, but the EPA intends to build upon these positive experiences in the future.

5.2 Prioritisation

Another obvious way to reduce resource expenditure is to prioritise the projects and process steps that are most important and expend more resource there, and fewer resources on other projects or process steps. A starting point for such an exploration should always be the objectives that the EIA system needs to achieve⁶⁸. See for example the next case example which reports on an exploration into the efficiency of the Australian EIA system. Governments can choose to strategically invest more resources in those projects that have the greatest potential to cause adverse environmental impacts (Risk based prioritisation.⁶⁹) In addition, strategic planning at the national level can define priorities that guide the targeting of monitoring efforts at the sub-national and local levels. Reversely, if compliance monitoring

⁶⁷ Sonderegger G., 2012. Explaining EIA performance in the water sector in Ghana. The role of capacities of the main actors. Master Thesis, University of Utrecht.

⁶⁸ International Association for Impact Assessment in cooperation with the Institute of Environmental Assessment, UK, *Principles of Environmental Impact Assessment: Best Practice* (January 1999).

⁶⁹ Mazur, E. (2011), "Environmental Enforcement in Decentralised Governance Systems: Toward a Nationwide Level Playing Field", OECD Environment Working Papers, No. 34, OECD Publishing. Available at <http://dx.doi.org/10.1787/5kgb1m60qtq6-en>.

and enforcement priorities differ among entities at the sub-national and local levels, that can adversely affect efficiency.⁷⁰

Case example: Improving EIA efficiency in Australia

A 2009 study on improvements in the EIA process in Australia concluded that consideration of the following factors could help in improving efficiency:

- Adoption of a risk-based approach to prioritisation that focuses on environmental risks and impacts that matter most (avoid unnecessary or low-value work)
- Focus on environmental outcomes, by specifying “clear, relevant, reasonable and auditable environmental conditions” in licensing provisions
- Review of the environmental policy framework and priorities to assure they are not unnecessarily comprehensive
- Finding ways to avoid duplication of efforts by coordinating government processes across departments
- Reducing the number of levels of environmental assessment to simplify the process
- Improving the management of the EIA process through clear accountability, project management and tracking, and a strategy for clearing backlogs

5.3 Devolution of tasks

Transferring certain tasks and responsibilities to project proponents can result in cost savings to the government. It is important in the case of devolution, that there is a trustworthy mechanism to ensure that these functions are properly performed and accurately reported. Since proponents are often motivated by economic objectives – carrying out their projects cost-effectively and unimpeded, the risk of loss of quality and objectivity is significant and must be addressed. The risks inherent in devolving tasks to the proponent are reduced where it is possible to establish clear, auditable requirements, where third parties with an ascertainable degree of independence can be utilised, and where there is a high degree of transparency in the process. The devolution of a task does not necessarily reduce overall government costs in itself. It would do however, if the cost of verifying the quality and objectivity of the proponent’s performance is less than the cost of a government entity performing the task itself. In Chapter 3, devolution possibilities are discussed per EIA activity.

5.4 Compliance promotion

Another way to reduce resource needs for EIA-related governmental tasks is to encourage proponent compliance. This can be a cost effective way to decrease administrative burdens associated with monitoring, inspection, and enforcement especially. Compliance incentives include policies and programmes that encourage private or public sector facilities or project proponents to avoid practices that result in environmental violations, or which provide recognition to those that surpass minimum standards of environmental performance.⁷¹

⁷⁰ *Ibid.*, p. 24.

⁷¹ INECE, *Principles of Environmental Compliance and Enforcement Handbook*, Chapter 6: Compliance Promotion 4 (April 2009).

Significant experience has been built up with market based instruments and other methods that promote compliance. Below we discuss some of these mechanisms. We start with economic incentives such as tax reductions, then look at public disclosure initiatives that leverage the importance of company reputations. Next we move on to accreditation and certification and then address co-regulation, in which industry and government jointly set targets for environmental performance. Finally, we reflect on the effectiveness of compliance promotion mechanisms in the context of weak governance.

5.4.1 Economic incentives for compliance

Economic incentives work by making environmentally responsible behaviour more economically rewarding than behaviour that causes negative impacts. Incentives encourage commercial entities to use competitive business skills to achieve environmental objectives in the most cost effective manner. A distinct advantage of economic incentives is that they often do not require significant expenditures on regulatory oversight and enforcement. For example, governments can choose to give tax incentives to proponents that are willing to make voluntary investments in environmentally friendly technology, such as energy-saving equipment.⁷² The tax incentives could take the form of tax credits, tax exemptions, tax deductions, and accelerated depreciation. A tax exemption releases a taxpayer from tax liability for a specific source of income, whereas a tax deduction allows taxpayers to deduct certain costs incurred from the net income they report. A tax credit is an offset that may be applied against a taxpayer's tax liability if certain conditions are met, such as the installation of energy-saving equipment. Finally, accelerated depreciation permits a taxpayer to front-load the costs of depreciation, recognising these expenses early after an investment in energy-efficient or pollution control equipment.

A. PUBLIC DISCLOSURE AND REPUTATIONAL INCENTIVES

Governments can use public disclosure as an effective tool to motivate project proponents to fulfil the commitments they made during the EIA licensing process. Since reputation is an important concern for many (but not all) businesses, a company's desire to maintain a good image in the public eye can be leveraged to encourage compliance with EIA requirements. A number of countries that have used public disclosure successfully have implemented a public rating system to simplify the way that environmental and social performance are reported to the public.

In the case examples below, companies had been given the option to receive public recognition for performance that exceeds mere compliance and had the opportunity to improve their performance levels before information was disclosed to the public. In order to ensure that company performance ratings were sufficiently visible, it was critical to foster the cooperation of public media, inviting them to partner with the relevant authorities to implement well-publicised events in which information on business enterprises was disclosed.

⁷² INECE, *Financing Environmental Compliance and Enforcement Programs* (1996).

Case examples: Performance rating and public disclosure in Indonesia and Ghana

Promoting industrial compliance in Indonesia

In 1995, Indonesia's Environmental Management Agency (BAPEDAL) created the Programme for Pollution Control, Evaluation, and Rating (PROPER) to promote industrial compliance with national wastewater discharge regulations and to facilitate and enforce the adoption of "clean technology" practices. BAPEDAL used a colour-coding system consisting of five tiers to rate factories on their compliance level and then disclosed these ratings to the public through the media. Rating levels ranged from black, for companies that made no effort to comply, to gold for companies that surpassed mere compliance and made extensive use of clean technology, waste minimisation, and pollution prevention. During the first two years of its pilot programme, the compliance level of factories increased from 35 percent to 51 percent⁷³. After being temporarily suspended during the Asian economic crisis from 1998–2001, PROPER was re-instituted in 2002, providing a more comprehensive assessment process that included the control of air pollution, the management of hazardous and toxic waste, and the use of Environmental Impact Assessment⁷⁴. By 2011, there were 1,002 participants in the PROPER programme and the compliance level had risen to nearly 75 percent⁷⁵.

Environmental performance rating and disclosure in Ghana

Ghana's Environmental Protection Agency (EPA) built on the successful experiences from the PROPER programme. It designed a public disclosure programme (AKOBEN) around Ghana's own cultural institutions and country-specific circumstances. The AKOBEN programme was also guided by the principles of Ghana's National Environment Policy, which calls for "Use of the most cost effective means to achieve environmental objectives, use of incentives in addition to regulatory measures and public participation in environmental decision-making"⁷⁶.

The AKOBEN programme follows a two-step procedure that provides regulated facilities an opportunity to avert unfavourable disclosures if they are willing to correct violations that are detected by the government. After conducting a comprehensive review of a facility's environmental and social performance, the EPA shares their findings privately with the facility operator. If the facility operator contests a finding of poor performance, the facility must inform the AKOBEN team, who will then review the ratings and resend the results to the facility before they are disclosed to the public. Final ratings are disclosed each year on World Environment Day.

The extent to which public disclosure will work as an incentive may depend on the industry sector involved. It is difficult to use market pressure effectively in sectors where there is little or limited competition or where a company's profitability is not affected by its public reputation⁷⁷. It may also be challenging to influence the performance of government-owned operations that may be more insulated from public pressure than private sector companies.

⁷³ World Bank, Empowerment Case Studies: Indonesia's PROPER, Available at http://siteresources.worldbank.org/INTEMPowerment/Resources/14825_Indonesia_Proper-web.pdf.

⁷⁴ AECEN, Public Disclosure of Industrial Pollution in Indonesia (February 26 2010), Available at <http://www.aecen.org/good-practices/public-disclosure-industrial-pollution-indonesia>.

⁷⁵ Shakeb Afsah, Allen Blackman, Jorge H. Garcia, and Thomas Sterner (authors), *Environmental Regulation and Compulsory Public Disclosure: the PROPER Case*, RFF Press, page 3 (2013).

⁷⁶ Cite Ghana's national environmental policy document.

⁷⁷ INECE, Principles of Environmental Compliance and Enforcement Handbook, Chapter 6: Compliance Promotion

B. CERTIFICATION & ACCREDITATION

It has become increasingly common in industrialised countries for private sector entities to pursue high standards of environmental and socially responsible performance, through compliance management systems that are based on standards developed by private sector organisations. Incentives for such efforts often have as much to do with reputational enhancement as they do with regulatory compliance. In order for voluntary environmental performance practices to result in measurable reductions in regulatory burdens, however, there must be a trustworthy means of verifying the integrity of claims by facility operators that their environmental performance is compliant. Obtaining certification of environmental performance through a widely used and recognised standard, such as the International Standards Organisation (ISO) 14000 series, has the potential to accomplish this. Assuming that adequate measures can be developed to ensure reliability and consistency.

One area where certification may reduce the governmental workload, and resources needed, is inspection and enforcement. These activities can be reduced (or even eliminated) in cases where proponents obtain certification for their environmental management systems, and are audited by certified auditors. The proponents carry most or all of the costs of certification and/or auditing in this case. However, even the most robust certification procedures cannot guarantee environmental performance at all times. Government regulators will need to choose to what degree they can place “justified trust,” in such certification arrangements⁷⁸. There is significant interest in how private standards might interact with government regulatory compliance systems if adequate guarantees of trustworthiness and consistency can be achieved, see also textbox.

Case example: EIA accreditation in the UK

The UK Institute of Environmental Management and Assessment (IEMA) offers two types of accreditation schemes to the field of EIA: accreditation for individual impact assessment professionals, and a quality mark for consultancies that undertake EIAs.

The “EIA Quality Mark” is based around a set of EIA Commitments, which organisations registered to the scheme agree to comply with. IEMA operates the EIA Quality Mark and undertakes an independent review of an organisations compliance with its EIA commitments both during the application process and once registered through an annual review process. As part of the EIA Quality Mark, registrants commit to work with IEMA to enhance the profile of good quality EIA. This commitment is met through the delivery of presentations, publication of articles and production of relevant case studies.⁷⁹

At the individual level, impact assessment professionals can apply for registration in the EIA Practitioner Register, which has existed since 2002. The register works with 3 levels: associate, registered and principal level. Applications are evaluated on the basis of an individual's practical experience and personal attributes and skills by an panel of experts. EIA Practitioners are required to sign and agree to abide by the Code of Practice. Complaints against registrants are dealt with by a disciplinary committee and instances of malpractice or breaches of the Code of Practice result in the removal of individuals from the register.⁸⁰

⁷⁸ IMPEL, *Compliance assurance through company compliance management systems 2011/04*, 40 (May 2012).

⁷⁹ <http://www.iema.net/eia-quality-mark>, accessed July 2013.

⁸⁰ <http://www.iema.net/eia-practitioners>, accessed July 2013.

In practice, however, the integrity of certifications performed by accredited private sector certification bodies is still a matter of considerable concern. The entities that perform compliance audits may not be truly impartial with respect to the companies that pay for their services and may be motivated by factors other than accuracy and objectivity. For example, it has been observed that there are variations in the qualification of certifiers and inconsistencies in the way different certifiers interpret international standards.⁸¹

Developers of established certification standards are aware of these problems and are working to enhance the integrity of the certification process and to ensure robust qualification requirements for certifiers. For example, the new ISO/IEC TS 17021-2 standard clarifies the requirements for the competence of personnel involved in the certification process.⁸² In addition, the ISO does not conduct its work unilaterally. It engages government and private sector representatives from around the world in continuously improving the technical implementation of its standards. The ISO is currently undertaking a four-year action plan for developing countries, integrating national and regional input in efforts to create robust certification programmes, enhance local skills and expertise, and promote opportunities for regional cooperation.⁸³ In other words, there is a broad knowledge base to build on, when developing certification systems specifically for EIA related tasks.

One way of safeguarding auditor independence is to avoid direct payment by the proponent to the auditor. Proponents may make a selection from a government approved list of auditors and make payments through a secure and transparent system that utilises a trusted intermediary, which in turn pays the auditor's fees. Similarly, governments may randomly assign auditors to projects. In countries with a limited pool of auditors, however, the chance of the same auditor needing to inspect the same project on multiple occasions is greatly increased.

Certification of environmental systems might be one approach to ensure high standards in EIA and environmental licensing practice. Countries can also invest in the quality of the experts and organisations involved in EIA. Some countries have chosen to develop programmes for accrediting EIA practitioners and independent auditors (see also the next two case studies). Key reasoning behind such accreditation is that the quality of EIAs will elevate, which will in turn reduce the workload involved in EIA review. Note that, certification and accreditation systems require a significant up-front investment and require ongoing management costs. In developing new programmes, countries within an economically integrated region may consider pooling resources with neighbouring countries to cost-effectively develop regional standards that are compatible and which increase the number of qualified auditors and recognised EIA practitioners that can service an area.⁸⁴

⁸¹ See e.g., Document Center's Standards Forum, New ISO/IEC TS 17021-2:2012 addresses Conformity assessment — Requirements for bodies providing audit and certification of management systems — Part 2: Competence requirements for auditing and certification of environmental management systems. <http://standardsforum.com/?p=3352>

⁸² <http://www.document-center.com/standards/show/ISO/IEC-17021-2>

⁸³ ISO Action Plan for Developing Countries 2011-2015. Available at http://www.iso.org/iso/iso_action_plan_developingcountries-2011-2015.pdf

⁸⁴ See Southern African Institute for Environmental Assessment (SAIEA), *Handbook on Environmental Assessment Legislation in the SADC Region*, 14 (2007), (Stating that the introduction of certification and registration schemes for environmental assessment practitioners would improve the quality of EIA reports and provide a degree of quality assurance, and that the credentials should be standardized for reciprocal recognition among countries in the region).

Two studies on certification of environmental management systems

1. A study by the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) entitled “*Compliance assurance through company compliance management systems, 2011/04*,” focuses on the use and reliability of private certifiers to check and assure the legal compliance of companies that have voluntarily implemented compliance management systems (CMSs). The study seeks in part to determine whether government oversight burdens can be lessened for companies that proactively demonstrate consistent adherence to rigorous compliance goals. The study aimed to answer questions such as:

- What conditions should be met before regulators can make use of company compliance management systems? Is it possible to define minimum criteria for robustness and reliability?
- In what directions could governmental supervision develop once a company’s CMS has proven to function according to the expectations, minimum criteria, and needs of both the company and the authorities? Should environmental permits be aligned to a company compliance management system? How? ⁸⁵

The study concluded that there is significant potential for self-responsibility within regulated companies in the European Union that is largely underutilised and that CMSs present an opportunity to improve the efficiency and effectiveness of government oversight. While the study found that there are considerable potential benefits from the accreditation and use of private, third-party verifiers, the study cautioned that there were significant risks involved, including the difficulty of maintaining verifier independence and the potential for inspection agencies to lose strategic knowledge of how CMSs work and should be evaluated, creating dependence on private verifiers. The second phase of the study, which is ongoing, seeks to further examine how CMS performance can be assessed against standardised criteria, how the level of confidence in a CMS can be measured, and how government oversight actions can be tailored to respond to differences in how companies implement these systems⁸⁶.

2. A study by SNIFFER, a non-profit organisation based in Scotland, is dedicated to the development of knowledge-based approaches for dealing with sustainability objectives. The SNIFFER study is titled: “New opportunities to improve environmental compliance using certified EMSs”. This research project examines how accreditation and certification processes could be better aligned with regulation, but focuses specifically on implementation in the United Kingdom⁸⁷. The study identifies options to maximise synergies between environmental regulators and certification bodies, and gives recommendations on, for example, parameters and legal requirements for permits needed for better synergy.

⁸⁵ IMPEL, *Compliance assurance through company compliance management systems, 2011/04* (May 2012), http://impel.eu/wp-content/uploads/2012/06/Final-Report_Compliance-assurance-through-company-CMS_2012-05-03.pdf

⁸⁶ IMPEL, *Compliance assurance through company compliance management systems, project II / 2013*, <http://impel.eu/projects/compliance-assurance-through-company-compliance-management-systems-phase-2/>

⁸⁷ SNIFFER, *Improved Alignment with UKAS-Accredited Certification Bodies’ Activities with UK Environment Agencies’ Regulatory Processes*, <http://www.sniffer.org.uk/knowledge-hubs/environmental-regulation/better-regulation/improved-alignment-ukas-accredited-certification-bodies-acti/>

C. CO-REGULATION

Co-regulation is a hybrid approach that falls between command-and-control regulation by the state and public standard setting and oversight⁸⁸. It involves an agreement between government and a particular industry on environmental performance. Co-regulation generally takes one of two forms:

- Negotiated agreement between government authorities and a commercial entity on environmental remediation actions to be taken
- Voluntary programme in which the government awards successful participants with the right to use some kind of label or indicia of their compliant behaviour⁸⁹

Co-regulation is not new and has been in practice in Europe and the United States for some time. The European Union's Eco-Management and Audit Scheme (EMAS) and the 'Energy Star Program' in the United States are examples of successful programmes.

In order to instil confidence, both mandatory and voluntary programmes require the ability to substantiate compliant behaviour through transparent disclosure and robust verification methods. However, in many countries that are still in the process of industrialising, acquiring the capacity to access, measure, and share accurate data on environmental performance is still a work in progress. This makes co-regulation an especially attractive option, since it harnesses the cooperation of large numbers of project developers whose facilities, collectively, may require too many resources to monitor on a regular basis. Studies from Chile, Colombia, and Mexico suggest that those governments are using co-regulation to bring a large number of non-compliant entities into compliance.⁹⁰

Case example: Negotiated agreements

Environmental auditing in Mexico

Mexico's 'National Environmental Audit Program' is a new programme that gives companies the choice to opt-out of a traditional environmental enforcement programme operated by the Federal Attorney General for Environmental Protection (PROFEPA) by agreeing to conduct an audit for the purpose of identifying and correcting harmful environmental practices. Under the programme, the company selects an auditor approved by PROFEPA to perform a comprehensive environmental audit according to the agency's terms. Based on the results of the audit, the auditor proposes a plan of action, listing the measures needed to bring the facility into compliance. PROFEPA and the facility owner then negotiate a written agreement, in which the facility commits to implementing the plan according to an agreed timetable, submitting progress reports periodically to agency and receiving an environmental certificate at the completion of the objectives.

⁸⁸ McAllister, Lesley K., *Co-Regulation in Mexican Environmental Law* (June 11, 2012). 32 Utah Envtl. L. Rev. (2012 Forthcoming); San Diego Legal Studies Paper No. 12-088. Available at SSRN: <http://ssrn.com/abstract=2082120>, 2012

⁸⁹ *Ibid.*

⁹⁰ Allen Blackman, *Can Voluntary Environmental Regulation Work in Developing Countries: Lessons From Case Studies*, Resources for the Future.

Agreements between the government and industries in Chile

Chile has negotiated more “clean production agreements” than any other country in Latin America⁹¹. The country also has increasingly used other forms of compliance promotion, including state-run, voluntary audit, eco-labelling, and public disclosure programmes. The Ministry of the Economy has championed the introduction of environmental co-regulation programmes using the slogan “public-private cooperation”.⁹² The initiatives indicate a common interest on the part of government and industry in achieving regulation that was mutually agreeable.⁹³

5.4.2 Compliance promotion in the context of weak governance

The compliance promotion mechanisms described above have largely been successful in industrialised economies. Elsewhere, the results have been mixed. For example, in emerging economies, a few public disclosure-based programmes ⁹⁴ (e.g., Ghana’s AKOBEN programme and Indonesia’s PROPER programme, see also case example paragraph 5.4.1) have been successful, while others have failed to recover their costs. The economist Allen Blackman has recognised a flawed assumption that is commonly made in formulating environmental strategies for emerging economies: that innovative regulatory policies will allow countries to sidestep institutional and political weaknesses that have undermined environmental regulation under command-and-control systems.⁹⁵ He notes that:

The value of such policies largely depends on whether or not they contribute to, or divert attention from, the hard work of building the requisites of effective environmental management, including strong regulatory institutions, clear consistent written regulations, and the political will for diverting scarce resources to environmental protection.⁹⁶

Therefore, this caveat does not mean that these and other innovative strategies should not be pursued, but that they should be pursued with knowledge that they have limited prospects for success without also strengthening the institutions that they will depend on for their success.

⁹¹ Allen Blackman et al., *Voluntary Environmental Agreements in Developing Countries: the Colombian Experience* ii, 13–15 (Res. for the Future 2009), available at <http://www.rff.org/rff/documents/rff-rpt-colombia.vas.pdf>.

⁹² Orlando Jiménez, *Voluntary Agreements in Environmental Policy: An Empirical Examination for the Chilean Case*, 15 J. of Cleaner Production 620, 630 (2007).

⁹³ McAllister, Lesley K., *Co-Regulation in Mexican Environmental Law* (June 11, 2012). 32 Utah Env’tl. L. Rev. (2012 Forthcoming); San Diego Legal Studies Paper No. 12–088. Available at SSRN: <http://ssrn.com/abstract=2082120>, 2012, p.14.

⁹⁴ See e.g., INECE, *Principles of Environmental Compliance and Enforcement Handbook*, Chapter 6: Compliance Promotion 4 (April 2009). Governments can use public disclosure-based programs as an effective tool to motivate project proponents, who may be motivated by reputational concerns, to fulfill the commitments they made during the EIA licensing process. These programs involve the use of published ratings of the levels of compliance by members of the regulated community. For example, Ghana’s AKOBEN program requires that all projects in the mining and manufacturing sectors undergo annual reviews, the results of which are published on World Environment Day.

⁹⁵ Allen Blackman, *Environmental Policy Innovations in Developing Countries*, (2 June 2008) Available at http://www.rff.org/Publications/WPC/Pages/08_06_02_Environmental-Policy-Innovations-in-Developing-Countries.aspx

⁹⁶ *Ibid.*

6. FINANCIAL MECHANISMS FOR RAISING AND DISTRIBUTING REVENUE

Previous sections in this publication have addressed resources that government agencies need to undertake their tasks in EIA, licensing and enforcement. This section covers the financial mechanisms that can be used to finance these tasks. In the first part of this section the mechanisms by which revenue can be generated are described. Taxation, fees, and fines and penalties are covered. The second part of this section describes the mechanisms that are used to mobilise and channel the flow of the finances raised. We look at different types of accounts and funds that can be used, and also review environmental guarantees which ensure that finances are available to redress environmental damages.

6.1 Raising revenue

Below we will outline different mechanisms government agencies can employ to raise revenue, starting with taxes and fees. We cover general taxes that apply widely, but also special taxes that target specific individuals or organisations. Next, user fees and charges are addressed. These have to be paid by parties that make use of a specific governmental service, such as the processing of an EIA. Finally we consider fines and penalties charged in case of non-compliance. Throughout the text, the advantages and disadvantages of each revenue raising mechanisms are outlined.

6.1.1 General taxes

Many governments depend on taxes as the principal source of funds with which to pay for the cost of carrying out government tasks and providing services to the public. Governments collect most of their general tax revenue through taxes on personal or corporate income, sales, and property. Income taxes are charged based on a percent of the money earned by an individual or corporation. Property taxes are based on a percentage of the value of the property owned. In many countries, the amount of revenue derived from taxes is significantly greater than revenue from all other sources.

Managing an effective system of general taxation usually requires the implementation and administration of a comprehensive system for reporting, collecting, and tracking information. It requires investments in well-trained staff and reliable information systems. Once the infrastructure for a taxation scheme is in place, this can be an efficient way to raise revenue. For a country that is still in the process of developing its infrastructure, transitioning to a general tax system may be challenging. Especially if economic activity is dominated by small-scale agriculture or informal enterprises⁹⁷.

⁹⁷ United Nations Development Programme, International Guidebook of Environmental Finance Tools, Executive Summary, 8 (2012).

Case example: Property tax allocation in Colombia

In Colombia property taxes fund environmental management tasks through autonomous regional corporations (CARs). CARs are highly decentralised agencies that implement all aspects of environment management within their jurisdictions, including management of water resources and forests as well as conservation of biodiversity. Under Colombia's 1991 Constitution, municipalities must transfer a percentage of property tax revenue to the CARs for environmental management, representing a significant share of their funding. There are significant variations in financial resources for the support of CARs, depending on location. Those that are closer to large cities are significantly better funded and are able to secure the services of more qualified technical staff.⁹⁸ A more detailed description of the CAR system is given in the country cases in Chapter 7.

ADVANTAGES OF GENERAL TAXES:

- A broad revenue base permits the generation of a stable and consistent flow of revenue at relatively low rates to taxpayers.
- By spreading charges across the general public, general taxes may promote a sense of shared responsibility or ownership for the environment.
- General taxes allow simplified revenue generation for sub-national government entities that can impose their own charges as a percentage of the national general tax rate.

DISADVANTAGES OF GENERAL TAXES:

- General taxation systems only work if the amount of income, sales, and property are known and accurately reported. If reliable systems for gathering and verifying this information are not in place, this mechanism cannot work fairly or effectively.
- There is only an indirect relationship between the individuals and corporations that make up the tax base and the use of the tax revenue.
- There is often public resistance to the introduction of new taxes, and to tax increases, especially if there are limited clear benefits in return.
- Government agencies do compete for finite amounts of general tax revenue and the allocation of the revenue is subject to shifting political priorities.

⁹⁸ Overseas Development Institute, *Evaluation of Sector-wide approach in environment: Colombia Case Study Report* 13 (January 2008).

Case examples: Using general taxes to fund EIA related tasks

In France, EIA review and inspection activities are funded entirely through allocations from the State budget. General taxes, as well as environmental fees and charges imposed on industrial installations, are all pooled in the treasury, and there is no attempt to match fees and other charges with specific costs of regulation.⁹⁹

In the Netherlands, almost all funding for environmental compliance assurance comes from general taxation at the national government level.

In South Africa, general taxes are used for funding environmental protection functions, including environmental monitoring and enforcement for activities subject to EIA.

Obviously, it will be difficult to make a case to introduce or increase general taxation solely to cover EIA related costs. However, the resource needs for a country's EIA and licensing system could form part of an argument to better match taxation levels to governmental responsibilities. The special taxes and fees discussed next can be more directly matched with environmental management in general, and EIA and licensing in particular.

6.1.2 Special taxes

Special taxes are not imposed on the general public, but target a specifically defined regulated community. Many governments use special taxes to target individuals and corporations that are directly responsible for environmental impacts. Revenues raised in this way can be specifically allocated to the regulatory programmes designed to manage these impacts.

The exact types of products and activities that can be considered for special taxes will vary according to local circumstances, but common forms of special taxes that have been imposed include selective sales and use taxes, severance taxes, taxes on waste disposal, and selective value added taxes. Some countries charge special taxes on selected commodities at the point of extraction. These are called severance taxes. A special tax can be implemented as a graduated tax that increases according to the level of resource extraction or the market value of the resources extracted, see the examples in the box below. Some governments tax the sale of certain materials, such as petroleum, fertiliser, or pesticides, since the use of these material necessitates environmental regulation. Special taxes may also be charged on the disposal of different types of waste, such as hazardous or construction waste.

Case examples: Severance taxes in India, Brazil and Indonesia

In India and Brazil, a mining tax is charged. The rate of this special tax varies according to the type of mineral extracted (from 0.2% to 20% in India and from 0.2% to 3% in Brazil).

Indonesia imposes a national reforestation tax on commercial logging, returning 40 percent of the revenues collected to the districts where the timber is harvested.

⁹⁹ OECD, *Funding for Environmental Compliance Assurance: Lessons Learned from International Experience* 69 (2005).

The specific types of goods, services, or activities that can be targeted most effectively for a special tax will vary from country to country. When considering options for special taxes it is important to consider the long term viability of the revenue. For example, special taxes can negatively impact the market for the products or services targeted for taxation. When this occurs, the consequences of potential decreases in revenues of regulated producers of products or services may include diminished competitiveness by affected entities or reduced consumer purchases of the item. This may lead to an unintended reduction in the tax revenues. If taxes imposed are more stringent than comparable taxes in other countries, they may have adverse effects on a country's economy and the country's ability to attract investment.

Another important factor for the consideration of special taxes is the likely acceptance of the tax, both politically and by the community that will be taxed. The more closely the tax is targeted to specific environmental impacts and to those who are directly or indirectly responsible for those impacts, the greater the likelihood of acceptance. Consultation will make a difference as well. For example, the imposition of a severance tax for managed timber harvesting is likely to be more effective after participatory consultation with members of the logging sector.

Ideal candidates for a special taxes are the use of scarce resources, such as water or timber and harmful or energy-inefficient goods and activities that require significant government oversight, such as the disposal of hazardous waste and equipment. Special taxes sometimes have the secondary objective of influencing behaviour. For example, governments can use special taxes to provide incentives to shift production or consumption away from a less desirable activity or product to more desirable ones¹⁰⁰.

ADVANTAGES OF SPECIAL TAXES:

- The revenue from special taxes can be more directly dedicated to specific programmes, such as environmental programmes, than general taxes.
- Because there is a direct relationship between the tax charged and the benefit received, the regulated community may be more motivated to comply.

DISADVANTAGES OF SPECIAL TAXES:

- The tax base for special taxes is significantly narrower than that of general taxes.
- Special taxes are likely to deliver a less predictable revenue stream and may increase the volatility of budgets.

¹⁰⁰ INECE, Financing Environmental Compliance and Enforcement Programs (1996).

Case examples: Environmental taxes in practice

In January 2012, Vietnam began levying an environment tax on five product groups: petroleum, coal, hydro chlorofluorocarbon liquid (HCFC), plastic bags and chemical pesticides, with each product being subject to a separate tax rate.

In Europe, energy taxes (including taxes on transportation fuels) represent the largest share of overall environmental tax revenue – which accounted for 74.0 % of the European Union total in 2009¹⁰¹. Lithuania, the Czech Republic, and Luxembourg relied most heavily on energy taxes, where they are accounting for more than 90 % of the total revenues from environmental taxes. In contrast, energy taxes represented less than 60 % of total revenues from environmental taxes in the Netherlands, and less than 50 % in Denmark, Norway, and Malta.

In 2008, Switzerland introduced a CO₂ tax levied on all fuels not used in transportation. The tax, which is designed to decrease CO₂ emissions, features an automatic mechanism for increasing the tax rates if predetermined emission reduction targets are not achieved. Revenues from the tax are recycled back to companies and households in several ways. For example, the revenues are used to fund the energy retrofitting of buildings.

6.1.3 User fees and special charges

User fees generally consist of payments for services provided by the government. Charges refer to payments imposed on the regulated community for the environmental impacts of their activities. Revenues from user fees and charges are often dedicated to the administration of specific programmes. A well-structured administrative fee arrangement can provide a close matching of the costs of carrying out specific government tasks with a charge to those who benefit from those tasks. The mechanism of a special charge can be used to collect the remediation costs from parties whose activities cause adverse environmental impacts.

Fee arrangements can differ greatly. Administrative fees can take the form of a one-off fee, for example for the application for a new licence, or renewal of an existing licence. Fees can also be charged on a regular schedule, such as every year that a regulated activity is ongoing. Some governments also charge separate fees for additional government services, such as provision of geological information and maps, for taking samples and performing laboratory analysis and for modelling of data. There are governments that impose a transfer fee for the sale of part or the whole of a project installation. Surrender or decommissioning fees may be charged for the closure of a project installation, such as a mine. There are also government bodies that impose fees for the accreditation of EIA practitioners or for independent auditing and verification of proponent compliance.

Government can charge for services through a fixed charge, or on a full cost recovery basis that includes the cost of the actual staff time and other expenses incurred in the process of performing the service. Fixed charge fee arrangements can use one flat fee, or differentiate according to activity characteristics. For example, fees can be tiered to reflect different levels

¹⁰¹ European Commission, Eurostat, Available at http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Environmental_taxes#Environmental_taxes_in_the_EU

of environmental impact. In the UK, a risk-based fee system is used to implement the EU Integrated Pollution Prevention and Control (IPPC) permitting regulation. This system proportionally allocates government costs according to the relative scrutiny that a project should receive under a prioritised system based on project risk.¹⁰²

Many countries apply a fee system to partly or wholly cover the costs of EIA, licensing and enforcement tasks of the government agencies involved. The fees can have different forms, but an up-front processing fee for the review and processing of an EIA is common, as is a licensing fee, and a fee that covers the ongoing costs of monitoring and site inspections. See for a case example the Box Below on the EIA fee system in Ghana.

Case example: Ghana's system of EIA fees

Ghana has a graduated EIA processing, permitting, and certification fee system. The amount of the fees is determined by a project's industry sector, project value, and the scale of the impact. Permitting fees range from 625,00GH¢ (332USD) for a small manufacturing installation to 100.000,00 GH¢ (\$53.008 USD) for a core proposal for a large mining project.¹⁰³ For more information, see the detailed country description chapter 7.

In order for fee revenue to meet its potential, however, fees should not be perceived as arbitrary and unjustified by the regulated community.¹⁰⁴ They should be set according to rational criteria that accurately reflect the true costs that the government incurs in carrying out its responsibilities. It will, therefore, be important to have good data on, for instance, the staff hours spent on EIA tasks.

ADVANTAGES OF USER FEES AND CHARGES:

- When properly structured, fees can equitably impose the costs of government tasks on those parties that benefit from those tasks. User fees and charges can also assign the costs of environmental remediation and pollution prevention to the parties causing the damage.
- Fees represent a stable revenue stream.
- Fees can often be prescribed administratively, requiring no action by lawmakers to establish the fee.

DISADVANTAGES OF USER FEES AND CHARGES:

- Fees are targeted to specific services or regulated entities, resulting in a narrow revenue base.
- In the case of a differentiated fee system: this requires a solid set-up. There needs to be a clear logic on which to base the differentiation.

¹⁰² US EPA, *An In-depth Look at the United Kingdom Integrated Permitting System* (July 2008) (Stating that the United Kingdom's approach is designed to be "risk-based, targeted, and proportionate.")

¹⁰³ Ghana Environmental Protection Agency amended fee chart, Available at http://www.epa.gov.gh/index.php?option=com_docman&task=cat_view&gid=147&Itemid=73.

¹⁰⁴ Akiva Fishman, *Restructuring Liberia's EIA Fee Regime* (August 2012).

6.1.4 Fines and penalties

Governments use fines and penalties to discourage non-compliance with regulations. Fines instituted to deter violations occurring in the EIA process may represent a significant source of revenue with which to administer government tasks relating to permitting, monitoring, and enforcement. The monetary proceeds received from fines are frequently used to cover all or part of the costs incurred as a direct result of environmental violations, which may include both harms to the environment or human health, as well as the cost of the government's response to the violation.

The use of fines as a financing mechanism does present a potential problem, especially if the fines are retained in the same government body that collects the funds. This can lead to perverse incentives to prioritise revenue gathering over compliance. In addition, the collection of fines can be sensitive to corruption. Therefore, a frequently advanced recommendation is that environmental inspectorates should not be authorised to receive fines directly from violators.¹⁰⁵ Instead, fines should be collected by and subject to control by a separate government body that is responsible for fiscal or treasury services. However, it may be prudent to maintain these funds in an account that is distinct from general treasury funds so that funds are retained for use in supporting specific activities, such as EIA-related tasks.¹⁰⁶ Under a dedicated account or trust system that provides sufficient separation between revenue collectors and the ultimate redistribution of those funds, the inclusion of fines as a revenue source is not likely to facilitate corruption or result in distorted incentives.

Note that when fines and penalties are effective in influencing behaviour, the revenue from fines will reduce over time. Therefore, fines should not be regarded as a strategic revenue source. However, fine revenue could be reserved to finance specific capital costs associated with the administration of EIA-related tasks.

ADVANTAGES OF FINES AND PENALTIES:

- If structured correctly, fines and penalties can provide incentives to improve compliance.

DISADVANTAGES OF FINES AND PENALTIES:

- Revenues generated by fines and penalties are inherently volatile and unpredictable. As a result, it is ineffective for government entities to rely heavily on fines to cover routine operating expenses.
- Perverse incentives may result if the same government departments that are responsible for identifying violations directly receive and retain funds, since they may view continued pollution as a long-term income source.

¹⁰⁵ US AID, *Amélioration du System d'Evaluation Environnemental et Financement de la Gestion de l'Environnement au Mali*, (2006).

¹⁰⁶ INECE, *Moving Forward: A Summary of the INECE Roundtable Discussion on the Enforcement of EIA Requirements*, Comments by Weston Fisher (2 April 2012).

Case examples: Charging fines for environmental violations in Mexico and Brazil

In Mexico, a fine equivalent to 20 to 20.000 times the minimum daily wage in effect in the Federal District (Mexico City) may be imposed on a person who violates the General Law on Ecological Balance and Environmental Protection.¹⁰⁷

In Brazil, the National Environmental Law has established a mechanism whereby a portion of the environmental fines collected in the country are allocated to the National Environmental Fund.

6.2 Mechanisms to manage finances

The sources of revenue described in the previous section represent methods of raising revenues – revenues that were not previously in the hands of the government. The mechanisms described next are the arrangements governments use to manage funds once they have been received, and to channel revenues to their intended use. These mechanisms are not revenues themselves, but represent ways that revenues may be mobilised to provide sources of funding. In this section we first cover the transfers of finances between levels of government, specifically from the general treasury to an agency responsible for an EIA related tasks. We then review a specific type of mechanism that can be put in place to manage and allocate money to environmental tasks: the environmental fund. Such a fund can pool finances from different sources, and manage these sums for a specific environmental objective. Finally, we look at mechanisms that secure funds from project proponents for decommissioning of projects or for repairing environmental damage.

6.3 Transfers of finances between levels of government

In many countries, the agencies that undertake EIA and licensing related tasks do not raise their own revenue, but receive the funds to undertake tasks from the general treasury. The general treasury is where the various incomes that a government receives from taxes and such are pooled. General taxes (income, sales, or property taxes) are usually routed to the general treasury. From the treasury the government appropriates and deploys funds to support a broad range of government purposes. These purposes are subject to change from year to year, based on economic needs and political priorities.

Allocation from the treasury to the relevant agencies can take place in different ways. Commonly an agency will receive an annual allocation in the course of budget execution. Often, agencies will have to submit a specific budget before they can claim an allocation, and the allocation of the treasury is dependent on the approval of such a budget. Whether the requested budget is allocated may also depend on the political agenda at the time. The agencies may receive the allocations directly from the treasury, or they may receive it through another government entity. For example, an environmental assessment agency may receive its annual budget allocation through the national Ministry of Environment.

¹⁰⁷ <http://www.cec.org/lawdatabase/mx04.cfm?varlan=english#2>.

Transfers between levels of government may take the form of grants or revenue sharing. In the case of grants, the government entity distributing the funds may make a specific grant to another unit of government for a specific purpose, or may distribute a statutorily determined allocation (a block grant in US terminology), over which the recipient may have more discretion. Revenue sharing involves an apportioning of a specific revenue stream between two or more government units. A legislative act might specify the formula for distribution. For example, the revenues from a tax on gasoline could be allocated equally to two agencies involved in management of air quality.

Another way in which agencies with EIA related tasks can receive the necessary finances from the treasury is through dedicated programmes that tie government appropriations to specific goals that needs to be achieved over a specified time, for example a multi-year programme to further sustainable development, or strengthen an EIA system. Here too, the allocations for such a programme may come directly from treasury, or be redirected through another government entity.

In some countries, the relevant agency may receive funds for EIA related tasks from other governmental agencies directly, per service delivered, rather than in annual appropriations.

Often, the funds that are received by an agency with an EIA related task are kept in a dedicated account with a financial institution, such as a national bank. A dedicated account is the simplest way to segregate funds needed for uninterrupted operation of EIA-related government functions. In addition to treasury allocations, such an account can be set up to receive funds from recurring revenue sources, including special taxes, user fees, certification fees, and fines. Such an account serves a purpose in managing day-to-day expenditure.

However, without structural safeguards, this type of system is vulnerable to a number of weaknesses. On a policy level, an unimpeded, bidirectional flow of funds violates the prevention of conflict of interest principle. If EIA reviewers and compliance inspectors collect funds from those they review and inspect, for example, there are incentives for government staff to prioritise revenue maximisation over the encouragement of good environmental performance practices by the regulated community. On a practical level, an account that is overly accessible to a government department is likely to invite the unauthorised diversion of funds or to encourage departments to depart from prudent fiscal management practices. In addition, a dedicated account does not protect against inflation, which may be especially problematic if finances are held in local currency and are not quickly moved in and out of the account. A dedicated environmental fund can address the erosion of the value of the funds. Such funds are managed to enable sustained growth of the finances available, and have more stringent controls in place against misappropriation. This type of mechanism is discussed next.

Case example: Separation of roles to ensure account integrity in Mali

In its 2006 study of financing mechanisms for the government of Mali, USAID proposed a two-part system to provide integrity for a dedicated funding mechanism.¹⁰⁸ Under the scenario proposed, an environmental ministry would have a leading role in establishing spending priorities and key operational rules and procedures. The ministry would implement these rules and guidelines through a formal process, through official channels and procedures, but would not attempt to influence their application to specific projects or proponents. A separate government entity would be responsible for day-to-day management of the financial mechanism. The entity would manage funds, but have only limited discretion in determining how the funds were used. Combined with robust controls to ensure transparency and to prevent the diversion of funds, that system largely would eliminate conflicts of interest and perverse incentives.

A dedicated account could work well in this case, assuming a situation of rapid turnover of funds, where revenues are deposited into the account and then withdrawn within a relatively short time period. Over a longer time period, however, a dedicated account may not provide protection from inflation or from other government uses, and a type of environmental fund might be well suited.

6.3.1 Environmental funds

An environmental fund is a long-term financial instruments that manages and allocates finances to accomplish specific environmental objectives. A fund is managed by financial professionals who can carefully invest the money received in interest-bearing instruments such as securities. The investments are designed to increase in value over time, provide additional funding to cover the costs of environmental management tasks, and offset inflation. The operations of an environmental fund are supervised. The financial operations are regularly audited. Fund administrators carry out the monitoring of use of the funds. Funds often receive seed money at the outset, but can be replenished with finances from different sources, including environmental fees and fines. Donors may also contribute to environmental funds as part of development co-operation.¹⁰⁹

Not to be confused with “green” investment funds by the same name, environmental funds often take the form of a trust and have increased in numbers since their introduction. Most environmental funds are operated in Latin America, but there is a growing number in Africa and Asia now as well. Environmental funds have been promoted as long-term sources of funds for covering the recurring costs associated with conservation and sustainable development, such as permanent monitoring, staffing, the maintenance of infrastructure and any other foreseeable operating costs¹¹⁰. They are used as a means to strengthen environmental organisations and to balance the limited capacity of many developing countries to receive and use financial resources allocated to environmental purposes

¹⁰⁸ USAID, Amélioration du système d'évaluation environnementale et financement de la gestion de l'environnement au Mali (November 2006).

¹⁰⁹ Debt counterpart funds may be generated through loans by bilateral lenders to borrower countries, who use the foreign currency to broker a transaction between a domestic company and a foreign seller. The government places local currency received from the buyer into a fund that is used to fund economic development or environmental protection.

¹¹⁰ Alain Lambert, Sustainable Financing for Environmental Projects in Africa: Some Ideas for Consideration, UNEP, Prepared for the 11th regular session of the African Ministerial Conference on the Environment, Brazzaville, Congo from 22 – 26 May 2006

effectively. While environmental trust funds are often used to protect specific ecosystems or conservation goals, they can also be used to fund EIA system elements – either as a standalone purpose or as part of a broader environmental protection programme. See for example the case example on the Ghana National Environment Fund in this paragraph.

The Organisation for Economic Co-operation and Development (OECD) has directed several criticisms at the use of dedicated environmental funds, particularly as a long-term funding mechanism in mature economies.¹¹¹ Allocations to such a fund may be intermittent and unpredictable. Other critics have suggested that trust funds tie up substantial amounts of limited resources in long-term investments that cannot be used for short-term cash needs, while generating only modest amounts of income.¹¹²

Another consideration is that the added control and security offered by an environmental fund comes at a price. Trust funds need skilled staff, governance structures, and technical support. The administrative costs of managing a trust are high (10%–15%). Others have pointed out, however, that these costs should be compared with the offsetting revenue generated by the investment, as well as the administrative overhead of managing funds that are held in a conventional account.

While administrative overhead may consume some of the investment income generated by the fund, with skilled management, an environmental fund can provide a stable and long-term source of financing which is insulated from shifting priorities within the general budgeting process and makes it more likely that a stable source of revenue is available to support tasks, including those related to EIA. A dedicating environment fund provides a critical advantage in contexts where funding for environmental programmes face overwhelming competition from economic growth priorities and social needs. As a mechanism for funding the recurring costs of EIA-related activities, the benefit stream from the trust fund is long-term and can theoretically continue forever if the investments are managed properly.

Case example: Water conservation fund in Quito, Ecuador

In 2000, the Nature Conservancy teamed up with the U.S. Agency for International Development and local Ecuadorian partners to establish a water conservation fund based in Quito, Ecuador. The city of 1.5 million residents receives 100% of its drinking water from Andean creeks and rivers. Protection of the water, which comes entirely from the Condor Bio-reserve, represents one of the country's biggest conservation challenges. The fund will be capitalised by fees charged to Quito residents for the use of the water. The fund's revenues will be used to protect the forests in the city's watershed. The fund's main goal is to realise sufficient water quantity and quality to meet the needs of the city's residents, as well as to provide long-term protection of water sources in the bio-reserve.¹¹³

¹¹¹ OECD, *Funding for Environmental Compliance Assurance: Lessons Learned from International Experience* (2005).

¹¹² Global Environment Facility (1999a), *Experience with Conservation Trust Funds*. The report of the GEF evaluation; Conservation Finance Guide, Environmental Funds, (July 2011) Available at www.conservationfinance.org/guide/guide/images/envirocnm.doc; Inter-Agency Planning Group on Environmental Funds, The IPG Handbook on Environmental Funds, Edited by Ruth A. Norris, January 2000, Available at http://shores-system.mysite.com/ef/ef_handbook.html

¹¹³ The Nature Conservancy, *Ecuador: Using Investment Strategies to Protect Water*, Available at <http://www.nature.org/ourinitiatives/regions/southamerica/ecuador/water-for-quito.xml>.

Many environmental funds are set up as trust funds. There is no strict definition of a trust fund, which can be implemented in a wide variety of ways depending on the purpose for which it is created.¹¹⁴ However, the defining feature is that a board of trustees is established to oversee the fund operations. Trust funds have a high degree of reliability. Trust funds typically require the participation of a broader group of participants, including NGOs, academics, and other private sector entities.

The Global Environment Facility (GEF) has provided guidelines for determining when a trust fund should be considered over other financing methods, such as a dedicated account. The GEF has observed that certain conditions are prerequisites to the suitability and viability of a trust, without which other financing vehicles should be preferred:¹¹⁵

- The environmental issue to be addressed is significant, and appropriate actions to respond are long term and can be met with the resource flows an environmental trust fund could produce.
- There is active and broad-based government support for creating a mixed, public-private sector mechanism that will function beyond direct government control.
- There is a critical mass of people from diverse sectors – government, NGOs, academic and private sectors, donor agencies – who can work together despite different approaches to nature conservation and sustainable development.
- There is a need for, and value in providing, a mechanism for governmental and non-governmental organisations to work together to address conservation issues.
- There is an environment of legal and financial practices and supporting institutions (including banking, auditing and contracting) in which the majority of people have confidence.
- The government and other key players have sufficient commitment to support a trust fund and participate in its work.

Although trust funds place the actual management of funds beyond the direct control of the government, a trust fund can be organised to allow government agencies to receive the funds they require and to exercise full discretion over those funds once they are disbursed for the purpose of carrying out their tasks. Environmental trust funds often evolve to be more than mere financial tools and become institutions unto themselves. In addition to being a source of funds, they may take an active role in helping to develop national conservation strategies and may work with public and private agencies to develop environmental management approaches.¹¹⁶ Since trusts can take an almost limitless number of forms, they can be tailored to accomplish very specific objectives. For example, an environmental trust could take on roles apart from funding that include management of a neutral certification standard.

The form of trust fund that is most consistent with the needs of EIA administration is a cash or sinking fund. This is the simplest form of a trust fund. A cash or sinking fund can receive new revenues on a regular basis, such as proceeds from special taxes, user fees, fines, and

¹¹⁴ Alain Lambert, *Sustainable Financing for Environmental Projects in Africa: Some Ideas for Consideration*, UNEP, Prepared for the 11th regular session of the African Ministerial Conference on the Environment, Brazzaville, Congo from 22 – 26 May 2006.

¹¹⁵ Global Environment Facility (1999a), *Experience with Conservation Trust Funds*. The report of the GEF evaluation; Global Environment Facility (1999b), *When is Conservation Best Served by a Trust Fund?*, GEF Lessons Notes No. 5, January 1999.

¹¹⁶ *Ibid.*

other sources, which would be used to continuously replenish and augment the original capital. A cash fund distributes funds in the form of grants, depending on the availability of funds and the approval of activities. When the trust's funds are depleted, the trust fund may be replenished or it may end its operations (in the case of sinking funds). A revolving fund, which disburses funds in the form of loans rather than grants, is likely less suitable as financing mechanisms for EIA related tasks.

Case examples: Trust funds in Brazil and Uganda

Brazilian Biodiversity Fund (FUNBIO)

Founded in October 1995, FUNBIO is a non-profit civil association that was established to provide long-term, sustainable support for the conservation of biological diversity in Brazil through the administration of a programme to provide long-term grants to promote sustainable use of biodiversity.

FUNBIO's principle objective is to complement governmental programmes for conservation and sustainable use of the Brazil's biological diversity, in accordance with the worldwide Convention on Biological Diversity (CBD) and the National Biological Biodiversity Program (Pronabio). FUNBIO was launched with an initial grant of US\$ 20 million from the GEF (Global Environmental Facility).

Mgahinga-Bwindi Impenetrable Forest Conservation Trust (MBIFCT), Uganda

The objective of this trust fund is to support biodiversity conservation in the Bwindi Impenetrable National Park (BINP) and Mgahinga Gorilla National Park (MGNP) both directly, through incremental financial support for park management and associated research activities, and indirectly, by funding grants that assist local community groups in developing economic activities that replace traditional means of subsistence based on harvesting forest products.

Case example: Revenue allocation for EIA in Ghana

Revenues generated are deposited into the National Environment Fund and a certain percentage (currently 25%) is used for the operations of the Environmental Protection Agency (EPA). The National Environment Fund established under the EPA Act 1994, is also used for the following purposes:

- Environmental education of the general public
- Research, studies and investigations relating to the functions of the agency
- Human resource development
- Environmental monitoring

The fund is managed and administered by a governing Board, which is charged with carrying out the following responsibilities:

- Formulating policies to generate revenues for the account
- Determining the allocation of funds to support the fund's mandated purposes
- Determining annual targets
- Investing a portion of the Fund, under strictly prescribed rules

The EPA Act establishes robust rules for administration of the National Environment Fund. All payments issued from the Fund must be signed by the Chairman of the Board, the Executive Director and one other member of the Board. In addition, special accounting and auditing provisions are required. First, the Board must maintain books of account and related records,

which must be in a format approved by the Auditor-General. Secondly, the accounts of the EPA must be audited by the Auditor-General within six months after the end of each financial year, which must be the same as that of the national government. Thirdly, the Executive Director of the EPA must prepare budget estimates for each financial year and present the estimates to the Board for its approval no later than two months before the end of each financial year.

Special reporting requirements also apply. After each financial year, the Board must submit to the Minister of the Environment an annual report that covers the activities and the operations of the EPA. The report must also include the report of the Auditor-General. The Minister is required submit a report to Parliament within two months after receiving the annual report. The Minister may require additional information from the Board as necessary.

From time to time, the Board may decide on additional rules. However, these must be implemented within the framework of the Financial Administration Act of 2003, which specifies rules for the use and management of public funds. The 2003 Act also provides additional details governing revenues and expenditures, accounts and audits, and establishes a financial administration tribunal.

6.3.2 Environmental guarantees and reclamation funds

Environmental guarantees are mechanisms ensuring that funds are available at the termination of a project to restore a project site as closely as possible to its natural state.¹¹⁷ They provide a transparent means to compel project proponents to recognise future environmental obligations in advance, in a manner that provides strong financial safeguards.¹¹⁸ Guarantees also place the primary risk of loss for non-compliance with environmental standards with the private sector (the proponent), rather than the government.¹¹⁹ Guarantees are frequently used in the mining sector, due to the enormous expense associated with restoration of a mining site and the fact that it is difficult to raise these funds after the economic benefits have been exploited.

Environmental guarantees can be used in connection with many types of project activities where significant restoration work is needed at the closure of a project, or where the activity poses a high risk of environmental harm. The costs of reclamation can vary enormously according to project size, local conditions, and the country or jurisdiction in which it is located.¹²⁰ There should be a clear logic to the required level of financial surety, and project-specific approach will work best.¹²¹

The arrangement for guarantees need to cover different circumstances. For example, how funds can be ensured in the case of default through bankruptcy. Requirements could also be implemented to secure additional funding that may be necessary to contract out the work

¹¹⁷ The World Bank Group, *Guidance Notes for the Implementation of Financial Surety for Mine Closure 4* (2008), Available at http://siteresources.worldbank.org/INTOGMC/Resources/financial_surety_mine.pdf.

¹¹⁸ Boyd (2001) *Financial Responsibility for Environmental Obligations: Are bonding and assurance rules fulfilling their promise?* Resources for the Future, Washington DC.

¹¹⁹ Klas Sander and Matthew Cranford, *Financing Environmental Services in Developing Countries*, World Bank Group, 58 (December 1, 2010), (Describing the concern that performance bonds tie up large amounts of the capital used by businesses, decreasing overall social efficiency).

¹²⁰ The World Bank Group, *supra* note 89.

¹²¹ *Ibid.*

associated with rehabilitation, since it may be more expensive for a third party to perform than the mine operator or owner. Also, if an operation changes ownership, many countries require that reclamation and closure plans be reapproved as a condition for permitting continued operation by a new owner. Finally, consideration should be given to language and mechanisms that compel government agencies involved to use these funds solely for their intended purpose.

Although environmental guarantees can be self-funded, many environmental guarantees involve arrangements with a third party, such as an insurance company or a bank. The third party then provides the financial surety, or guarantee, that the project proponent will follow through with environmental performance commitments at the closure of a project. Both proponent-funded guarantees and guarantees involving third party sureties have been criticised for tying up large amounts of capital over the life of a project.¹²² Without them, however, there is a significant risk that the funds will be unavailable. Both self-funded and third party guarantees are discussed in more detail below.

A. ENVIRONMENTAL GUARANTEES PROVIDED DIRECTLY BY THE PROJECT PROPONENT

Guarantees provided directly by a project proponent involve either cash deposits into a special-purpose bank account or a self-bonding mechanism. We will cover both types.

Payment of funds into a special-purpose account (usually an escrow account) by the proponent is a simple and direct means of setting aside funds to guarantee future performance. The contents of the account functions as collateral in the case where a project proponent cannot be compelled to follow through with restoration or remediation commitments. The funds in the account are usually not available for the proponent to draw upon to carry out reclamation activities, but are held aside until restoration is successfully achieved. The deposits may be made in the form of a lump sum, or incrementally over a prescribed period.

In effect, the proponent must cover reclamation costs twice while the restoration process is underway, by making new expenditures during the reclamation while reclamation funds are simultaneously held aside. In theory, all or part of the funds in the special-purpose account are returned to the proponent upon verification by the government that restoration is completed successfully. Unless the fund is set up as an escrow account, restricting access to both the project owner and the government, there is a potential danger that a government agency could divert these funds for other uses, leaving few recourses (apart from fines and penalties) if a proponent does not fulfil commitments.

A company can also provide a written guarantee that the finances will be available for rehabilitation as agreed, this is called a self-bonding guarantee.¹²³ Such a company guarantee, or self-guarantee, includes a balance sheet test, which is an indicator of ability to cover future costs that is based on an evaluation of the assets and liabilities of the company. A company guarantee requires proof that a company has been financially stable over the long term and that it has a high credit rating. For this reason, this form of guarantee is not

¹²² *Ibid.*, p. 57.

¹²³ The World Bank Group, *Guidance Notes for the Implementation of Financial Surety for Mine Closure 4* (2008), Available at http://siteresources.worldbank.org/INTOGMC/Resources/financial_surety_mine.pdf

appropriate for projects that are directly operated by large, established companies. Even with solid indicators of financial strength, an increasing number of jurisdictions have prohibited the use of company guarantees for mining operations.¹²⁴ Of those jurisdictions that do allow company guarantees, some only permit the use of this form of surety for the first half of the life of the project, or only for a portion of the surety.

B. THIRD-PARTY GUARANTEES¹²⁵

There are three types of third-party guarantees to consider here:

- **Letter of Credit:** With respect to guaranteeing mine rehabilitation or other environmental restoration, an irrevocable letter of credit is an unconditional agreement between a bank and a project proponent to provide funds to the competent government agency on demand. A letter of credit includes the terms and conditions of the agreement between the proponent and the government. To qualify for a letter of credit, the proponent must demonstrate to the bank that plans have been developed for the rehabilitation of the site and that the proponent has sufficient funds or liquidity to cover the future costs. A letter of credit must usually be renewed on an annual basis.
- **Trust Fund:** A Trust Fund (a “Mining Reclamation Trust” in the case of mining), a Qualifying Environmental Trust or a Cash Trust Fund, is an arrangement between a trust company and a project proponent that is established to finance the rehabilitation of a site. To fulfil the purposes of an environmental guarantee, the trust fund is accompanied by a signed agreement between the project proponent and the competent government authority stipulating the proponent's responsibility for site rehabilitation. The agreement also specifies that the trust fund will provide security for the rehabilitation costs, the total amount that will be required, and a schedule of payments. If the proponent fails to make required payments to the trust fund and does not provide an acceptable alternative form of surety, the government may, at its discretion, withdraw the full amount of the fund.
- **Surety Bond:** In the context of an environmental guarantee, a surety bond (also known as an insurance bond or a performance bond) is an agreement between an insurance company and a project proponent to provide funds to the competent government authority if the proponent fails to implement site rehabilitation. Like other third-party environmental guarantees, a surety bond includes the terms and conditions of the rehabilitation plan contained in the environmental management plan or other EIA requirements. The agreement between the proponent and the insurance company also specifies the agreed costs and the conditions for the release of the bond. If the proponent fails to renew the surety bond, the government authority has the right to withdraw the full amount guaranteed by the bond.

¹²⁴ *Ibid.*, p. 110.

¹²⁵ *Ibid.*, p. 4.

Evaluation of Commonly Used Guarantee Instruments in the Mining sector ¹²⁶		
<i>Instrument</i>	<i>Advantages</i>	<i>Disadvantages</i>
Self-bonding (Company Guarantee)	Most advantageous for a mining company. Does not tie up capital. Simple to administrate. Requires public availability of annual reports.	Even very large companies can fail, no matter what their financial health was when mining project started. Annual Reports and financial statements are not immune to manipulation (accounting scandals). Problematic public acceptance.
Insurance policy (scheme)	Low costs also to smaller mining companies. No tied-up capital. Modest cash outflow from mine operator.	Only very few insurance products are currently on the market. Reluctance of large insurers to cover environmental liability risks.
Letter of Credit (LOC), bank guarantee	Cheap to set up (provided that company meets the bank's requirements). No tied-up capital. Modest cash outflow from mine operator. Less administrative requirements. The government can reserve the right to approve banks from which they accept an LOC, thereby minimising the risk of failure of weak banks.	Surety provider (bank, surety company) itself may fail. Obtaining an LOC may reduce the borrowing power of the mining Company. Availability of bonds depends on the state of the surety industry and may be negatively affected by market forces outside the mining industry.
Surety Bond	Generally low costs. No tied-up capital.	Bond issuer may fail over the long term (see also under "LOC"). The cost will be substantially higher for small companies, especially those without proven track records.
Cash deposit	Cash is readily available for closure and rehabilitation. Investment-grade Securities (treasuries) can be traded with minimal risk of liquidity. High public acceptance ("visibility" of guarantee).	Significant capital is tied up for the duration of the mine life, especially for large mining projects. Some governments may be tempted to use the deposited cash for purposes other than securing the mining project. Cash is more vulnerable to being lost to fraud or theft.
Trust Fund	High public acceptance ("visibility" of trust fund). Trust funds may appreciate in Value (but may also lose value, see "Disadvantages").	Risk of bad management of the trust fund (loss of value if fund invests in risky assets). A trust fund may not have enough value accumulated through annual payments if the mining project ceases prematurely. Trust fund management and administration consumes some of the value and income earned.

¹²⁶ The World Bank Group, *Guidance Notes for the Implementation of Financial Surety for Mine Closure* 6 (2008), Available at http://siteresources.worldbank.org/INTOGMC/Resources/financial_surety_mine.pdf

7. DETAILED COUNTRY EXAMPLES

7.1 THE NETHERLANDS

7.1.1 Distinctive feature: independent EIA review body

When the Dutch legislation on EIA entered into force in 1987, it provided the legal basis for the establishment of the Netherlands Commission for Environmental Assessment (NCEA). This commission has been set up as a separate independent advisory body tasked with reviewing the quality of EIAs (as well as strategic environmental assessments). The NCEA has a statutory role in the review stage of most EIA procedures in the Netherlands. In addition, the NCEA can provide voluntary advice on the scope of an EIA, as well as on the screening decision. The NCEA gives advice to the competent authority responsible for decision-making on the project or plan, subject to environmental assessment. The NCEA's advisory reports are published for all stakeholders in an EIA to refer to.

The NCEA is an autonomous foundation; the foundation by-laws of the NCEA set out how the structure operates. These include not-for profit principles, and clauses that restrict the operation and dispensing of funds to those activities that support the Commission's statutory role. Beside the core of permanent staff, the NCEA works with a pool of approximately 400 experts. For each review, an ad-hoc working group is put together with experts from this pool.

Dutch law affords the NCEA complete independence in determining the composition of the expert groups, but the NCEA does check with the competent authority if there are no objections to the inclusion of one or more members of the working group. If a competent authority has good reason to doubt the impartiality of the experts in connection with the activity or the decision concerned, then the NCEA will find someone more suitable. Who the competent authority is, depends on the type of decision being made and which government body has administrative authority over the matter.

7.1.2 Funding mechanism for independent review

The mandatory advisory work of the NCEA is funded by the following Ministries: Ministry of Infrastructure and Environment, Ministry of Economic Affairs, Agriculture and Innovation and the Ministry of Education, Culture and Science. For voluntary advice the competent authorities requesting the advice have to make a financial contribution to the Ministry of Infrastructure and Environment.

A. FEE SCHEDULE

The amount that the competent authorities are asked to pay for voluntary advice depends on the complexity of the EIA, as follows (as per 1st July 2012 – 31st December 2013):

- Standard fee of € 10,000
- Low fee of € 5,000. This fee applies to relatively straightforward scoping or review advice, which includes: EIAs for large scale pig farming operations, certain flood

protection measures (dike strengthening), gas/oil extraction at sea, certain infrastructure measures, and for a second opinion on case-by-case EIA screening;

- High fee of € 24,000. This fee applies to more complex EIAs and for SEAs, such as an SEA for infrastructure planning (including rail and shipping routes), SEAs for national level spatial plans and EIA/SEAs for airports, power plants, and transmission lines.

If two advisory reports are needed within one EIA procedure (scoping and review advice), the NCEA charges 160% of the fee for both combined (rather than 200%).

For review of supplementary information, the NCEA charges € 3,500. This fee applies when the NCEA review of an EIA report has shown essential information to be lacking, and supplementary information has later been provided.

B. INTEGRITY OF THE FINANCING MECHANISM

To minimise political influence on individual advisory reports, the finances are provided directly to the NCEA's operational budget by the Ministry of Infrastructure and Environment. The NCEA is accountable to the Ministry of I&E on cost effectiveness, but not on the content of individual advice. For her role in the Dutch EA system, the NCEA does not directly receive financial contributions from competent authorities or from other Ministries than the Ministry of I&E. The contributions that the Ministry of Economic Affairs, Agriculture and Innovation and the Ministry of Education, Culture and Science allocate to the operation of the NCEAs budget, are collected by the Ministry of I&E and reserved for release to the NCEA as part of the operational budget advance that this Ministry provides. The remainder of the NCEA's operational budget is financed directly from the Ministry of I&E's own budget. The contributions that competent authorities make for the voluntary advice requested from the NCEA are also collected by the Ministry of I&E, but these go into the state coffers, as is common practice in the Netherlands for such external revenues.

The operational budget of the NCEA in recent years has been between 5 and 7 million euro. These amounts include an annual allocation for the knowledge centre function that the NCEA has, but the majority of this budget goes towards the advisory work. The budget is allocated based on the number of advice requests made. Every quarter (3 months) the NCEA makes a prognosis of the number of advisory reports expected, on the basis of which the Ministry for Infrastructure and Environment provides a financial advance. At the end of the year the NCEA provides a financial report to the Ministry.

C. COSTS OF THE REVIEW

- Personnel, including salaries, insurance, and training costs
- External consultants
- Office supplies, communications, and publication costs
- Leased office space

The costs for advisory reports consist of expenditures made by the secretariat (including costs for personnel, office supplies, communications, publication, and office space, etc.), and the costs of engaging working group experts. The experts that the NCEA mobilises for its advisory services receive a standard fee of €146 per hour (with the exception of a minority of experts, who receive an hourly fee of €59 because they undertake their advisory work for the

NCEA outside of their regular employment). The fee is based on the market price for a senior expert in the Dutch context and there is no difference in compensation based on seniority.

A significant variation in the costs of different types of advice is demonstrated by the following annual budgets:

- In 2010 the budget allocated was €6,627,500 for 265 advisory reports.
- In 2011 the budget allocated was €5,607,600 for 208 advisory reports.

Annual budgets can only provide snapshots of each year's activity. Year-to-year variations in the average cost of advisory opinions are dependent on the types of assessment that are handled in each year.

Of the 265 advisory reports produced by the NCEA in 2010:

- 90 were advisory reports on the Terms of Reference (ToR) for EIA, and for combined SEA/EIA.
- 42 were advisory reports on the ToR for SEA.

The average costs per advice for 2010 comes to € 21,500, but the range of actual costs varied from 4,000 € for the least complex advice to 65,000 € for the most complex advice. In addition, 2010 data show that:

- The costs of expert input came to approximately one third of the advice costs in most cases.
- The costs for review advice is between 10 to 20% higher than the costs of a scoping advice.
- The average cost for advice on SEAs is very similar to the average cost for advice on EIAs.

7.2 COLOMBIA

7.2.1 Distinctive feature: decentralisation through regional development corporations

Colombia has a decentralised environmental governance framework that includes innovative policies for securing the achievement of programme objectives. The National Environmental System (Sistema Nacional Ambiental, or SINA) apportions environmental management functions among several types of organisations, including a mid-level ministry that is charged with general policy-making and coordination, research organisations that are responsible for gathering and disseminating environmental data and autonomous regional environmental corporations.¹²⁷

There regional development corporations (Corporaciones Autónomas Regionales, or CARs) are a unique feature of Colombia's environmental management structure. The CARs, which were first established in the 1950s, are financially independent governmental organisations. Originally charged with the regional management of economic development and energy infrastructure, the responsibility of CARs has evolved considerably over time.

¹²⁷ World Bank, Republic of Colombia, *Mitigating Environmental Degradation to Foster Growth and Reduce Inequality*, Report No. 36345 – CO (February 25, 2006).

Colombia's Constitution of 1991 gave CARs autonomy to plan and administer local policy, promulgate local regulations, and impose regional taxes. Subsequently, Law 99 of 1993 which established SINA, made departments and municipalities subordinate to the CARs in matters relating to the environment.¹²⁸ Under Law 99, CARs are required to produce short, medium, and long-term plans, as well as formulating annual operating plans for investments.

7.2.2 The role of CARs in the EIA process

Article 49 of Law 99 mandates that any activity, industry, or development that could cause serious harm to natural resources or significantly alter the landscape requires an environmental licence. Three types of institutions — the Ministry of the Environment (Ministerio del Medio Ambiente – MMA), CARs, and certain territorial governments—have the authority to grant environmental licences.¹²⁹ Under Article 53, CARs have authority within their territories to grant environmental licences for projects requiring environmental impact assessments and environmental evaluations of alternatives. The Ministry of the Environment has authority to issue licences for projects that appear in a list of large-scale activities as well as activities that have a national impact.¹³⁰ In some cases, authority for oversight of the EIA process may be delegated to municipal authorities.

Under the current regulatory process, screening consists of determining whether a project activity falls within a list of 21 sectors or activities that are automatically subject to an EIA requirement. If a project is in one of the statutory categories, the project proponent must then ask the CAR or another relevant environmental authority whether an environmental evaluation of alternatives procedure (Diagnostico Ambiental de Alternativas or DAA) is necessary.¹³¹ This step requires the proponent to devise several technical approaches to the development of a project activity in order to identify one that would result in the fewest adverse environmental impacts. If the CAR (or other authority) determines that the DAA is required, the proponent must incorporate the results of its analysis in its EIA study.

There is no formalised scoping process. Instead, the government has prepared mandatory, standardised terms of reference for each of the enumerated types of project activities, which specify the range of issues that the EIA process must consider in undertaking the environmental impact study and creating an EIA report.¹³²

In Colombia, reviews of EIA reports are usually performed by planners and experts within the CARs or other competent authorities who are familiar with the environmental assessment regulations. During the review process, the review panel utilises Environmental Studies Assessment Guides jointly developed by the ministry of the Environment and the Convenio

¹²⁸ Artículo 63°, Ley 99 de 1993 (Diciembre 22), Available at <http://www.alcaldiabogota.gov.co/sisjur/normas/Norma1.jsp?i=297>

¹²⁹ Article 55, °, Ley 99 de 1993.

¹³⁰ Allen Blackman et al., *Assessment of Colombia's National Environmental System (SINA)*, Resources for the Future 42 (October 2005).

¹³¹ Official Journal of the Colombian Government. Decree 1220 of 21 April 2005, which regulates Title VIII of Law 99 of 1993 regarding environmental licences. Bogotá: Nacional Press; 2005a; 45890: 2–7.

¹³² Javier Toro, Ignacio Requena, Montserrat Zamorano, *Environmental impact assessment in Colombia: Critical analysis and proposals for improvement*, Environmental Impact Assessment Review, Volume 30, Issue 4, July 2010, Pages 247–261, ISSN 0195–9255, 10.1016/j.eiar.2009.09.001.

Andrés Bello (Andrés Bello Convention) of Spain.¹³³ The guides are evaluation tools that provide general recommendations regarding the process for evaluating impact assessment criteria, a rating scale of the evaluation method, and benchmarks to be used.¹³⁴

7.2.3 Funding mechanism for the CARs

Under the 1991 constitution, municipalities must transfer a percentage of property tax revenue to CARs for environmental management, representing a significant share of their funding. These and other charges that CARs are authorised to levy at the local level (including environmental licensing fees and watershed protection fees) represent a large part of their revenues, and about 85% of total SINA resources.

There are significant variations in financial resources for the support of CARs depending on location. Those that are closer to large cities (as opposed to areas of high biodiversity) are in a better position to generate revenue from taxes and fees and can to secure the services of more qualified technical staff.¹³⁵

7.2.4 Application of the cost recovery principle

In Colombian legislation, the levying of environmental fees provides one of the few contexts in which the concept of “environmental damage” is addressed.¹³⁶ Under Law 99, fees are imposed on proponents in order to internalise the costs of pollution caused by project activities. Fees are based on the value of natural resource depletion, the extent of social and environmental damage, resource cost recovery, and the economic harm resulting from these impacts. Article 42 of the Law provides that CARs must determine fees based on a combination of these factors, with each factor being given a weighting coefficient to provide an overall score, from which the fee is calculated. It does not provide a numeric formula for doing so.¹³⁷

7.3 FRANCE

7.3.1 Distinctive feature: EIA funding through general treasury allocations

France’s Environmental Code contains the principal provisions establishing the framework for environmental impact assessment and compliance assurance. Projects (“installations”) are classified according to their type and subject to permitting provisions that relate to the degree of a project’s anticipated environmental impact. Under the Code, “installations” refer

¹³³ The Convenio Andrés Bello is an international, intergovernmental organizations whose members currently include Bolivia, Chile, Colombia, Cuba, Ecuador, Spain, Mexico, Panama, Paraguay, Peru, Dominican Republic and Venezuela. The work of the organization includes strengthening national science, technology, and innovation systems; social ownership of science and technology; and environment and sustainable development.

¹³⁴ Ministry of the Environment of Colombia and the Executive Secretariat of the Convenio Andrés Bello (CAB), *Manual de evaluación de estudios ambientales: criterios y procedimientos*, (2002) Available at http://www.minambiente.gov.co/documentos/manual_evaluacion.pdf.

¹³⁵ Overseas Development Institute, *Evaluation of Sector-wide approach in environment: Colombia Case Study Report* 13 (January 2008).

¹³⁶ Daniel Rincón Rubiano, *Environmental Law in Colombia*, Wolters Kluwer, 142 (2011).

¹³⁷ Ley 99 de 1993, Artículo 42, Tasas Retributivas y Compensatorias (Retributive and compensatory fees) Available at http://www.otuscolombia.org/tabs/normativa/LEY_99_DE_1993.pdf.

to a technical unit of a facility (établissement). Several technical units may receive a permit as a single entity.

The Code embraces the polluter pays principle, stating that costs resulting from efforts to prevent and reduce pollution must be borne by the polluter. Revenue from environmental fees imposed on proponents during the application processing and permitting phases go to the national treasury. However, fees and charges do not cover the full regulatory costs. The government tasks relating to the entire EIA system, including EIA review, permitting, monitoring, and enforcement activities, are funded entirely from the national budget through general taxation.

7.3.2 Governmental responsibilities in the French EIA system

A. BODIES INVOLVED IN EIA

In France, a single authority, the Directorate General of Risk Prevention (DGPR) of the Ministry of Sustainable Development is responsible for general oversight of all the functions related to environmental impact assessment, including permitting, inspection, and enforcement. The DGPR has authority over the prefects (préfets) of the 100 territorial departments in France. The prefects are representatives of the central government to the departments and territories and have responsibility for oversight of all environmental permitting, monitoring, and enforcement functions, with the exception of major public infrastructure projects. Prefects issue draft decisions and final licensing decisions (orders) for classified establishments and may issue other administrative orders in areas falling within the competency of the national government.

Prefects chair the Departmental Councils of Environment and Sanitary and Technological Risks (CODERST) for the departments and territories in which they serve. These Departmental Councils are stakeholder committees that meet monthly, contribute to the making of local environmental policies and issue opinions on individual project proposals and administrative sanctions. The committees consist of representatives of national and local authorities, representatives of approved consumer, fishing, and environmental protection associations, as well as technical experts. Prefects usually (and sometimes must) follow the advice of CODERST, which has an advisory role but is not a decision making body. CODERST delivers opinions on draft prefectural orders as requested by a government service (by DRIRE, for example).

B. RESPONSIBILITIES IN SCREENING AND SCOPING

Depending on the type of proposed project activity, the screening process may be fully or partially automated by statute. Under a statutory revision that went into effect in June 2012¹³⁸, activities or types of facilities listed in the accompanying statutory annexes are either automatically subject to the requirement of a full impact assessment or subject to a case-by-case determination of its applicability. Activities that are not on either of these lists, but which meet a statutory cost threshold, may also be subject to a full EIA process if not exempted by other criteria. Proponents of projects that are not subject to the full EIA requirement may be required to produce an impact statement – a less comprehensive report, if the activity proposed is contained in a separate Annex (Annex 4). In France, the scoping

¹³⁸ Décret n°2012-1529 du 28 décembre 2012 – art. 13

process is undertaken by the project proponent, who may request the prefect of the department in which the facility will be located to specify the information that must be contained in the EIA study. The prefect may not use this process to impede a project application and the scoping guidelines issued may not be used to prejudice the decision to approve or deny the project.¹³⁹

C. RESPONSIBILITIES IN INSPECTION

Departmental Councils delegate most inspection responsibilities to Regional Directorates for Industry, Research, and the Environment (DRIRE), which are comprised of 24 regional branches and responsible for compliance in connection with the majority of industrial installations.¹⁴⁰ A database of permitted installations is used to help determine budget allocations to individual DRIREs. DRIREs do not have their own laboratories and must use external laboratories certified by the Ministry of Sustainable Development to obtain sampling and analyses at an installation owner's expense. DRIREs are not permitted to outsource regulatory activities to contractors, but the options for outsourcing certain monitoring functions are being evaluated.¹⁴¹ The table below gives an overview of inspection activities across the whole of France in 2010.

Table: Licensing and inspection statistics for France (2010)¹⁴²

Classified installations	45,998
Number of inspectors (Overall)	1,501
Number of full-time equivalent inspectors	1,217
Administrative Action (2010)	
New installations requiring a licence	
Licensing orders	1,699
– Including corrections	339
Supplementary orders	5,038
Emergency orders	110
Inspections	
Detailed inspections	10,133
Other inspections	14,405
Total inspection visits	24,507
– On account of accidental pollution	242
– Inspections in response to complaints	549
– Decommissioning visits	366
Unannounced inspections	3,447
Calculations	
Average number of classified installations per inspector	37,8
Average number of inspections per inspector annually	20,13

¹³⁹ Decree No. 2000–258 of 20 March 2000 (classified installations for the protection of the environment).

¹⁴⁰ Departmental Councils delegate inspections in connection with agriculture and related industries to the Departmental Veterinary Service Directorates (DDSV). This responsibility falls with the Technical Service for Inspection of Classified Industrial Installations (STIIC) (under the Police Prefecture of Paris) covers the greater metropolitan area of Paris.

¹⁴¹ OECD Environmental Compliance and Assurance Systems, 100 (2008).

¹⁴² Inspection des installations classées – Bilan d'activité 2010

7.3.3 Fees, charges and budget allocations

The national government charges proponents a fee for the issuing of permits for new projects or major modifications that require an EIA. These fees are typically close to €2,000. In addition, installations are required to pay an annual subsistence charge.¹⁴³ Installation operators must also pay for the cost of sampling and monitoring installation discharges where these are required by a permit. In the case of non-compliance with permit provisions, they must deposit a reimbursable sum of money with the competent DRIRE as a guarantee of completion of the corrective work they will undertake. Note that there is no mechanism for matching charges to the costs of a specific task.

The Ministry for Sustainable Development reviews national funding requirements on an annual basis. Financial resources are allocated to individual regions based on a calculation that determines the relative degree of industrialisation in the region. This proportional share of funding is calculated according to a list of priority criteria, including the number of installations weighted by priority category (such as those involving dangerous substances). The annual costs of each region's DRIRE's regulatory activities primarily consist of personnel and the resources deployed in carrying out its functions.

7.4 GHANA

7.4.1 Distinctive feature: fees tailored to project impacts

The fee system that Ghana has implemented for activities subject to environmental impact assessments is noteworthy because of the extent to which the fee structure is tailored to overall project impacts. Ghana's system classifies projects according to three separate criteria: industry sector, project investment cost, and scale of impact. As a result, fees differentiate in a manner that approximates the actual government costs of administering different types of projects. In addition, the system further addresses differences in government costs that may be incurred over time by implementing proponent charges through three different fees. The result is a fee structure that is more responsive to differences in project characteristics than many fee systems in the world.¹⁴⁴

7.4.2 Differentiation in EIA fees

Under the EPA Act 1994, Act 490, Ghana's Environmental Protection Agency is charged with imposing and collecting environmental protection fees and the Agency is authorised to establish a fee system for EIA Activities. The fee system includes (1) a processing fee, (2) an environmental permit fee, and (3) an environmental certification fee. The three-part system enables the Agency to respond to three distinct areas where government costs are incurred, as follows:

¹⁴³ Annual subsistence charges are based on plant complexity and roughly range from €300 for a small, simple installation to €30,000 for a large, complex plant.

¹⁴⁴The author would like to express special thanks to Jonathan Allotey for providing good information on Ghana's current fee system.

A. PROCESSING FEE

The processing fee is designed to recover the cost of processing project applications, but also includes an administrative charge. The cost of processing applications includes the following components:

- Site inspection cost
- Allowances for technical review committee members
- Cost of mailing materials (e.g., stationery)
- Postage
- Staff time
- Risk allowance
- 20% administrative fee

B. PERMIT FEE

The permit fee is based on a point system that assigns monetary values to impact levels. The determinants of the various levels of impact points include:

- Sensitivity of the location of the proposed project
- Potential for relocation/resettlement of communities
- Diversion of water bodies, roads, etc.
- Need to hold public hearings
- Potential for reclamation and restoration of degraded areas
- Decommissioning/closure measures required
- Overall level of project impact

Each impact point is equivalent to a certain monetary value depending on the sector.

C CERTIFICATION FEES (RECURRING)

Once projects have been granted permits, they are required to obtain environmental certificates after 24 months in operation. Small and medium sized projects must renew them every 24 months, while large projects must renew them every 36 months. The Environmental Protection Agency charges fees for issuing certificates, which are equivalent to the processing fee, plus 50% of the permit fees. This fee is intended to cover the ongoing costs of monitoring operating activities.

D DECOMMISSIONING COSTS

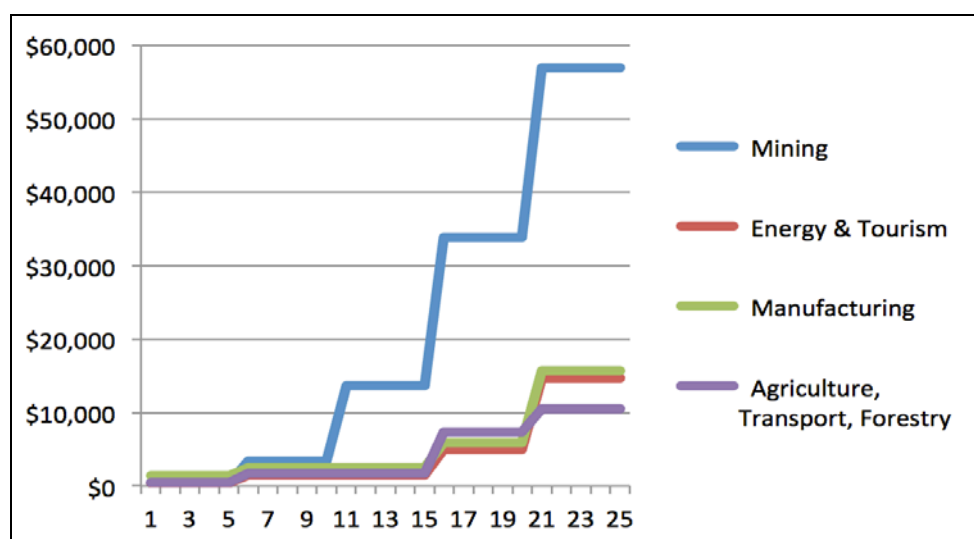
The Environmental Protection Agency has plans to develop a fee to cover decommissioning costs but has not yet developed a fee structure to cover this.

7.4.3 Revenue allocation

Revenues generated from fees are deposited into the National Environment Fund. A percentage (currently 25%) is used to cover the cost of the Agency's operations, upon approval of the EPA Board. The National Environment Fund was established under the EPA Act 1994 is also used for the following purposes:

- Environmental education of the general public
- Research, studies and investigations relating to the functions of the agency
- Human resource development
- Environmental monitoring

Graph: Graphical comparison of Ghana's fee structure



Approximate impact levels are depicted on the X-axis and fee levels are depicted on the Y-axis (Amounts in USD).

7.5 GEORGIA

7.5.1 Distinctive feature: reforms to fight corruption

Since 2004, the Republic of Georgia has evolved from a post-Soviet state that struggled with high levels of official corruption to a country that has received broad acclaim for its success in establishing integrity in its government institutions. Georgia's environmental governance structure has been profoundly impacted by the transformations that have taken place. One of a number of important measures introduced to reduce corruption is a statutorily prescribed procedure for the payment of environmental permitting fees, which reduces opportunities for bribes and improper influence by eliminating direct payments to environmental authorities. The changes have brought mixed results. Reforms have greatly reduced opportunities for corruption in the environmental permitting process, but have also resulted in a weakening of the regulatory framework for environmental impact assessment.¹⁴⁵

7.5.2 The regulatory reforms and their political background

The current process of continuing government reforms began in November 2003 with the "Rose Revolution," which resulted in the election of president Mikheil Saakashvili and the introduction of a comprehensive new policy of economic liberalisation that aimed to remove barriers to private investment and enforce the rule of law in the fight against corruption.¹⁴⁶ Prior to these reforms, bribery was pervasive and aggravated in part by a cumbersome regulatory system. Obtaining a construction permit involved 29 separate procedures and

¹⁴⁵ Kolhoff AJ, et al, An analysis framework for characterizing and explaining development of EIA legislation in developing countries—Illustrated for Georgia, Ghana and Yemen, Environ Impact Assess Rev (2012), doi:10.1016/j.eiar.2012.04.004

¹⁴⁶ *Ibid.*

approvals from as many as 9 agencies.¹⁴⁷ This type of process provided incentives for many businesses to pay bribes to obtain permits more quickly or to ignore the permitting process altogether. The impact of corruption was felt as profoundly in the administration of environmental permitting as elsewhere in government.

New policies sought to simplify regulatory requirements for commercial activities, and one of the outcomes included the adoption of procedures that enable investors to enjoy “one stop shopping” in the environmental permitting process. Administrative bodies issuing licences must ensure the approval of additional licensing conditions by other administrative bodies. Under this system, investors may obtain integrated licences that not only provide authorisation for project execution to go forward, but also include permits to release air pollutants and consume natural resources.

7.5.3 Consequences of reform for financing the EIA system

A. CHANGES IN THE ENVIRONMENTAL PERMITTING SYSTEM

Georgia’s Law on Environmental Protection, which establishes the general legal framework for environmental protection, was first adopted in 1996 and then amended several times. It covers a broad range of issues, including the implementation of environmental standards, licensing of activities that consume natural resources, issuing of environmental permits and the monitoring of environmental performance.¹⁴⁸ The country’s environmental permitting system is governed by the Law on Licences and Permits (2005), the Law of Georgia on the Environmental Impact Permit (2007), the Law on Ecological Expertise and the Law on Fees for Natural Resources Use (2004).

The Law on Licences and Permits defines all types of licences and permits in Georgia. Article 24 of the law established the “permit of environmental impact”. This is an “integrated” permit, meaning that the permit for undertaking the project also includes a permit for air pollution, water use and the disposal of waste. The “Permit of environmental impact” is further regulated by the Law of Georgia on Environmental Impact Permit. The law provides a list of 22 activities subject to a mandatory ecological study.¹⁴⁹ It establishes a legal basis for issuing environmental permits, implementation of an ecological study, as well as procedures for proponents to manage the public participation process.¹⁵⁰ Under this law, an Environmental Impact Permit is defined as a permanent authorisation for implementation of the planned project. The law also stipulates that a proponent must carry out public consultations in connection with the EIA before submitting it to an administrative body that is responsible for issuing a permit. Previously, consultation was the responsibility of the EIA authorities. In addition, the streamlined procedures do not currently specify a screening or scoping step, and the review period has been reduced from 90 to 20 days. In that sense the reforms have reduced the safeguards in the EIA system.

¹⁴⁷ The World Bank, *Fighting Corruption in Public Services: Chronicling Georgia’s Reforms* (2012).

¹⁴⁸ European Neighbourhood and Partnership Instrument, *Georgia: National Indicative Program 2011–2013*. p.41

¹⁴⁹ See also Aarhus Centre Georgia, *How to Obtain the Permit for Impact on Environment from the Ministry of Environmental Protection of Georgia* (2011).

¹⁵⁰ Aarhus Centre Georgia, Observer Report, *Environmental Impact Assessment Process in Georgia*, 5 (February–March 2008).

B. REFORMS AFFECTING THE PAYMENTS FOR PERMITTING FEES

Prior to changes in the laws in 2004, payments were made directly to the Ministry of Environmental Protection. Namely, the fee was paid to the Department of Licences and Permits on the basis of an agreement between the Department and the permit applicant. The fee amount was decided on a case-by-case basis depending on number of experts needed for the EIA review (ecological expertise), the scale of the project etc. This factor, combined with more comprehensive and numerous steps in the permitting process, meant that there were significant opportunities for Ministry officials to demand or accept bribes for favourable treatment in the permitting process. The low salaries of the Ministry staff also contributed to this situation.

The new Law on Licences and Permits (2005) establishes a permit fee as well as a licence fee, a one-time mandatory fee paid by a permit applicant to the central budget or municipality budget (if the permit or licence has been issued by the local municipal governance body). Permit and licence fees are imposed with the aim to cover the administrative costs of these procedures.¹⁵¹ A receipt evidencing payment of a permit fee must be enclosed, along with other required documentation that must be filed with other application materials. Proponents must pay the permitting fees to a government account at a bank, which issues the receipt that must be provided as a precondition for the processing of the application. The new procedure is part of an aggressive policy of zero tolerance for corruption. Since fees are no longer paid directly to the Ministry, there are diminished opportunities for officials to exact bribes as part of the process.

Article 25 further states that the “amount of the fee, the procedure of its payment to the budget, as well as return of any excess amount paid” shall be determined by the law of Georgia on licence and permit fees. According to the Article 7 of this law, the fee for “permit of environmental impact” is a fixed amount, equalling to 500 GEL (about 300 USD). The payment can be made at any bank. An account number upon which the payment should be made can be received at the Ministry of Environmental Protection.

7.5.4 Changing roles and financing of EIA tasks

A number of organisational changes have marked the allocation of administrative responsibilities for environmental permitting for the period from 2004 to the present. The authority of territorial bodies and subordinate government entities has been greatly curtailed, with responsibilities being centralised or consolidated in fewer territorial organisations.¹⁵² The Ministry of Environment and Natural Resources of Georgia was reorganised in February 2011. As part of this reorganisation, certain functions of the Ministry were transferred to the Ministry of Energy of Georgia. As a result of these ongoing institutional changes, funding for the EIA process in Georgia are a moving target. Until government roles and responsibilities stabilise around a permanent organisational structure, it will be difficult for the Georgian government to effectively finance the government tasks in EIA.

¹⁵¹ Law of Georgia on Licenses and Permits, 24 June 2005, Article 3.

¹⁵² Arend Kolhoff and Tamuna Gugushvili, EIA in Georgia – state of affairs, p.29.

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