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WORLD BANK GROUP
Fragility, Conflict & Violence

A PRACTICAL HANDBOOK

for Environmental
Regulators and Legislators
*working in situations affected
by* Fragility, Conflict and
Extreme Violence (FCV)

Wolfhart Pohl & Ella Humphry,
FCV Group, The World Bank

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1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
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Acknowledgements The idea for this training and the resulting handbook was originally initiated by a request for proposals by the Korean Trust Fund's (KTF) window for Supporting Economic and Peacebuilding Transitions. We are grateful to the KTF for the generous funding for this activity, which - combined with a light administrative burden - allowed us to dive in and focus on the substance.

The activities leading up to this handbook could not have been carried out in the same quality and spirit without the engaged contributions of a number of colleagues and organizations from our host country Kenya: Gerphas Opondo from the Environmental Compliance Institute, and Wilson Busienei, National Environmental Management Agency (NEMA) have not only provided invaluable insights from their professional experience, but also helped with organizing the training event, especially the field trips to regulated entities as diverse as sewage plants and flower farms, national parks and geothermal power plants. In this context a special thank you goes to the Naivasha Water and Sewage Corporation, Nini Flowers Ltd., The Hell's Gate Park management from Kenya Wildlife Service, and the Geothermal Division from KenGen.

We also want to express our gratefulness and appreciation for our Colleagues from the World Bank, Alexandra Bezeredi, Amos Abu, and Stephen Ling, who made time in their busy schedules to join the training workshop in Kenya and share their knowledge as trainers. A special thank you goes to Andy Huckbody, who sacrificed a week of home leave, joining us from his posting at

a remote mine in Mali to share his experience and perspective of a regulated entity.

Mike Eldon deserves special thanks and recognition for working his magic as a facilitator during the workshop. Under his regimen the mood was - from the very first minute - relaxed, open and collegial, and charged with energy and creativity. Mike was a key factor in getting the participants to work and think hard, discuss and argue, investigate and analyze, network and communicate, and all that in good spirits, with mutual trust, respect and humor, and a firm belief that “win-win” is a real possibility.

In this context we thank all participants for bringing such enthusiasm and positive energy to the workshop! Without their engagement and participation this handbook could not have been developed in its current form: Zinnah S. Mulbah, Pélagie-Angèle Damino Nee Yangoi, Marc Mbetessinga, Augustin Dongba-Potchozo, Mashood Aliyu, Peter Mulbah, Malami Muhammad, Andriamampianina Harizo Rasolomanana, Mohyeldeen Eltohami Taha, Helena Gorpu Hallowanger, Saah Augustine David, Jr, Ephraim Sneh Swen, Serge-Maxime Kolika, Olayiwola Shuaib Baker, Oladunni Fatimat Oke, Lovetta Yatta Juanah, Patricia Gibril Wachata Ali, Rosana Luis Francisco, Abdul Akeem Olawuyi, Korotoumou Mariko, Abbas Abdul Rafiu, Reagan Opondo, Cicilia Githaiga, and Moumoni Sawadogo, thank you for bringing your experience and enthusiasm.

Amos Abu we also thank for his extensive review of draft versions of this handbook, and his helpful and collegial comments.

Last not least we are very grateful to Nicholas Mbocha for his tireless support and engagement with the workshop's logistics and the project's overall administrative processes. His excellent help with bureaucratic obstacles and bottlenecks gave us much more time to focus on substance!

Nairobi, December 2015

Wolfhart Pohl & Ella Humphry

Introduction



Dominic Chavez/World Bank





Dominic Chavez/World Bank



Masaru Goto/World Bank

FCV affected countries often are affected by multiplying environmental problems, while the capacity to deal with them is severely reduced.

The job of an environmental regulator is generally a difficult one under the best of conditions: the real value of environmental components (such as water, air, soils, biodiversity) and ecosystem services (e.g. climatic regeneration, flood retention / prevention, health and recreation) is often poorly understood, not quantified in monetary terms and overlooked especially on a project-level feasibility studies and revenue calculation. The regulator is frequently seen and/or depicted as an obstacle to entrepreneurship, a hindrance to economic development and to the building of a modern system / society. Sometimes environmental concerns are associated with extremist political views (e.g. Greenpeace's militant wing) or outdated nostalgia, and their proponents portray social misfits and agitators.

Added to this general perception are the conditions prevailing in situations of fragility, conflict and violence (FCV), such as tangible risks for health and safety, uncertain supply and access to food, water, utilities, reduced or non-existent public services, breakdown of government and administration, and often forced displacement, famine, disease and the significant probability of a violent death. Such FCV situations often are accompanied by inherent, diffuse environmental impacts, relating e.g. to the overuse of natural resources (deforestation for firewood), biodiversity degradation (poaching, encroachment on remote areas, deforestation), pollution (unmanaged waste and sewage, destructions from acts or war, ambient pollution from open fires) etc.

The regulator in FCV situations: Do more with less, and accept a high personal risk...

Imagine being a regulator in this type of environment: In the hierarchy of peoples' worries environmental concerns will be close to the bottom, even though the need for environmental protection and the management of natural resources actually increases during situations of FCV. Moreover, many regulated entities will already struggle for survival, probably suffering shortages of energy, fuels, consumables, raw materials, skilled staff, transport and financial resources. Having just the most basic survival strategy will probably be the theme foremost on everyone's minds. In such conditions any attempt to review and / or enforce environmental performance is likely to be shrugged off or ignored as one of the least pressing problems that an industrial sector, or large energy, transport or infrastructure project encounters.

Purpose and Structure of this Handbook

This handbook is the product of a workshop held in June 2014 with about 25 environmental regulators from over 10 FCV-affected countries (Burkina Faso, Central African Republic, Kenya, Liberia, Madagascar, Mali, Mozambique, Nigeria, Sierra Leone, South Sudan, and Sudan) that was financed by the Korean Trust Fund (KTF) and organized and hosted by the World Bank Group (WBG). Over the course of one week the participants went through a dense program consisting of presentations, discussions, participatory exercises, field trips and the preparation and presentation of case studies from their own countries. The materials processed and harvested during the workshop were extremely rich, and it seemed logical to capture them in a form that would be of continued practical use for the participants. This handbook is intended as a handy toolkit with practical tips that is borne out of experiences garnered from years of working in FCS, including post conflict situations.

The structure of this handbook was conceived during extensive discussions towards the end of the workshop and seen as a “road map” towards the best chance for Environmental Regulators to make a difference in practice.



This handbook is the product of a workshop held in June 2014 with about 25 environmental regulators from over 10 FCV-affected countries

Figure 1:
Road Map to
Regulatory Practice
▽

	1. shape/create	2. implement/apply
<u>PROCESS-oriented</u>	<ul style="list-style-type: none"> ▷ legal ▷ administrative process/procedures (Chapter 1.1) 	<ul style="list-style-type: none"> ▷ documentation ▷ oversight & reporting (Chapter 2.1)
<u>ACTION oriented</u>	<ul style="list-style-type: none"> ▷ technical standards and guidelines ▷ mitigation hierarchy ▷ incentives and deterrents (Chapter 1.2) 	<ul style="list-style-type: none"> ▷ project-related solutions ▷ scope of remedies ▷ realism of regulatory approach (Chapter 2.2)

Figure 1 above depicts the original idea of the handbook's contents and structure as a simple graph.

The regulator's practical challenges were seen as four quadrants by the participants: under the two broad activities of shaping / creating regulations, and applying / implementing them, there is in each case a subdivision between a more legal, administrative, process-oriented perspective, and a more technical, practical, action oriented approach.

The organization of the handbook is deliberate. It is intended to gently introduce the reader to the core principles and key messages in environmental regulation and compliance enforcement in FCS. The approach of the handbook, which is summarized in the below graphic, aims to translate theoretical foundations of regulation into the practical realities of operating in a situations of FCV. This is achieved through the articulation of pragmatic skills and case studies.

This handbook does not claim to be an exhaustive treatise of environmental regulatory work in FCV. Rather, it is a collection, however incomplete and subjective it may be, of principles, approaches, methods, skills and experiences that 25 regulators with real exposure to FCV deemed noteworthy and useful, and that have their origin in the reality of being an environmental due diligence professional in a FCV affected country or situation. For the workshop participants it is meant to be a reminder of the knowledge acquired, for the newcomer to regulatory professional challenges it may prove very helpful as a compact collation of information vetted by experienced practitioners. For both the veteran and the newcomer to regulatory work in FCV it will hopefully be a “vade mecum” type of pocket book that will grow into a constant companion for their challenging jobs.

We wish the users of this handbook much success and look forward to any feedback, positive or negative, be it quick and dirty, or elaborate and exhaustive, on its value in the field.

Best wishes from the authors,
Ella Humphry (Consultant) & Wolf Pohl (Adviser, Team Leader)

Figure 2:
*Approach of
the handbook*
▽

PROVIDES SOME THEORETICAL FOUNDATIONS OF REGULATION

▷ Legislative and institutional infrastructure and management approaches are set out, albeit not as an exhaustive treatise

**ACKNOWLEDGES
LIMITATIONS**

Given the significant challenges in FCV situations, practical limitations to effective regulations are discussed throughout

Attempts to achieve the perfect outcome can lead to not achieving anything at all

The importance of trade-offs and win-win situations are emphasized

**EMPHASIZES
SOFT SKILLS**

Successful regulation entails achieving a solution that is technically sound and benefits both partners, or is win-win

This is particularly pertinent in situations of FCV

The importance of emotional intelligence to guide thinking and behavior to get to win-win is stressed

**USES CASE
EXAMPLES**

Participants of the workshop submitted case examples on regulatory challenges they had to overcome in their work

Experiences and approaches of the participants were extensively discussed during the workshop

The case examples and experiences were captured in the handbook to illustrate the practical realities of regulatory work

**A PRACTICAL TOOLKIT FOR BOTH VETERANS AND NEWCOMERS
TO ENVIRONMENTAL REGULATION**

Notes

The handbook is intended to be a living document. The printed version contains plenty of blank pages for notes, and the Bank team is committed to continue receiving suggestions for changes and updates from the field, and incorporating them into future (at least electronic) versions.

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Chapter 0

The FCV Context



Natalia Cieslik/World Bank



Dominic Chavez/World Bank



Natalia Cieslik/World Bank

Fragility The World Bank's World Development Report for 2011 (WDR11) defined Fragility and Fragile Situations as periods when states or institutions lack the capacity, accountability or legitimacy to mediate relations between citizens and the state, making them vulnerable to violence. Thus states become fragile when governments and state structures lack capacity — or in some cases, political will — to deliver public safety and security, good governance and poverty reduction to their citizens. Other definitions follow similar lines:

- ▷ **FRAGILITY** is a period of time during nationhood when sustainable socio-economic development requires greater emphasis on complementary peacebuilding and state-building activities, such as building inclusive political settlements, security, justice, jobs, good management of resources and accountable and fair delivery.
- ▷ **FRAGILITY** is a condition of elevated risk of institutional breakdown, societal collapse or violent conflict. Fragility is an imbalance between the strains and challenges (internal and external) faced by a state and their ability to manage them. At the extreme, fragility is expressed as conflict or collapse of state institutions.
- ▷ And conversely: **RESILIENCE**: the ability of social institutions to absorb and adapt to the internal and external shocks and setbacks they are likely to face. The risk is gradually reduced as the institutions develop the necessary ability to cope with the types of threats they are exposed to.

Fragility and Conflict have a profound impact on a country's development perspectives: While the bulk of the developing world is expected to progress, by 2030 half of extreme poor will live in countries that are on today's harmonized list of FCS. By OECD's definition of FCV affected states, poverty is already concentrated mostly in FCSs, and almost the totality of extreme poverty will be in FCV affected countries by 2030.

The World Bank has identified FCS as those ranking 3.2 or lower in the annual Country Policy and Institutional Assessments (CPIA), and have other features, such as the presence of a UN peacekeeping or political mission. The OECD's fragile states list is useful since it combines those designated as such by the World Bank, the Asian Development Bank, and the African Development Bank, and includes countries that score 90 or above on the Fragile States Index produced by the Fund for Peace. It is currently moving toward a more inclusive definition that takes into account countries experiencing FCV.



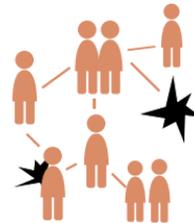
*Fragility and Conflict
have a profound
impact on a country's
development
perspectives*

0.2 Violence

0.3 Conflict

What is extreme violence in the FCV context?

Violence The most commonly accepted definition of violence is “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation.” (WHO, 2002). There are two important categories of violence, based upon the perpetrator:



(I) INTERPERSONAL:

perpetrated by an individual or small group (such as a youth gang) against a family member, community member, or stranger; and

(II) **COLLECTIVE:** organized in order to advance a particular social, economic, or political agenda, including organized crime, terrorism, war, and civil conflict.

There are of course overlaps between the two. For example, the WDR 2011 highlighted the fact that as many armed conflicts cease, homicide rates can increase, which indicates a perpetuation of violence at the interpersonal level. Another example is from the literature on gender-based violence in conflict zones, which highlights that the majority of rape is committed by intimate partners (interpersonal violence) as opposed to by combatants as

a tactic of war (collective). While strictly criminal justice definitions limit violence to physical behaviors that cause harm to a person and can therefore be considered crimes, more extensive definitions make distinctions based on the type of harm intended or caused, such as psychological, symbolic, financial, and economic. Others define forms of violence according to spatial characteristics (as in domestic or urban violence), context (war or election-related violence), intensity (acute, chronic, or petty violence), or relationships between the actors (as in child abuse). Still others differentiate forms of violence by the motivation driving the behavior, for example social, economic, institutional, and political violence.



*There are overlaps
and interactions
between fragility,
conflict and violence.*

Conflict Collective violence is more commonly known in its form of armed conflict, defined as a “contested incompatibility with the use of organized armed force between two or more parties”. In making such a definition, the following should be noted:

- (I) There is a typology of conflict that comprises interstate conflict; intrastate conflict/civil war or subnational conflict; genocide; politicide; and intercommunal violence.

0.3 Conflict

0.4 FCV's Impact on a Country or Society

0.5 What FCV Means For the Environmental Regulator

- (II) One armed conflict may involve a number of different conflicts; for example Afghanistan, Iraq, Somalia, or Syria are frequently cited as examples of sectarian or local intercommunal violence, civil conflict against the present government as well as contests in the global war on terror.

- (III) Although a country may be engaged in armed conflict, there may not necessarily be violence (for example, the conflict between North and South Korea).

Armed conflict may have significant temporal and spatial variations in the levels of violence, and so explanations of armed conflict between two or more belligerent parties may not be adequate to understand why violence occurs at the local level or at different periods of time.



John Donnelly/World Bank

“New threats such as organized crime and trafficking, civil unrest due to global economic shocks, terrorism, have supplemented [and often replaced] continued preoccupations with conventional war between and within countries.”
[WDR 2011]

There are complex and multi-faceted relationships between FCV and the environment.

FCV's Impact on a Country or Society Fragility, conflict, and violence (FCV) is the unified conceptualization of the challenges described above, which includes a spectrum of different types of violence and conflict. However, it also alludes to the importance of institutions as mediators between the state and society, and highlights societal dynamics among different groups. It does not only apply to states traditionally considered fragile or in conflict, and can therefore be applied to situations devoid of active conflict but where there may be issues of criminal violence and terrorism, among others. As the WDR 2011 highlights: "new threats such as organized crime and trafficking, civil unrest due to global economic shocks, terrorism, have supplemented [and often replaced] continued preoccupations with conventional war between and within countries." [WDR 2011]

What FCV Means For the Environmental Regulator The relationship between the environment and FCV is complex and multifaceted. Active conflict can deplete natural resources, generate pollution and destroy biodiversity, as environmental assets are often overexploited in the context of FCV for both survival and profit. The misuse of environmental assets can actually drive conflict. For example, in Pakistan, the activities of militant groups in tribal areas are funded in part by profits from the illegal timber industry. Competition or grievances related to natural resources can also be among the causes of FCV. Environmental regulation efforts, if ill-conceived or poorly handled, can also drive conflict by unintentionally reinforcing or magnifying existing social and economic grievances at the root of the conflict. At the same time, regulatory efforts can contribute to peace building efforts.

0.5 What FCV Means For the Environmental Regulator

Environmental assets and services can be both causes for, and victims of FCV

For example, by focusing on efforts to sustainably manage ecosystems linked to livelihoods, environmental regulation may contribute to addressing scarcity of natural resources that can drive conflict.

The political economy of FCV adds to the challenges for environmental regulators. Governance in FCV often comes with multiple symptoms of competing interests for power and resources, often characterized by a unilateral view of development and economic profit. Both in fragile, but also post conflict situations the drive for attracting foreign investors (and some sectors, e.g. extractive industries, are particularly notorious) can compromise environmental and social concerns. Where a newly established Government seeks to secure state legitimacy through the rapid provision of basic service delivery, this is often done at the expense of good environmental and social practices. In most FCV contexts Governments have a multipolar role to play (e.g. both as promoter of investment and steward of natural resources and environmental services) and need to balance policy priorities to promote and regulate investments and developments. Often the ability to balance interests and find compromises can go beyond a Government's capacity (or willingness) and pose significant obstacles to the implementation of environmental and social standards.

In order to operate effectively in such a complex and challenging context, the regulator must adapt to the prevailing conditions. This handbook will explore some of the practices that can aid environmental regulatory work in FCV and have been briefly summarized below:

- ▶ **HAVE A FLEXIBLE APPROACH:** Conditions can change quickly during conflict, and regulators must develop new and flexible strategies to keep functioning effectively. Information is key and it is important to continuously monitor the situation in order to ensure that chosen approaches fit current circumstances.
- ▶ **KEEP A 'FOOT IN THE DOOR':** Poor security can make it difficult to maintain a presence in the field. However, a continued presence – even one that is considerably scaled back – allows for a swift response at critical moments, some monitoring of changing conditions on the ground and relationships to be maintained. It is more challenging to re-enter and reengage in an area after completely pulling out regulatory presence and efforts.
- ▶ **COLLABORATE WHERE POSSIBLE:** In situations of FCV, shifts in needs, interests and capacity require regulators to leverage partnerships —whether it be with the private sector or communities dependent on natural resources —that are based on a common interest. Such partnerships create opportunities for exchanging information, increased support for mutually beneficial initiatives and leveraging expertise.
- ▶ **DOING WHAT YOU CAN WITH WHAT YOU'VE GOT:** As will be discussed in this handbook, the range of options an environmental regulator can pursue to ensure environmental protection is wide. However, the range that one can pursue in practical terms in FCV-affected situations is often much

0.5 What FCV Means For the Environmental Regulator

Governments in FCV often have an unilateral view of development as economic profit

more narrow. Pursuing the ‘perfect’ outcome can fall short of achieving anything at all. Accordingly, the environmental regulator in FCV must be more willing to compromise on regulatory standards and adapt their management approach accordingly. However, as will be discussed, a lot can still be done with less.

- ▷ **PURSUIING WIN-WIN SOLUTIONS:** Achieving regulation requires a solution that is technically sound but also benefits both parties. In other words, solutions — to some extent — need to be win-win. This is particularly pertinent in situations of FCV where, as already discussed, environmental concerns are lower on the hierarchy of people’s concerns and regulated entities are already facing significant challenges.

USEFUL LINKS:

World Bank’s FCV Group:

<http://www.worldbank.org/en/topic/fragilityconflictviolence/overview#1>

Notes

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Chapter 1

Shaping and creating legal frameworks and management approaches for environmental regulation



Curt Carnemark/World Bank



Lauren Day/World Bank

1.1 Legal and Institutional Infrastructure

1.1.1 Legal Foundations

An enabling legal environment is necessary to achieve environmental goals.

Legal and Institutional Infrastructure — Legal Foundations —

Law is the foundation of any regulatory framework. An enabling legal environment is necessary to achieve environmental goals. It levels the playing field for those regulated and establishes and upholds the legitimacy and integrity of institutions.

Through laws, regulations, permits, and/or licenses the government defines the environmental objectives or requirements (including changes to a prevailing situation) and then promotes and enforces compliance. Environmental requirements can apply to just about any activity, including construction, land management, energy production, use of natural and mineral resources, manufacturing, distribution, and environmental testing, reporting, and monitoring. Laws also are needed to govern the management and remediation of pollution, including ambient, accidental (e.g. spills of hazardous substances) and legacy pollution.

The mandatory management approach commonly used to establish and enforce environmental compliance requires specific laws or regulations, which in turn need to include “requirements” that clearly define, or refer to specific practices and procedures to directly or indirectly reduce or prevent negative environmental impacts (e.g. pollution). Effective requirements define that specific things be done or outcomes reached, as well as measurable criteria and indicators to monitor status and change. Once requirements have been set, the next step is compliance and enforcement.

The main legal cornerstones for comprehensive coverage by an effective environmental regulatory system are the following laws:

- ▶ Environmental Assessment (EA), sometimes referred to as Environmental Impact Assessment (EIA) or Environmental and Social Impact Assessment (ESIA)
- ▶ Protection of natural resources (parks, protected areas, wildlife, fisheries, watersheds, coastal areas, forests, natural habitats)
- ▶ Land management, acquisition and involuntary resettlement
- ▶ Occupational health and safety
- ▶ Pollution (solid waste management, hazardous chemicals and wastes, water and air, legacy pollution)
- ▶ Stakeholder / community environmental health and safety regulations

Sources of environmental law that typically govern a given country's regulatory framework are:

- ▶ Environmental Treaties/ Multilateral Agreements
- ▶ Constitution
- ▶ Framework Environmental Legislation (e.g. a national environmental policy or strategy)
- ▶ Specific Environmental Legislation, e.g. for sectors (mining, transport, waste management) , or specific components or compartments (air, water, soils, natural habitats, wildlife)
- ▶ Subsidiary Legislation (e.g. for new or emerging technologies —e.g. fuel efficiency in cars, pollution control in emissions from thermal power plants)
- ▶ Regulations (containing technical information required for compliance such as acceptable limit levels, target values and acceptable processes, practices and technologies, monitoring and reporting arrangements)
- ▶ By-Laws, which are rules and regulations enacted by an association or a corporation to provide a framework for its operation and management. E.g. local councils may have by-laws, which sometimes overlap and can be used interchangeably with regulations.

- ▶ **Common Law (Case Law/Judicial Precedent)**
- ▶ **Customary Laws (especially important in Africa, where tribal lands and their traditional use often intersect with more modern concepts —e.g. cattle grazing in national parks)**

Some of the problems with institutions and effectiveness of environmental regulation in FCV can be traced back to issues with the legal foundation. Specific challenges in FCV affected countries include gaps, legal loopholes and overlap in existing laws and the influence of informal rules in shaping the process. For example while laws on EA are almost universal, there are sometimes no legal requirements for environmental management plans (EMP) to be prepared, or for monitoring or compliance assurance to be carried out, which severely curtails the regulator to enforce environmental good practice towards a given project or entity.



Simone D. McCourtie / World Bank

When working to the strengthen laws and regulations, a starting point of analysis often would be to examine existing laws (national and provincial) and—best from a bottom up perspective—check to see if policies are clear on incorporating environmental and social dimensions into development planning and decision making? Are they strong enough to commit all parties to perform according to the same standards? A good way could be to find answers to the below questions:

- ? Are they up-to-date and effective, given technological changes or advances?
- ? Are there applicable environmental criteria and quality standards (e.g., for atmospheric emissions, effluents or noise levels)?

TIP:

A good test for the actual clout of the legal and regulatory framework is e.g. to “hypothetically” apply for a license for a substantial civil construction, exploration, land conversion or industrial development, and check which scope and detail of environmental requirements and obligations the license actually contains, and how they are proposed to be monitored and enforced.

1.1.1 Legal Foundations

1.1.2 Administrative Functions

Ideally there is a feedback loop from enforcer to legislator and judiciary.

It is important for the regulator (in an ideal system) to detect, analyze and report gaps and loopholes in the legal and regulatory framework. In most functioning systems there should be some sort of feedback loop from the regulator / enforcer (part of the executive branch) to the legislator (to add, delete or change unproductive laws) and the judiciary branch (to interpret existing legislation in an enabling manner). It is important to also establish whether the policy maker is the same as the enforcer. Practical experience has shown that that in contexts where these two functions resides in one agency or entity, both falter. While this theoretical statement holds true in stable countries, it is particularly prominent in FCV affected situations.

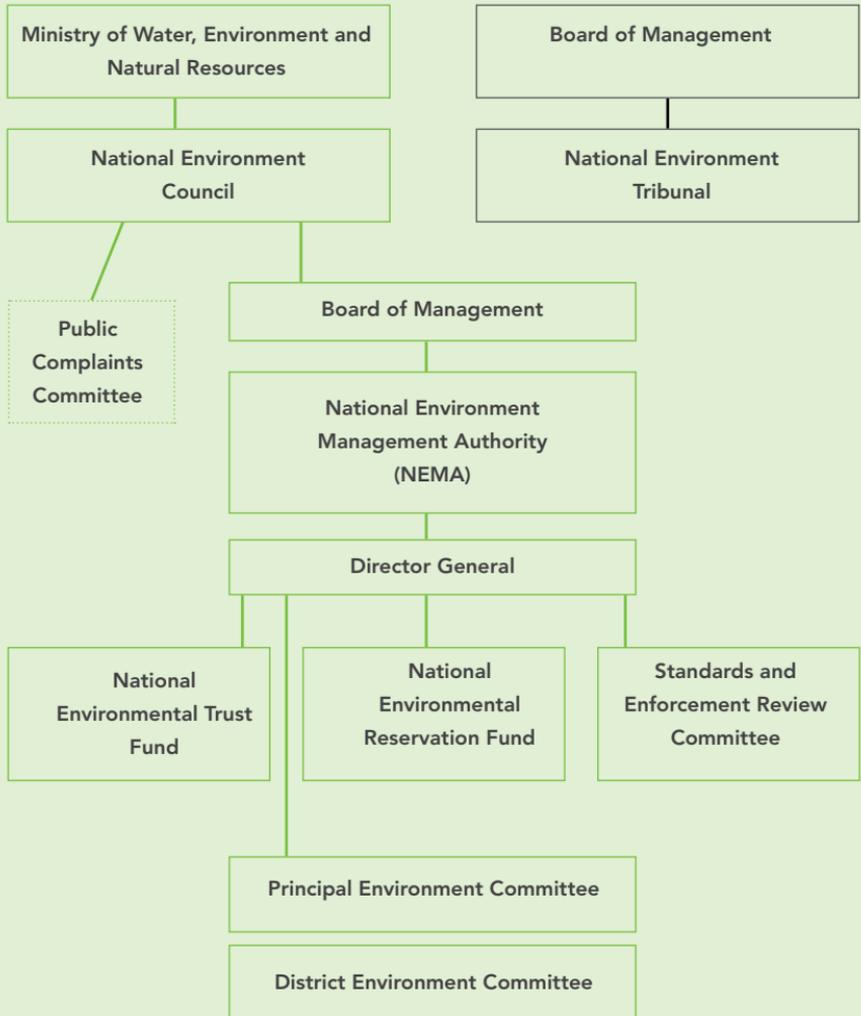
— **Administrative Functions** — The administrative and institutional framework is an inherent and indispensable part of the environmental management system. It facilitates and supports the environmental policymaking process, and ensures the implementation and enforcement of policies. Government agencies appointed and authorized by elected officials to carry out these tasks are the main pillars of environmental administration.

In Kenya for example, the administrative arrangements for environmental management is as follows (and also set out in [figure 3](#)), largely corresponding to international good practice:

▷ **MINISTRY OF ENVIRONMENT, WATER AND NATURAL RESOURCES**

▷ **NATIONAL ENVIRONMENT COUNCIL (NEC)** —reports to the

Figure 3: *The administrative arrangements for environmental management in Kenya*



1.1.2 Administrative Functions

Ministry of Environment and is the highest policy making body under the Environment Management and Coordination Act of 1999 (EMCA). It is chaired by the Minister in charge of the environment. It is responsible for policy formulation and directions for purposes of EMCA. NEC sets national goals and objectives and promotes cooperation among both public and private organisations engaged in environmental protection programmes.

- ▷ **NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)**—is the principal government institution charged with the overall supervision and co-ordination of all environmental management activities. NEMA is responsible to the NEC for dealing with EIA. It helps coordinate the environmental management activities of Lead Agencies.
- ▷ **LEAD AGENCIES**—government agencies in which any law vests functions of control or management of any element of the environment or natural resources. Examples include: Kenya Wildlife Service (KWS), Kenya Forest Service (KFS), Energy Regulatory Commission (ERC), etc.
- ▷ **PROVINCIAL ENVIRONMENT COMMITTEES (PECS) AND DISTRICT ENVIRONMENT COMMITTEES (DECS)**—are the local representations of NEMA and existed in the old constitutional dispensation to deliberate on environmental matters at the provincial and district levels. Currently they are operating as County Environment Committees (CECs) pending amendment of the law to conform with the Constitution.

- ▶ **NATIONAL ENVIRONMENT TRUST FUND (NETFUND)** — responsible for mobilizing resources for environmental research, capacity building, environmental awards, publications, scholarships and grants.
- ▶ **PUBLIC COMPLAINTS COMMITTEE (PCC)** — receives and investigates complaints in respect to the condition of the environment or any suspected cases of environmental degradation. The PCC has powers to investigate complaints against any person or even NEMA or on its own motion investigate any suspected case of environmental degradation. The PCC is required by law to submit reports of its findings and recommendations to NEC. However, the law does not provide the PCC with the mandate to see its recommendations carried through. Further NEC is not required to do anything with regard to the reports submitted by the PCC.
- ▶ **NATIONAL ENVIRONMENT TRIBUNAL (NET)** — entertains appeals with regard to decisions of NEMA. May also entertain a referral from NEMA on any point of law of unusual importance or complexity.
- ▶ **ENVIRONMENT AND LAND COURT (ELC)** — hears and determines disputes relating to the environment and the use and occupation of, and title to, land.

Environmental legislation is often housed several within tiers of government with unclear, fragmented, conflicting and overlapping mandates.

However, ideal institutional arrangements providing complete coverage of all aspects and levels of environmental regulatory oversight are rarely in place. Case in point, Nigeria. The institutional framework for environmental compliance is fraught with unwieldy institutional arrangements —specifically, several tiers of government with unclear, fragmented, conflicting and overlapping mandates amongst government agencies; on the other hand gaps where no clear responsibility has been assigned; and weak capacity (both legal and technical) to supervise and enforce existent laws. Other issues that frequently constrain institutional capacity to regulate effectively include issues with budget (which affects staffing, mobility, training), constrained regional and local level presence and engagement (which means noncompliance often goes entirely unnoticed); inexperienced staff and significant staff turnover (preventing correct technical evaluations and balanced enforcement approach).

When seeking to enhance administrative arrangements, it is often best to work with what already exists and aim to improve capacity over time, rather than attempt sudden wholesale institutional change. Much of what is needed may already exist (e.g. effective laws and regulations may be in place, but not enforcement capacity) and thus working from the bottom (i.e. the regulatory field agents) upwards may yield the most immediate and tangible improvements. Institutional changes should be implemented with moderate pace, and costly and difficult institutional reorganizations only undertaken as a last resort. Often supplying simple things such as transport, cameras and computers to regulators has an immediate positive impact on

Poor enforcement is often the real impediment, rather than poor legislation.

How to go about institutional analysis

enforcement effectiveness. Change processes need to ensure the sustainability of institutional components and recognize limitations of agency budgets and staffing when undertaking reorganization. Avoid introducing overly ambitious reforms that exceed budget and capacity, and create more confusion than simplification and efficiency.

As a starting point, it might make sense to begin with an institutional analysis or conduct inventory of all institutions responsible for EA and environmental regulation at relevant levels of government and private sector, covering the following key questions and topics:

- ▶ Which institutions have the mandate for making of environmental policy, laws and regulations?
- ▶ Which environmental management procedures and instruments (e.g. EA, ESIA, ESMP) exist?
- ▶ Are they actually used when and where intended by the law?
- ▶ Availability, quality and accessibility of data and information?
- ▶ Organizational structure / functions?
- ▶ Human resources capacity (number and qualifications)?
- ▶ Financial resources (budget process? how are expenditures managed / monitored?)
- ▶ Relationship to regional / municipal counterparts?
- ▶ Cooperation and networking between the various entities and agencies involved in environmental regulation?

1.1.2 Administrative Functions

1.1.3 Process / Procedures

Some entry points for enhancing institutional development include:

- ▷ Building capacity in major line agencies (such as, e.g. an EPA's pollution management group in anticipation of a major investment in the extractives sector)
- ▷ Strengthening capacity of local governments at provincial and local levels (e.g. by holding "enforcement clinics" with external advisers, either international peers or regulators from larger / central entities)
- ▷ Building capacity of academic institutions to train effective EA professionals
- ▷ Building capacity of NGOs, research institutions and consultants as monitoring agents, watchdogs and consultants



Lundrim Aliu/World Bank

In a functioning regulatory system, hazards to environment, health and safety trigger immediate enforcement action, such as fees, fines or the suspension of the activities.

— **Process / Procedures** — Administrative procedures are tools and instruments that administrative agencies can utilize to perform their administrative duties. This includes the legal powers to receive access to locations, data and information, the right to inspect, to levy fees and fines for non-compliance and to order immediate measures to avert immediate hazards to environment, health and safety (e.g. by ordering a plant to stop certain production processes, or suspend a construction project, until EHS regulations are met). Disclosure of information to, and consulting with the public and engaging with other agencies (e.g. the police to enforce executive orders given by the regulator) are also important administrative tools. Elements of effective process/procedures are summarized in the table below.

Elements of effective process/procedures	EXPLANATION
Clear descriptions of regulatory core competencies	Clarity in objectives, technical context, background and data, rights, roles and responsibilities, timelines, monitoring arrangements, compliance criteria, remedies for noncompliance and enforcement tools



1.1.3 Process / Procedures

Elements of effective process/procedures	EXPLANATION
Engagement with the public and other important stakeholders	This is particularly important in the context of FCV, where shifts in needs and interests away from environmental conservation often occurs and capacity is reduced. Through effective alliance with the private sector and independent organizations it is possible to collect data, monitor, and use it to inform policy making, planning and priority setting; public disclosure of information and mechanisms of public participation; and assessment of demand for effective management of environmental priorities (e.g. transparency of regulatory procedures and public naming and shaming of non-compliance increase pressure on both regulator and regulated entity, and thus increase scope and effectiveness of regulatory work).
Balanced interests	This is a mapping of the main interests and their potential influence on the project, through identification of key stakeholders, mandates, functions and goals and aspirations. This would best be presented in diagram showing the entities, their relationships, and interacting processes. Explanatory notes could include the rules shaping inter-sectoral coordination, and a description of environmental management at all relevant levels, including links between national and sub-national organizations.

Table 1: *effective process/procedures* ▽

Elements of effective process/procedures	EXPLANATION
<p>Follow through on mandates and commitments to improve environmental outcomes.</p>	<p>The effectiveness of formal rules may be impeded through the functioning of informal relations by institutions, which could e.g. cause two government agencies, one in the role as project proponent, the other as regulator, to enter a collusive relationship and not deploy the full scale of regulatory action. This can be prevented by e.g. the existence of independent auditing and accountability mechanisms (e.g. a National Environmental Tribunal, see section 1.1.2) or by transparency, public scrutiny and accountability to the public</p>
<p>Compliance with industry standards and certifications</p>	<p>Especially in export-oriented sectors, industrial enterprises often seek to improve their market positions by signing up to voluntary certification programs that include environmental and social sustainability criteria. This can influence the types and quality of technologies and approaches and help to set standards for future legal and regulatory updates. Also, such voluntary compliance can be used as model for other sectors, in terms of demonstrating the feasibility of environmental compliance while remaining competitive or even increasing economic viability, e.g. by being able to charge higher prices for certified products, or by accessing markets that require certification.</p>

1.1.3 Process / Procedures

1.1.4 Practical Approach and Behavioral Factors

In practice there is a host of common challenges and problems with the practical application of EA process and procedures in FCV (with many examples reported from sub-Saharan Africa). Some of the most prominent types are listed below:

- ▶ EA clearance processes can be a heavy and lengthy administrative burden (especially when decision-making is hampered by lack of data and lack of capacity for professional evaluation and judgment), both on regulator and regulated entity, and cause substantial delays in project development;
- ▶ Effectiveness of the EA process can be undermined by lack of uniform approach; for example, several line ministries may define differing regulations for EA, including types of EA documents, EA scope and content, timing for review, and approval and means of public consultation;
- ▶ Ambiguity in environmental assessment and management instruments contributes to wide variations across sectors with regards to development and application of environmental regulations, resulting in a huge challenge for regulators to identify and formulate the legally correct approach;
- ▶ Business and project proponents often rely on a number of intermediaries or service providers to obtain clearances from the Ministry of the Environment; the regular process is often intentionally complicated and lengthy to create business opportunity for such informal sectors, often at the cost of professionalism and the intended purpose behind

regulations to introduce and foster better quality and environmental performance;

- ▷ Existence of rent-seeking schemes from officials entrusted with review and clearance tasks, resulting in unofficial payments made to obtain environmental clearances. The quality of the documents thus often becomes secondary or even irrelevant, as approvals are only obtained through the payment of bribes.

— Practical Approach and Behavioral Factors —

TECHNICAL SKILLS

Boiled down to the bare essentials the prerequisites for effective environmental regulation appear simple enough: “So, what does it really take to establish good environmental and social management? A cadre of well-trained, properly certified professionals. It’s dedicated and competent people who make laws and regulations function, or not!”

Consequently, if environmental institutions are not functioning effectively, it might be worthwhile considering whether the following factors are driving the deficits in the system:

- ▷ Shortages of qualified staff
- ▷ Deficiencies in managerial capacity, job descriptions, budget (including salaries/per diem), career prospects and training
- ▷ Low (perceived) status/professional regard

1.1.4 Practical Approach and Behavioral Factors

- ▶ Technical deficiencies? Need for specific strengthening capacity (including for specific projects / sectors)
- ▶ Lack of exposure to, and experience with good practice and modern standards; insufficient access of local experts to international best available techniques (BAT)

“SOFT SKILLS” AND RESULTS-MINDFULNESS

Key to sound environmental management is the degree of importance that the public and its representatives assign to environmental matters. Without the political and societal consensus that environmental resources, components and services are worth preserving and protecting, the problem of proper management and care will persist and it will be very difficult, if not impossible to achieve any changes (the often futile fight against poaching of Elephant and Rhino in many African countries is a highly visible example). Once there is general awareness and support for action, program proponents must begin strategic planning and setting goals. Mechanisms and skills for interpersonal and institutional interaction and consensus building among all affected parties therefore become important elements of environmental policymaking . The common vision should be an achievable win-win outcome. The timeframe of expected benefits to precipitate for the various parties to the vision also needs to be discussed openly and transparently, as often much persuasion will be needed to convince stakeholders to give up short term gains (e.g. villagers selling Ivory to middlemen) versus a longer term sustainable perspective (e.g. tourism development).

How can I communicate that regulatory oversight can promote win-win situations?

The often futile fight against poaching of Elephant in many African countries is a highly visible example that political and societal backing is crucial.



Curt Carnemark/World Bank

Communicating a vision of an outcome that is a win-win for all to the affected stakeholders can be one of the most daunting and challenging tasks for regulators. As noted from the outset of this handbook, governments have an often conflicting role to play and need to balance policy priorities to promote and regulate investments and developments, deliver services in an efficient and effective manner, and at the same time protect public interests. More often than not, situations of FCV encourage short-term thinking, as the immediate concern is survival, or short term profit, or remaining in power. Convincing people to give up short term benefits, change established practices that cause negative impacts, or to argue against vested interests, requires very specific skills, e.g. diplomacy, intuition, behavioral psychology, persuasion, and persistence / tenacity. It also may require a good amount of courage, and taking risks affecting personal health and safety.

Environmental legislation cannot be enforced unless it is compatible with existing administrative, technical and economic capabilities, and unless its broad directions and principles are supported by leaders and decision-makers on all administrative levels, as well as by a significant majority of stakeholders. To forge such consensus between parties and interests goes well beyond the standard terms of reference of a regulator, but s/he will in many situations be faced with this demand as one of the key ingredients of regulatory work.

CONTEXT CONSIDERATION

As a regulator the recognition of the political, economic and socio-cultural context is an important factor to consider in developing and applying legislation that actually works.

Policymakers are expected to prioritize environmental measures relying on tools and mechanisms that rank environmental problems according to the risks they pose to human health and environment. In practice, however, decisions on environmental issues are not simply technical or economic, but also depend on value judgment and political and equity considerations. Often the social standing of groups affected most by environmental problems is a key factor in either accelerating, or delaying the drafting and deployment of legislation. Often only a vocal champion or prominent figure, or strong external drivers (e.g. international development organizations) can break the cycle of complacency and political disinterest in environmental problems, and it may sometimes help to search for such

Engagement with the public is crucial to the success of policymaking and shaping of legislation.

champions to unblock entrenched problems. Additionally, even sound technical knowledge leaves significant room for interpretation and subsequent political bargaining. Often tradeoffs between various conflicting interests and objectives will have to be accepted in order to produce legislation that may not reach the ideal of best practice quality, but in the end proves enforceable in practice.

CONSULTATION AND PARTICIPATION

The availability of systematic public information on the environment is a powerful tool and driver to facilitate the interaction of policy making with the general public, and shape legislation that is in the interest of the general public (as opposed to e.g. elites and lobbies).

Engagement with the public, either through key actors, or an effective alliance with the private sector, or broad based community engagement is crucial to the success of policymaking and shaping of legislation. The mandating of independent organizations to collect data, monitor, and use it to inform policy making, planning and priority setting can be a way to maneuver through opposed political interests and create a balanced platform of baseline information. Sometimes such baseline studies can be attached to externally financed projects or initiatives (e.g. an aquatic ecology study or cumulative impact assessment as part of a feasibility study for a hydropower project), providing both a financing source and a degree of independence and objectivity.

1.14 Practical Approach and Behavioral Factors

Public disclosure of information and mechanisms of public participation, as well as the unbiased assessment of, and effective management of environmental priorities are also key ingredients.

Formally engaging communities dependent on access to natural resources can also help with engendering public awareness of, and support for, environmental priorities. Communities who require access to natural resources for livelihoods are particularly vulnerable to changes in the availability and quality of these resources during and after conflict. Accordingly, they could be natural allies of environmental conservation.

FOOD FOR THOUGHT:



Caroline Suzman/World Bank

The women from communities could be particularly powerful as environmental advocates. Women, as primary providers of water, food and energy at the household and community levels, are dependent on natural resources and most vulnerable to changes in access and availability during conflict. Moreover, periods of FCV are often accompanied by shifts in gender norms as women seek to fill the economic gap left by the male members of the household who may have left to engage in the conflict. To compensate for this loss of revenue, women sometimes assume greater natural resource management roles by taking up alternative income-generating activities. Formally engaging and empowering these women in the process of shaping of policy and legislation could result in an environmental regulatory framework that better reflects the public interest. Carefully targeted support might be necessary to overcome the cultural and social boundaries to formally involving them.

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1.2 Management Approaches and Tools

1.2.1 Development of Technical Standards and Guidelines

To translate the legal and regulatory base into effective oversight, management tools are required.

Management Approaches and Tools A strong legal base, an operative institutional framework and clear process and procedures are merely the foundations of effective environmental regulation. Management tools and approaches that are sensitive to the motivations of regulated entities and the promotion of best practice are also required. This section will discuss the use of three 'tools of the trade', namely; technical standards and guidelines; the mitigation hierarchy; and incentives and deterrents.

— Development of Technical Standards and Guidelines —

Technical standards and guidelines provide detailed interpretation and clarity regarding the environmental legal landscape. If used properly, they can channel the discretion of environmental agency employees, increase efficiency, health and safety and enhance fairness by providing regulated entities, and the public more generally, a clear notice of the line between permissible and impermissible conduct while ensuring equal treatment of similarly situated parties ("level playing field").

For example, in the US, the Clean Water Act mandates the Environmental Protection Agency (EPA) to develop water quality standards and guidance that define the goals for a water body by designating its uses and establishing policies to protect water quality from pollutants. Moreover, the EPA is required to develop criteria for water quality that accurately reflect the latest scientific knowledge. These criteria must be based on data and scientific judgments on pollutant concentrations and environmental or human health effects. The EPA has also created a handbook to guide state governments through the requirements and

Technical standards and guidelines provide clarity in the implementation of regulations.

expectations that the EPA has of water quality standards. The development of standards and guidance not only provide clear instructions to the public and regulated entities regarding permissible standards, they also function to protect the health of the public and prevent water pollutants. The significance of guidelines in effective environmental regulation in FCV is captured well in the case study in [box 1](#). It outlines the example of South Sudan where, in the absence of any legislation, guidelines were the only tool available to direct regulators when overseeing the environmental performance of a road construction project.

However, the development and implementation of effective standards and guidelines can be challenging, particularly in FCV contexts. Environmental regulators have to be mindful of practicalities and limitations and adapt guidelines and standards accordingly. Using the example of water quality standards, environmental regulators may simply not have access to comprehensive national data or the scientific specialists needed to establish water quality standards. Moreover, regulated entities may not have access to reliable, let alone accredited or internationally certified laboratories to test water quality, or lack budget to meet standards. In such situations, environmental regulators may wish to pursue an outcome that isn't technically perfect but robust to circumstances. For example, in the absence comprehensive national data, environmental regulators may begin developing their own standards by reviewing water quality guidelines and standards from developed and developing countries as well as from international organizations and, subsequently, by comparing them with data available on their own water quality. They also may want

1.2.1 Development of Technical Standards and Guidelines



Arne Hoel/World Bank

When South Sudan achieved independence in 2011, laws and institutions had to be built from scratch. At the same time, the South Sudanese government was under high pressure to develop infrastructure and deliver services quickly to help the new nation recover from a protracted civil war.

The roads sector was no exception. South Sudan has only a few all-weather roads, meaning that vast tracts of a country are only accessible during the dry season. This is considered one of the most critical factors hindering development, making roads construction one of the highest national priorities. However, the Ministry of Transport Roads and Bridges (MTRB) was expected to implement large projects in the absence of institutional structures, policies or Acts of Laws including a National Environmental Policy. The only guidance available were the Ministry's Standard Specifications, which included generic provisions for design, environmental / social assessments, tendering and supervision / monitoring of the implementation of Environmental Social Management Plans (ESMPs) and general issues on proposed roads construction / maintenance. These were not comprehensive enough to ensure a minimum of good environmental and social practice, thus donors suggested that the Ministry develop detailed technical guidelines for the entire Transport Sector.

*Box 1: Case Study on Policy or Laws on
Applying Environmental Regulations in the
Absence of National Transport (Roads
Construction /
Maintenance Works)*

▽

In this context KTF workshop participant Patricia Gibril participated in the preparation of an Environmental Social and Safeguard Assessment Framework (ESSAF). The ESSAF, a specific safeguards instrument developed by the World Bank, aimed to ensure that in implementing road projects an uniform level of due diligence was exercised, harm or exacerbating social tensions avoided, and social and environmental issues treated in a consistent manner by domestic agencies and contractors, as well as Donors and the Government of Republic of South Sudan (GRoSS). The ESSAF helped the Project Management Team (PMT) under the MTRB in screening all the project components for potential environmental and social impacts, and mainstreaming environmental and social requirements into detailed design and tender documents. Such requirements included adequate mitigation, management and monitoring measures to comply with World Bank safeguard policies (seen as representative of best practice).

For example, the ESSAF forms Appendix 1 of the Project Implementation Manual (PIM) of South Sudan Rural Roads Project. It has ensured that general policies, guidelines, codes of practice and safeguard procedures are integrated into the implementation of this World Bank-financed project. It has become an integral part of bidding documents for roads construction and rehabilitation works, and environmental social management measures were included as quotable items in the bills of quantities with a minimum percentage (15% of contract value), with an additional penalty of withholding the retention payment (usually 10% of contract value). Also well performing Contractors were issued with "environmental diligence certificates" which are valuable references for bids on subsequent projects.

1.2.1 Development of Technical Standards and Guidelines

1.2.2 Mitigation hierarchy

Avoidance has the best prospects of success and is the most desirable way of reducing potential negative impacts.

to focus quality management on potential pollutants that have the highest environment / health risk or relevance under given country context and circumstances.

— **Mitigation hierarchy** — The mitigation hierarchy is a tool that guides users (e.g. legislators or regulators) towards limiting as far as possible negative environmental impacts from development projects, and is commonly applied in Environmental Impact Assessments (EIAs). Illustrated in [figure 4](#), the mitigation hierarchy or “pyramid” encourages avoidance and minimization as best practice, which is critical given high cost, complexities and the feasibility question associated with compensation and offsets.

The steps of the mitigation hierarchy are as follows:

- ▶ **AVOIDANCE:** The first step of the mitigation hierarchy comprises measures taken to avoid causing impacts from the outset, for example, placing a road outside a key species’ breeding ground, or away from sensitive receptors such as schools or hospitals. As indicated in [figure 4](#), avoidance has the best prospects of success and is the most desirable way of reducing potential negative impacts. Also it frequently is the cheapest and most effective strategy available to address the impact on sensitive receptors, biodiversity, or valued environmental components (VEC). However, it requires an analysis and assessment to be conducted in the early stages of a project, at the very least during project conception. Taking the road the example again, it could be feasible and even more cost efficient (depending on the mitigation / remediation cost) to bypass sensitive areas or even consider

1.2.2 Mitigation hierarchy

1.2.3 Incentives and deterrents

The use of offsets should normally be viewed as the option of "last resort".

optional tunnels or bridges to shorten the alignment and avoid impacts. In order for this to be a realistic option, environmental regulators have to be involved in the project from the earliest stages.

- ▷ **MINIMIZATION:** Measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided. Examples include measures such as reducing noise and pollution by engineered barriers, or building wildlife crossings on roads. However, similar to avoidance, in order for minimization to be an option, measures should be built into the project and its financing from the very early stages.
- ▷ **RECTIFY:** Measures taken to improve degraded or destroyed ecosystems or environmental assets following exposure to impacts that cannot be completely avoided or minimized. Restoration tries to return an area to the original ecosystem that occurred before impacts, whereas rehabilitation only aims to restore basic ecological functions and/or ecosystem services (e.g. through planting trees to stabilize bare soil).
- ▷ **COMPENSATE/OFFSET:** Measures taken to compensate for any residual, adverse impacts after full implementation of the previous three steps of the mitigation hierarchy. These measures usually are applied to a location other than the area of impact / influence, with the philosophy that degrading one area can be compensated by upgrading the ecological value of another (e.g. the destruction of natural growth forest could be compensated by improving management of, or expanding a protected area, or reforesting degraded land). The use of offsets should however be viewed as a 'last resort.'

In practice regulation relies on a double motivation of “sticks” and “carrots”.

— **Incentives and deterrents** — The willingness of an entity to comply with environmental regulations can vary widely. Thus effective environmental management approaches demand a combination of incentives and deterrents which are sensitive to the interests and motivations of the regulated entity and effectively result in a win-win situation whereby both the regulated entity and the environment stand to benefit.

The deterrents or “sticks” usually entail mandatory requirements that are established under the legal infrastructure and allow environmental regulators to enforce compliance through, for example, revoking a license, fines or (criminal) prosecution.

Positive incentives or “carrots” include voluntary approaches which encourage and assist change through such means as education, technical assistance, and economic incentives. Examples of voluntary approaches include:



Public education



Awards



Subsidies



Technical assistance



Tax incentives

1.2.3 Incentives and deterrents

Market-based regulatory approaches can be highly effective, but require a high level of sophistication on the regulator's side.

Moreover, economic/market-based approaches use market forces which include both incentives and deterrents to achieve desired behavior changes. Economic approaches generally involve a combination of marketing advantages and financial incentives, and of legal / regulatory requirements. Examples include:

- ▷ Fees for waste generation and disposal (solid, atmospheric emissions and effluents) which—when avoided—yield savings
- ▷ Tax incentives for good environmental performance
- ▷ Subsidies, e.g. for innovative technologies helping to reduce environmental impacts and natural resource consumption
- ▷ Marketable / tradable permits, e.g. for emission reductions of CO₂ and other pollutants
- ▷ Emission offsets, i.e. a reduction in emissions of pollutants made in order to compensate for or to offset an emission made elsewhere.

At the “high end” of economic/market-based approaches is carbon trading. The carbon trade refers to the ability of individual companies to trade polluting rights through a regulatory system known as cap and trade. Companies that pollute less can sell their unused pollution rights to companies that pollute above regulated amounts. The goal is to ensure that companies in the aggregate do not exceed an agreed baseline level of pollution and to provide a financial incentive for companies to pollute less. An example of tradable permits is the sulfur dioxide (SO₂) trading program implemented in the U.S. under the 1990 Amendments to the Clean Air Act. This program allows coal-burning utilities and other industries to reduce their SO₂ emissions by buying and selling

FOOD FOR THOUGHT:



John Hogg/World Bank

To be successful, economic/market based approaches require that regulated entities have the means and technical knowledge to introduce and maintain the correct technology to reduce their environmental impact. New technology requires significant up-front investment for installation and ongoing financial support for running and upkeep. Moreover, regulated entities should already have knowledge of the required technology or be in the position to hire a technical expert to ensure the correct technology is installed and maintained properly. Accordingly, environmental regulators should carefully consider the capacity and financial position of the regulated entities when weighing up whether to introduce economic/market based approaches.

In this context a level playing field for all producers of a particular pollutant (e.g. SO₂, referring to the above given example) is extremely important, as inconsistent enforcement, that leaves loopholes or tolerates exceptions, could have the perverse effect of creating economic disadvantages for compliant businesses.

1.2.3 Incentives and deterrents

“allowances.” An allowance is the right to emit one ton of sulfur dioxide. The trading program allows companies that can cost effectively reduce their emissions lower than required levels to sell allowances to companies that have difficulty reaching the required limits. In most cases, buyers are required to “retire” or remove from the market a certain percentage of the allowances they buy. Removing allowances from the market pushes their cost up thereby encouraging companies to reduce their SO₂ emissions by technical means, rather than purchase allowances. Other parties, such as e.g. environmental groups also can purchase allowances and “retire” them to influence the cost of allowances, and thus overall emissions.

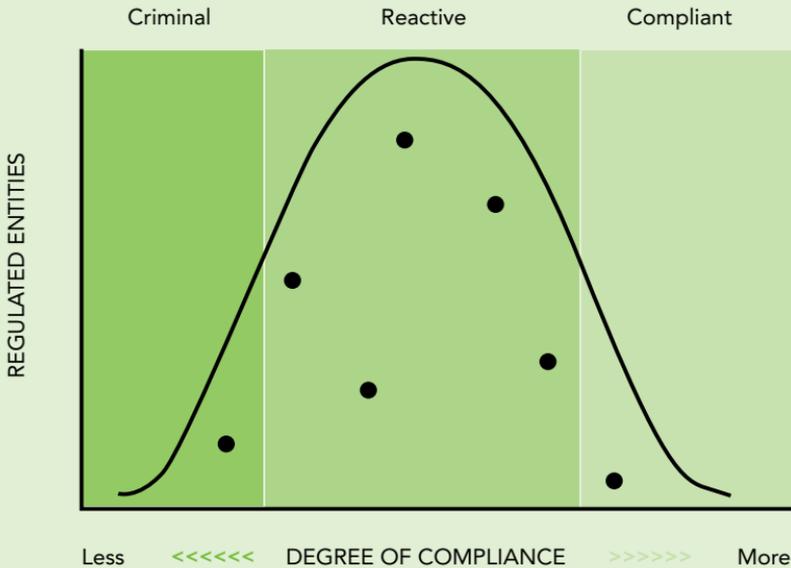
Pollution taxes are another example of an economic/market based approach. Taxes incentivize pollution reduction because it increases the cost of producing pollution and therefore companies have a financial interest in eliminating it.

When considering the combination of incentives and deterrents required for compliance, environmental regulators must take into account the specific motivation and behavior of regulated entities. To this end, it might be useful to think about the “willingness” of a regulated entity to comply as falling into a classical bell curve, as illustrated in [figure 5](#). The vertical axis indicates the relative number of regulated entities and the horizontal axis indicates the degree of compliance. The bell curve can be roughly roughly divided into three groups namely: the “Criminal Group”— the group to the far left or those most resistant to comply; the “Compliant Group”— the group on the far right which will comply with the least legal / regulatory pressure; and the “Reactive Group”— usually the

When considering the combination of incentives and deterrents required for compliance, environmental

regulators must take into account the specific motivation and behavior of regulated entities.

Figure 5: The compliance bell curve
▽



largest group in the center, which will comply based on a combination of regulatory pressure and peer behavior, adjusting their business model to the path of least resistance and always alert to what is happening to the rest of their sector.

The "criminal group" or the group most resistant to compliance will comply only if forced to do so by determined legal and regulatory action, such as fines and criminal prosecution. This group often operates in a range of marginal profitability (though not always) and is motivated by a corporate culture that is indifferent to, or does not respect the environment or the government's right to regulate them. Lack of sufficient financial capital is often a factor, but also the

1.2.3 Incentives and deterrents

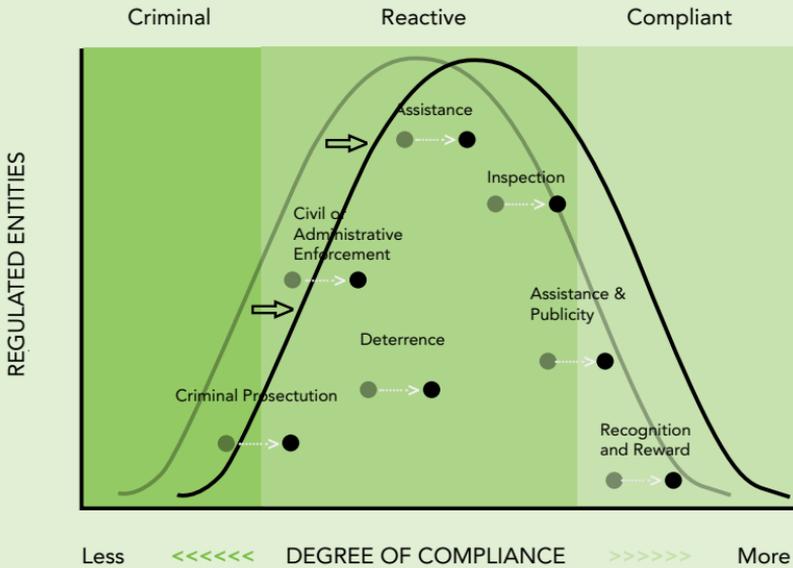
“criminal” firm might be actively subverting regulations in order to profiteer.

For example, in Germany, in the years after the fall of the Berlin Wall, private companies took over many hitherto public services, such as waste collection and disposal. However, in the first years of the “Wild East”, under an often unclear legal situation and gaps in regulatory oversight and enforcement, profiteering companies would dispose of waste at lowest cost possible. This led to a surge in dumping waste (sometimes hazardous) in unsuitable areas, often causing considerable environmental damage and hazards, or to the “export” of hazardous waste to neighboring Poland, where it is usually also dumped without considerations for good practice. For this “criminal group” enforcement action against each individual facility or company in this group may be needed.

The middle group is the reactive group. This group is “on the fence” and will react according to the mainstream happening around them. Factors they may consider include:

- ▶ What the rest of the companies in their sector are doing?
- ▶ Is the government enforcing the requirement?
- ▶ Are the penalties or punitive actions meaningful (= painful enough)?
- ▶ Is the government providing incentives, support or assistance?
- ▶ Has the government leveled the playing field or are some companies/sectors being regulated more than others?

Figure 6: *Shifting the compliance bell curve*



The shape of the curve (amplitude and width) will vary depending on the nature of the regulation and the sector, and will change over time based on the activities and determination of the regulator. The shape of the curve will also vary depending on the rules itself. Compliance will be much higher in the case of clear rules that are simple to understand and apply, while complex rules that are poorly written, costly to implement and difficult to enforce may have very low rates of compliance.

As illustrated in [Figure 6](#), if regulators are able to increase compliance amongst regulated entities, the entire bell curve will shift to the left. To achieve this movement toward compliance,

environmental regulators may deploy a range of different approaches for different categories of individuals under the curve as discussed below.

- ▷ **CRIMINAL TO REACTIVE:** Actions that involve strong deterrence including criminal sanctions, such as large fines, jail time or closing the facility are appropriate where people refuse to obey the law or intentionally find ways to mislead regulators and hide their wrongdoings. Civil or administrative enforcement is appropriate for less extreme violations. In some cases increased inspections may change behavior by alerting people to the problem they cause and have, as well as the potential consequences / liabilities for their businesses as well as them personally, and may avoid having to enter into more forceful types of enforcement response.

- ▷ **REACTIVE TO COMPLIANT:** On the low end of this category the same deterrent techniques may have to be applied as for the criminal group. Alternatively on the more compliant end, actions that involve incentives may be more appropriate. These include cases where environmental regulators may provide assistance to help someone comply by explaining the rules, and providing advice or additional resources to help them comply. Additionally, publicizing the good actors can help others understand how to comply and can provide motivation and good publicity for those doing the right thing. Finally, for the really good guys that are going beyond their minimal responsibilities, tax incentives, or a prize or recognition is appropriate to award the good behavior and motivate others to achieve the same objective.

- ▶ **NON-REGULATORY DRIVERS:** Compliance can also be driven by non-regulatory factors, such as international standards and cost-saving measures. Nini Flower Farm in Naivasha, Kenya is an excellent example of a regulated entity where compliance is driven partly by Kenyan environmental laws and standards, but also by a number of important external factors and positive incentives: energy conservation, water recycling and reuse of organic waste as substrate to grow flowers on are all important cost reduction factors, besides their positive environmental effects, thus compliance actually created a clear win-win situation. Other factors are the standards of the EU (a key export market) for flower certification, governing e.g. the use of pesticides, labor conditions, water and biodiversity protection and other environmental and social sustainability criteria.

However, the motivations of regulated entities are not always immediately obvious and thus it is not always clear what combination incentives and deterrence would best ensure compliance. Kenya's NEMA has addressed this issue by using surveys to assess awareness of regulations and standards amongst regulated entities in different sectors. For example, NEMA did a survey of water protection compliance and awareness in Kiambu and discovered awareness was high but compliance low. These results impacted on the compliance and enforcement approach as clearly education and awareness was not the issue and other means of enforcing or incentivizing compliance needed to be employed. Conversely, a similar survey of waste management entities found that 50% of waste recyclers were not aware of the regulations and compliance was low. Thus in this case a wider dissemination of legislation and regulations governing the management of wastewater and waste has been carried out.

— Practical Approach —

- ▷ **TECHNICAL SKILLS:** All management tools and approaches discussed in this section necessitate co-operation with specialists. Scientists and Engineers are required to define, establish and monitor technical standards and contribute to realistic strategies when pursuing each stage of the mitigation hierarchy. The skills and knowledge of economists and lawyers are important for the development of economic/market based approaches to compliance. All of this has been vividly demonstrated by the case example from Mali presented further below.
- ▷ **SOFT SKILLS:** Specialists and environmental regulators may not fully appreciate each other's objectives and constraints. It's therefore vitally important to invest additional energy into teambuilding and open and consistent communication to ensure a desirable and relevant outcome.
- ▷ **RESULT MINDFULNESS:** In order to effectively apply these management tools and get to win-win, environmental regulators should be deft in diplomacy and emotional intelligence. Even if there are advantages to the regulated entity in complying, they may not recognize the benefits immediately or seek to better their end of the bargain. Therefore, to get to win-win, environmental regulators must have an excellent overall and long term visions, be able to maneuver through human interactions effectively or, in other words, utilize their emotional intelligence. For example, environmental regulators may need to convince regulated entities of the advantages of avoidance strategies

both in terms of cost and effectiveness. When using incentives and deterrents, the proficient environmental regulator should have the skills and the know-how to negotiate the right amount of give and take required to achieve compliance in a given regulated entity. Characteristics of emotional intelligence include: self-awareness, emotion management, self-motivation, recognizing emotions in others, empathy, and managing relationships. By underpinning a systematic approach to negotiation with emotional intelligence, it's more likely that a regulated entity will undertake actions that protect the environment.

- **CONSULTATION AND PARTICIPATION:** Public consultation is required in the development of technical standards and guidelines as it not only enhances transparency but also encourages the 'buy in' of the public and regulated entities and helps ensure that the guidelines produced are easy to understand and effective. Public consultation mechanisms should be undertaken through a range of mechanisms, such as through an advisory council, ad hoc consultations or internet based social media, to inform governmental decision-making. Close consultation with affected communities is also necessary when pursuing the steps in the mitigation hierarchy. For example, an avoidance strategy such as placing a road outside a key species' breeding ground may result in the road cutting in too close to (or through) a nearby village. Thus, conflict management, a resettlement action plan and consultation and engagement (public to public) redress will need to be considered and acted upon.

1.2.4 Practical Approach

In the case of regulation of specific industrial sectors or for specific pollutants, the consulted stakeholders must include the “perpetrators” to understand the technical, economic, financial, market-related parameters of their businesses and find approaches that are realistic both in the scope and timing of the regulatory approaches.

USEFUL LINKS:

Emissions trading: <http://einstitute.worldbank.org/ei/course/emissions-trading-schemes-using-markets-promote-low-emissions-development>





One example of an international certification program with both a far reach into producer networks in developing economies, as well as high consumer penetration in mature economies, is the Fair Trade (FT) certificate (see www.fairtrade.net).

Fair Trade is an alternative approach to conventional trade based on a partnership between producers and traders, businesses and consumers. The international Fairtrade system —made up of Fairtrade International and its member organizations —represents the world’s largest and most recognized fair trade system. The idea behind it is to create a certification instrument which enables consumers to consume more responsibly, by ensuring that their buying power translates into tangible quality standards on the producer’s end, which are also adequately remunerated by higher commodity prices for certified produce.

Incentivized by higher revenue, producers must nevertheless adhere to a number of quality standards that include —as high priority criteria —the environmental and social conditions under which a commodity is produced and brought to market. The environmental objectives of Fair Trade are quoted from their webpage as follows: “Fairtrade rewards and encourages farming and production practices that are environmentally sustainable. Producers are also encouraged to strive toward organic certification. Producers must: (i) Protect the environment in which they work and live. This includes areas of natural water, virgin forest and other important land areas and dealing with

problems of erosion and waste management. (ii) Develop, implement and monitor an operations plan on their farming and techniques. This needs to reflect a balance between protecting the environment and good business results. (iii) Follow national and international standards for the handling of chemicals. There is a list of chemicals which they must not use. (iv) Not, intentionally, use products which include genetically modified organisms (GMO). (v) Work out and monitor what effect their activities are having on the environment. Then they must make a plan of how they can lessen the impacts and keep checking that this plan is carried out.”

Fairtrade stringently audits its members using specially trained inspectors and certifiers, who carry out on site audits (both for initial certification and later for continuous quality control) for every Fair Trade member producer, regardless of type and size of the operation.

For environmental regulators, cooperating with an organization such as FT might be highly synergetic in several ways: the auditors could help with technical advice, equipment, and budget; the entities audited by FT would be considered compliant by regulators, thus freeing resources for other, more problematic sectors; joint workshops, trainings and field visits could be organized to exchange knowledge, build capacity in a highly practical manner, discuss standards, and share cutting edge knowledge from international good practice. In exchange FT auditors could gain much by access to local information from experienced regulators. This would result in a win-win situation for both the FT organization and the domestic regulatory system.



Melody Lee/World Bank

In addition to FT, personnel working in environmental NGOs often carry significant expertise in relation to the implementation of environmental laws. NGOs may function in helpful cooperation with governmental authorities in the role of unofficial or deputy inspectors, monitors or watchdogs for environmental non-compliance. These functions may include mapping biological resources, observation of pollution sources and pathways, and sampling polluted media, recording the harvesting of natural resources and, in particular, illegal mining, logging, hunting and fishing.

CASE STUDY:

ENSURING COMPLIANCE AMONGST CRAFT DYERS IN MALI

Mali is known in the West African sub-region for the quality of its dyed fabrics (called “bazin”) which are very popular. This activity is a major source of revenue for many Malian women, but at the same time is a highly polluting activity.

Craft dyers have proliferated throughout the larger cities; in the dying process chemicals such as caustic soda (NaOH) and pigments containing a range of heavy metals are used. Process-related effluents and liquid residues are discharged untreated into streets, gutters and collectors. Some dyers’ workshops are located directly at river banks (e.g. of Niger River) and effluents and wastewater discharged directly into the river. An additional problem with this direct discharge is the effluents’ high temperature, which adds to the environmental hazards posed by caustic and toxic contents.

Negative impacts on rivers were felt in various ways, including change of color, bad odors, and mass poisoning of fish and other aquatic life. The City of Bamako, notably, is supplied with drinking water from the River Niger.

Faced with this problem, the Malian Ministry of Environment, through its pollution control agency, conducted an extensive awareness campaign for all users of the river water (dyers, fishermen, gardeners) to alert all stakeholders on the negative impacts environment and human health of their respective activities.

In an effort to follow up with concrete measures, the technical and financial assistance of donors and NGOs was sought to establish a better organized and thus regulated sector: larger scale dyeing centers

Case Study 1:
*Ensuring Compliance
amongst Craft Dyers
in Mali* ▾

catering to a large number of dyers were constructed, that could — due to their scale — be equipped with wastewater treatment plants while still operating economically.

In this case both an awareness campaign and technical assistance for better environmental performance / compliance created the foundations to make regulations on pollution management enforceable, and allow a large number of entrepreneurs to achieve compliance without too much regulatory deterrence.



Curt Carnemark/World Bank



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Chapter 2

Applying frameworks, mechanisms and tools for achieving effective regulatory compliance



Nugroho Nurdikiawan Sunjoyo/World Bank





Kubat Sydykov/World Bank



Simone D. McCourtie/World Bank



Gerhard Jöran/World Bank

2.1 Environmental Regulatory Frameworks

2.1.1 Processes, instruments and documentation

Environmental regulators need effective tools, both for oversight and enforcement downward, and communication and feedback upward.

Environmental Regulatory Frameworks — Processes, instruments and documentation — Environmental regulators need to have access to the right tools in order to be empowered to regulate effectively and provide feedback to policy makers on the strengths and shortcomings of a given existing environmental framework. Ultimately, the success and usefulness of the management approaches and legislation discussed in the preceding sections depends largely on their clarity, accessibility, and user-friendliness. The better the knowledge of regulations and guidelines, the better the regulator can identify, describe and communicate situations of non-compliance. It is therefore imperative that well defined processes — in particular the ESIA process — and the resulting reports, such as management plans and compliance frameworks, including guidance, templates, examples and required auxiliary documentation are complete, up to date, well structured, and easy to get to (either on paper or via www).

There also needs to be a formalized and effective process that allows environmental regulators “at the coalface” to feedback problems with, or gaps in, legislation and management approaches to policy-making colleagues. Such a formalized process allows for the “shapers” and the “implementers” to work together to create a regulatory framework that is ‘best fit’ for the context.

Moreover in order to keep standards consistent, particularly when conducting EIA, it’s important to have a system to track and make widely available regulatory activity. Such a system requires careful documentation of ESIA’s, a well-structured methodology and clear

Well-functioning regulatory systems need a feedback process from enforcement into legislative, and judicial functions.

criteria for reviewing and approving documents, and an accessible, preferably electronic database. Without such a system, regulators run the risk that processes such as the ESIA might be executed to, and reviewed by widely varying standards, as field based staff are unable to get a sense of what the appropriate benchmark might be based on clear guidance, or the “case law” of previous approvals of environmental due diligence documentation. Moreover, careful tracking, documentation and accessible archiving, enhances the transparency of ESIA’s, thus reducing the chances for rent-seeking, or the likelihood of interference from elites or lobbies.

The same principle applies to all monitoring efforts and activities carried out as a result of an agreed environmental management process. Ensuring effective monitoring is an integral part of achieving compliance with environmental standards, and data on setting up monitoring programs, choosing analytical parameters (that are meaningful and can realistically be analyzed in-country), the monitoring frequency, methodology, responsibility and — very importantly — cost, can be very valuable for the regulator’s work. In developed systems, analytical and monitoring programs for site investigation, risk assessment, remediation planning and supervision, and for post-remediation verification purposes are generally codified and described in great technical detail.

2.1.1 Processes, instruments and documentation

CASE STUDY: **STUDY ON IMPROVEMENT AND EFFICIENCY IN** **EIA IMPLEMENTATION**

In 1999, all ESIA field reports in Nigeria were done by hand and filed as hard copies. Moreover, due to a lack of functioning photocopiers in the EPA's premises the field reports had to be copied at an external copying center. There was neither place nor system to store the draft and final EIA reports in an organized and accessible manner, and as captured in the photo, reports gradually accumulated in large disorganized stacks that were largely unsearchable, inaccessible and made it almost impossible to keep track of any given project through its history.

In 2011, as part of the World Bank project "Nigeria Electricity Gas Improvement Project (NEGIP)" the Environmental Assessment Department received capacity building, monitoring equipment, vehicles, an electric generator, fiber-optic internet facilities, computers and a dedicated website. Additionally, an overhaul of the management and storage of existing EIA was initiated.

KTF workshop participant Aliyu oversaw the process of organizing the EIA reports. The starting point was setting up a system for cataloging the hard copies of the EIA reports, followed by the establishment of an Electronic Data Management System to enhance (or — in many cases — establish) the accessibility of the reports. This involved the conversion of 1,700 hard copies of final EIA reports to electronic versions. Finally, whereas before regulators would have to travel to Abuja to initiate the first stage of the EIA process, Aliyu and his team designed and developed a website with a portal which enabled the first stage to be initiated and filed online.

Case Study 2: *Study
On Improvement
And Efficiency In Eia
Implementation* ▽



Furthermore, the EA Department using Multiple Development Services, an environmental consultancy firm, and with the support of Emerging Markets Telecommunication Services, developed a web-enabled portal for archiving approved EIA reports, starting with the telecommunication sector. Thus, it was possible to access and assess these reports without relevant officials having to carry hardcopy versions.

2.1.2 Oversight and reporting arrangements

— **Oversight and reporting arrangements** — As a general principle of environmental and social management under good practice conditions, environmental and social (E&S) factors must be integrated into licenses issued for activities that might affect the environment. This includes the clear definition of processes and allocation of responsibilities for producing, reviewing, approving the E&S instruments; advisory / consultative arrangements for issuing licenses (e.g. construction license, operation permit); and the integration of E&S considerations into a larger approval process (for example, a construction license may cover anything from technical design, to fire safety, energy efficiency and number of toilets required, and inter alia include E&S management and performance requirements).

In practical terms, however, environmental regulators often have very limited leverage when it comes to ensuring that E&S factors are addressed. Regulators may well be sidelined or overruled by other departments, particularly when E&S factors are perceived to be blocking or inhibiting economic interests. For example, the department or ministry that is responsible for mining will often be in control of giving a license to a mining company rather than the environmental regulators. Thus, as illustrated in Case Study 3, E&S issues are often best addressed through smart negotiation and consensus-building, as was done when the Nigerian National Environmental Standards and Regulations Enforcement Agency (NESREA) conflicted with the standards of the Nigerian Communications Commissions.

Case Study 3:
*Resolving
Institutional Conflicts
For Sustainable
Development*



Arne Hoel/World Bank

CASE STUDY:

RESOLVING INSTITUTIONAL CONFLICTS FOR SUSTAINABLE DEVELOPMENT: *Setting Appropriate Standards for the Installation of Telecommunication Towers In Nigeria*

Conflicts among entities that are entrusted with the implementation of environmental and social laws are particularly tricky and not amenable to easy resolution in FCS.

The Nigerian Communications Commission (NCC) is an independent National Regulatory Authority for the telecommunications industry in Nigeria responsible for creation of an enabling environment for competition among operators in the industry as well as ensuring the provision of efficient telecommunications services throughout the country. The National Environmental Standards and Regulations Enforcement Agency (NESREA) is a body mandated to enforce compliance with the environmental legislations and prohibit processes and / or technologies that negatively impact the environmental quality in Nigeria.

2.1.2 Oversight and reporting arrangements

In order to effectively fulfill their constitutional mandates, both NCC and NESREA have developed guidelines and standards for the industries operating within the areas of their jurisdictions. Particularly, in accordance with NCC guidelines telecommunication service providers are expected to maintain a minimum of five meters (5m) setback/distance from the telecommunication tower (BTS) to the nearest habitable building. In contrast, NESREA guidelines state that all telecommunication towers should be located at a minimum distance of ten meters (10m) from the nearest habitable building.

The differences between NCC and NESREA had affected the activities of the Department of Environmental Assessment of the Federal Ministry of Environment which is charged with the responsibility of implementing Environmental Impacts Assessment (EIA) in Nigeria. Being in charge of evaluation, analysis and certification of EIAs in all sectors in Nigeria, evaluation and certification of EIAs for planned telecommunication masts (BTS) became a difficult task for the department due the technical discrepancy between NCC and NESREA standards.

Subsequently, the Environmental Assessment Department initiated an action to resolve the conflict for sustainable development. A five (5) member committee was set up to address the conflict involving the Permanent Secretary, Federal Ministry of Communication Technology; Permanent Secretary, Federal Ministry of Environment; The Executive Vice Chairman, NCC; The Director General, NESREA and, the Director, Environmental Assessment Department. The committee had series of meetings for a period of about six (6) months evaluating all technical issues relating to the minimum distance for BTS from inhabited structures.

Case Study 3:
*Resolving
Institutional Conflicts
For Sustainable
Development*



At the end of the committee's meetings; a distance of ten (10) meters was adopted for telecommunication towers in Nigeria to the nearest habitable building. However; the committee agreed that all the existing telecommunication towers across the country that have maintained five (5) meters setback should not be penalized for violating the law by NESREA. This amicable resolution of conflict has significantly accelerated the EIA process for telecommunication industry in Nigeria, which will in turn fast track telecommunication coverage in Nigeria, so direly needed for sustainable development.

In conclusion, the amicable resolution of conflicts between various government Ministries, Departments and Agencies (MDAs) has the potential to bring about harmonious working relationships that benefit sustainable development of any nation. This experience therefore advocates that whenever there is conflict between executive agencies due to differing standards of guidelines, the most recommendable way of addressing it is through dialogue, collaboration and consensus, keeping a balance between the expected risks and benefits of a given measure with the cost of compliance for a particular sector (this e.g. prevented NESREA from insisting on retrofitting all towers built in the past with a lesser distance than 10 m).

— **Practical approach** — The following practical skills and behavioral aspects are relevant in making environmental regulatory oversight work more effectively in FCV affected situations:

- ▶ **TECHNICAL SKILLS:** In order to be effective, environmental regulators require access to an extensive enforcement arsenal including standards, codified compliance criteria, fees, fines and strong linkages to penal codes. Moreover, a sound knowledge of the typical technologies and methods in a given sector, e.g. pollution management, energy and resource conservation, land management or biodiversity protection greatly enhances the regulator's credibility in the dialogue with the regulated entities, facilitates finding workable solutions and reasonable compromise, and increases the likelihood that regulatory action will in fact improve environmental conditions and / or performance.

- ▶ **SOFT SKILLS:** Include the capacity to convince others of the importance of E&S concepts, such as sustainability; ability to work with many different parties to ensure E&S is integrated on all the different levels it should be. In this context cooperation with the police is critical, as persuasion may not always work and have to be replaced with higher enforcement pressure. It is important that at least a select group of law enforcers have an understanding of environmental law and management approaches, and here the regulator's skills in communication concepts, and managing executive approaches will be very important.

- ▶ **RESULTS MINDFULNESS:** –sometimes it is really hard to win everything – choose your battles carefully. Let go of the small things. But be careful though, as small concessions may create precedence for bigger concessions...
- ▶ **CONTEXT CONSIDERATION:** Fragile and conflict affected environments require sensitive and flexible approaches when it comes to regulatory enforcement. For example, Burkina Faso shares long and porous borders with Mali and Niger. The region is under severe security threats from several armed groups, and environmental regulators thus need to develop tailored, flexible approaches for their enforcement objectives in this area.

The approach used includes close cooperation with the local authorities to map the most hazardous areas (which are of course quite dynamic), and to establish geographical “red zones” where active conflict makes it too dangerous to monitor and enforce in person. The regulators then “set up shop” in the nearest safe village to the red zones and collect information using proxy methods such as phone conversations, text messaging and monitoring agents. For one project, a private security team was contracted who worked with local authorities to assess the security situation ahead of visits. Additional options to consider pursuing include:

- Targeted, often abbreviated supervision & enforcement, focusing on selected key issues;
- Use of local capacity, as locals often can move in areas under threat less conspicuously and thus safer;

2.1.3 Practical approach

- Use of NGOs and CSOs that may be already present and operating in insecure areas;
- Employment of local community members, which in some situations may be under lesser threats than Government officials;
- Flexible / opportunistic Supervision & Enforcement
- Supervision / monitoring by remote sensing techniques, possibly as simple as Google Earth, or using aerial or satellite imagery; cooperation with military operations may be useful to get information from regular flyovers; the use of commercial (= non-military) unmanned aircraft has much advanced and may be an option worth considering.
- No supervision & enforcement, e.g. if the risk and effort is disproportionate to the expected environmental benefits from the regulatory activity. For a decision not to enforce the maximum effective environmental risk from a particular project or operation should also be considered.
- Self-reporting by proponents, and community monitoring and reporting

▷ **CONSULTATION AND PARTICIPATION:** Especially in FCV situations obtaining and sharing information can be a critical factor in several ways, which underscores the importance of transparency, consultations and disclosure. The following thoughts are put forth for consideration:

- Local populations may actually profit from, and thus have a strong interest in regulatory enforcement, especially in sectors with high potential environmental impacts, high

pollution potential, or high demand for land (e.g. extractive industries, large scale agriculture, harvesting of nature resources, such as logging). Their perception of the regulator as their ally and protector from environmental harm can —if regulatory enforcement is executed in an unbiased, fair and diligent manner —often ensure their cooperation and participation.

- Inclusive consultations may improve the security situation by making the local populations more inclined to provide vital, security-related information to regulators, and help regulators become part of the local fabric, rather than complying with insurgent or terrorist groups.
- Properly informed and consulted local populations may be more inclined to facilitate the regulator’s work by acting as proxies, monitoring agents and information collectors. Given the high penetration of mobile networks and phone use, crowd-sourcing techniques (such as e.g. the Ushahidi Platform) could be applied on a broader scale with a cooperative population.
- Consultations may also be an important contributor to better understanding the drivers and dynamics of an armed conflict such as an insurgency, rebellion or ideologically motivated terrorism, on a local level. This would not only be an important factor to better understand the overall security situation, but also anticipate if regulatory intervention could have any effect, and if so if rather net mitigating or aggravating.

USEFUL LINKS:

Valuable information that is of high detail and often real time can be found at the following, web-based global data platforms:

Global Forest Watch: <http://www.globalforestwatch.org/>

Protected Planet: <http://www.protectedplanet.net/>

The Land Matrix: <http://www.landmatrix.org/en/>

Flexicadastre: <http://www.spatialdimension.com/Map-Portals>

Global Earth Observation System of Systems (GEOSS):

<http://www.earthobservations.org>

Geo-Wikki Platform: <http://www.geo-wiki.org/>

IBAT for Business: <https://www.ibatforbusiness.org/>

Climate explorer: <http://toolkit.climate.gov/climate-explorer>

Climate resilience toolkit: <http://toolkit.climate.gov/tools>

Climate change media watch: <http://www.ecoresearch.net/climate/>

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2.2 Management Approaches and Tools

2.2.1 Project-related solutions

Management Approaches and Tools — Project-related solutions — Often, projects demand regulatory solutions tailored to the nature and / or the limitations of the specific project. When considering project-related solutions, both constraints and opportunities should be taken into account. Sometimes a best fit for purpose solution will have to be modified in the face of cost limitations — an issue that will be discussed in greater detail in the section “Scope of Remedies” below. Additionally there are times when aggregate solutions, or the strategic combination of a number of project-related solutions, are a more effective way to address environmental and social impacts.

Consider the following example of a pragmatic compromise reached specifically for a specific project, the Olkaria Geothermal field in Hell’s Gate National Park, Naivasha, Kenya. For this project of national importance, some of Kenya’s regulations on biodiversity conservation and habitat protection were partially and locally disabled.

Hell’s Gate near Naivasha is a unique landscape and an important biodiversity area for mammals and especially birds. It has several scenic spots that are well known attractions, sought out by local and international tourists. It also offers several unique landscape features (see [figure 7](#)), e.g. steep and high cliffs that offer refuge and niches for rare and endangered species.

However, Hell’s Gate also lies above a geothermal anomaly, with a very steep temperature gradient, evident through numerous naturally occurring hot springs and steam vents. The geothermal

Well-functioning regulation cannot be blind to project realities, but needs to consider ground

realities and employ creative, adaptive, sometimes unconventional regulatory approaches.

Figure 7: KTF workshop participants exploring the unique landscape features of Hell's Gate National Park ▽



power production potential is of a significant dimension for the country and production cost is comparatively low. Current installed capacity is ca. 500 MW, and mid-term plans aim to add another 1,000 MW, with the full development potential well over 5,000 MW. Moreover, geothermal energy is renewable, non-polluting and carbon-neutral, thus also from the environmental point of view a desirable energy source. However, there are also a number of negative environmental impacts associated with geothermal power production, which are exacerbated by the location in a national park (see figure 8). Roads and pipelines fragment habitats and often cause secondary impacts, such as land degradation and erosion. Noise and odors (especially H₂S) from steam vents affect wildlife, and the impact on the landscape has been significant and has led to effects on tourism.

With all the best intentions laid down on paper — proportionate and smart enforcement is key to balancing economic and ecological outcomes.

To reconcile the conflicting interests around Hell’s Gate National Park, conservation aspects on the one hand, national economic interests on the other, a MOU was developed between two national agencies, the Kenya Wildlife Service (KWS) as conservation agency, and KENGEN as developer and operator of geothermal power plants. The MOU seeks to ensure that the exploitation of geothermal power in the park is accomplished with minimal environmental disruption and damage, but — while well conceptualized — lacks clout and determination in its enforcement. With better enforcement tools and more leverage from the conservation angle the MOU could actually have become an effective management instrument, that would have pushed KENGEN to rise above “business as usual”. An enforcement-biased MOU would have helped KENGEN — with regulatory pressure — to develop awareness towards the specific environmental sensitivities in Hell’s Gate, and respond to them with innovative, adaptive technologies, practices and management approaches.

While the MOU has not been very well implemented it nevertheless offers an interesting and innovative way of dealing with the nexus of biodiversity and energy production. While issuing such MOUs to delineate exceptional circumstances is not the usual practice for Kenya’s environmental authorities (such as KWS and NEMA), it was considered appropriate given the importance of both positions in the competing interests of KWS and KENGEN for sustainable development in Kenya. The MOU clearly needed a more precise plan for implementation, including clearer ground rules for KENGEN’s operations, higher awareness of staff, a more stringent compliance framework (with monitorable compliance criteria,

Figure 8: *Brine pond with significant erosional damage, affecting both the structural stability*

and the adjacent vegetated slope: A telltale sign of poor environmental management. ▽

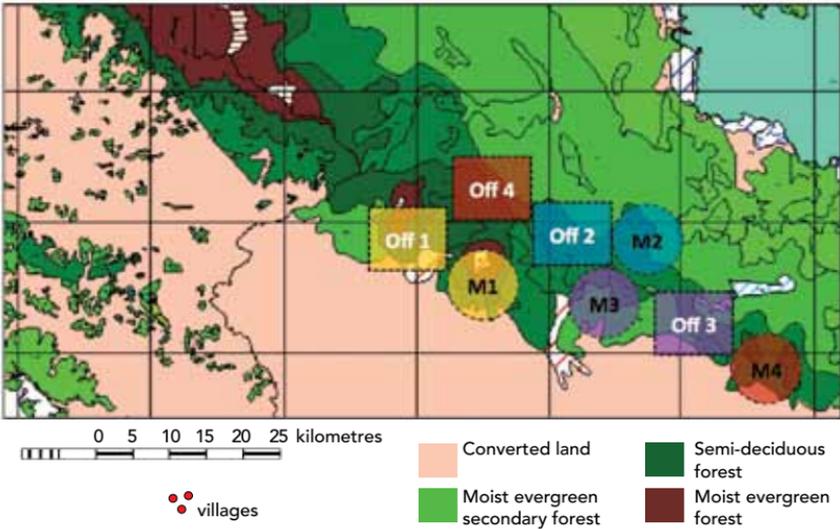


and meaningful fines / penalties for noncompliance, especially by Contractors), and overall management including budget and high level support and advocacy from within KENGEN. Had these implementation-oriented mechanisms been built into the MOU it would likely have better performed as a project-related solution appropriate for the situation.

In other cases, environmental regulators should be cognizant of situations where it is more strategic to combine a number of different, project-specific related solutions to achieve higher impact by unlocking synergies. For example, it might make more sense to pursue larger, aggregate offsets for several similar projects, instead of isolated, project-specific biodiversity offsets.

Figure 9:
Un-coordinated offsets
from four different
mine operators: ▽

Individual offsets for four mine sites



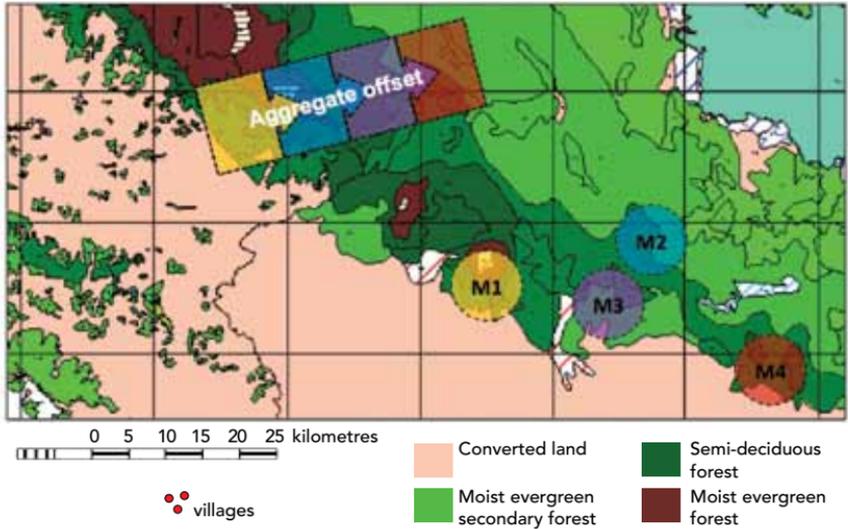
As discussed in an earlier section, the principles of environmental mitigation, including biodiversity offsets, promote to achieve zero net loss (and preferably a net gain) of environmental performance of quality.

However, offsets, particularly project-specific offsets, are often challenging, and do not yield optimal results, for the following reasons:

- ▶ Companies often lack knowledge, experience and resources to achieve effective offsets, despite often high transaction costs of such measures;

Figure 10: *Scheme for aggregated offsets by coordinating the efforts and resources of 4 individual mine operators. The offset area will be significantly larger and can be identified in line with national conservation priorities. ▽*

Aggregate offset for four mine sites



- ▷ Finding offset sites that meet the required criteria can be difficult;
- ▷ Long-term protection at offset sites can be very challenging, especially beyond the lifetime of a specific project;
- ▷ Numerous small individual offsets often fail to address issues related to habitat fragmentation, retaining biodiversity corridors, and preserving ecosystems in an integrated manner. A possible unsatisfactory outcome could e.g. be “islands of conservation” as illustrated in [figure 9](#), resulting from individual offsets for four different mines operating in the same region.

2.2.1 Project-related solutions

2.2.2 Scope of remedies

Thinking beyond the single project scale, e.g. regionally, can greatly enhance the effectiveness of offset-measures.

Alternatively, aggregate offsets are more likely to result in measurable, positive conservation outcomes as a consequence of coordinated actions that compensate for biodiversity losses (see [Figure 10](#)). They allow regulators as well as operators to overcome financial, logistical and geographic limitations of individual project offsets by pooling resources, knowledge and land. Moreover, often a regulator involved with a specific sector (e.g. mining) in a specific region will have a ‘birds-eye view’ of the totality of projects, and will often be in a good position to propose schemes to effectively aggregate offsets from a number of projects. Furthermore the regulator may also (i) link aggregate offsets to national conservation priorities, (ii) set up a national offsets framework and (iii) tie aggregate offsets to other initiatives such as the conservation priorities and support a protected area networks (REDD+¹)

— **Scope of remedies** — As discussed in the preceding sections, the range of options that an environmental regulator can pursue to ensure environmental preservation is wide. However, the range of options — or scope of remedies — that one can pursue in practical terms in FCV-affected situations is often much more limited. Lack of resources, incomplete, broken or absent processes and systems, adapting to security constraints, juggling other pressing development priorities, all these factors constrain both the regulators and the regulated entities in achieving compliance. Accordingly, the environmental regulator in FCV must be more willing to compromise on regulatory standards and creatively adapt their management approach accordingly.

¹ www.un-redd.org/



Nevertheless, much can still be achieved even in the face of significant constraints. According to the empirical “80:20 rule” , 80% of outcomes or results can be attributed to 20% of the causes or efforts for a given event (see [Figure 11](#)). In business, the 80-20 rule² is used to help managers identify problems and determine which operating factors are most important and should receive the most attention based on an efficient use of resources. Resources should be allocated to addressing the input factors have the most effect on a company’s final results.

It can be applied just as well to environmental regulation in situations of capacity and resource constraints; focus should be on addressing the primary 20%

² This is strictly NOT a scientific rule, but will be confirmed as more or less applicable by a majority of environmental practitioners

Figure 12: *The 80:20 rule implemented in construction site management.* ▽



causes rather than the full 100%. Consider waste disposal: The most important objective is that waste is collected and safely stored, which would eliminate the majority of environmental and health hazards. Recycling and waste reduction can follow later once effective systems for waste collection and disposal are established. Environmental regulators often will have to search for a solution that addresses immediate needs — it might not be technically perfect but it will hopefully be the best fit for the circumstances. In pollution management, especially the remediation of legacy pollution, 80% of a pollutant can usually be recovered with 20% of the cost that would be required to reclaim all 100% of pollutants. The last 20% of the pollutant recovery usually show an exponential rise in cost and effort (see [Figure 11](#) above).

Similarly, health and safety risks to site personnel and adjacent communities can often be mitigated to much lower levels with comparatively simple means. [Figure 12](#) below depicts a public works site in the Central African Republic, where drainage channels are cleaned from debris, garbage and sediment to enhance flood protection. The safety measures in place are simple, comprising signposting, barriers, and personal protective equipment (PPE) for the workers, but thus help to reduce some of the most pronounced and common accident risks, such as traffic accidents, falls, and injuries from moving machinery. Also the risk of workers contracting diseases is much reduced by wearing PPE, especially impermeable gloves, boots and masks. Certainly there are remaining gaps, but for the given country context this is one manifest example that compliance with good practice can work.

The water supply and sewage plant in Naivasha, Kenya, demonstrates an example of challenges experienced by a publicly owned company that on the one hand operates under tight financial constraints (prices for water and tariffs for sewage being fixed by the local authorities), on the other hand is required to meet strict quality criteria and the same environmental standards as any other entity in Kenya. Drinking water is taken from Lake Naivasha and purified to sufficient quality to be consumable, while sewage is treated to sufficient quality to be discharged back into the lake. While the lake itself has some natural regeneration and attenuation capacity, poor sewage treatment will make the supply of quality drinking water progressively difficult. This conundrum is met by plant management with near-heroic efforts to operate as good as possible on a shoestring, with much creativity, improvisation, and ingenious ways to repair their ageing equipment.

2.2.2 Scope of remedies

2.2.3 Realism of regulatory approach

Nonetheless, if the local authorities are unwilling to adjust the prices for water and tariffs for sewage, regulators at one point will have to accept that environmental standards can no longer be met, unless the public is willing to pay for at least the core environmental services. While 20% of a hypothetical “perfect” budget may buy 80% of compliance, dipping below 10%, or even 5% of what would be required will clearly have negative consequences.

Achieving compliance following the 80/20 rule of thumb would likely benefit from negotiated compliance, where negotiation is used to determine the terms by which regulatory standards will be enforced against a particular firm (or other regulated entity) that is out of compliance with a particular regulatory standard.

— **Realism of regulatory approach** — As discussed from the outset of this handbook, the job of an environmental regulator is generally a difficult one. The real value of environmental components and ecosystem services are not recognized or quantified in monetary terms in most countries’ national accounting systems. On project level environmental regulation may often be seen as an obstacle to entrepreneurship, economic development and the building of a “modern” state or society. Therefore, more often than not environmental concerns and arguments will take a lesser priority than economic growth. Regulators must accordingly adjust their approach to the full spectrum of environmental regulation — from developing a functional legislative base to enforcing compliance — to a better fit of regulatory approaches with the reality of their context.

Maintaining political support for the production and enforcement of EIAs at both central and local level, for example, can be challenging. Further, particularly during election periods, inconsistent political positions and statements on the environment can undermine the integrity (as based on proven scientific concepts and best practice) of the monitoring and compliance process. At the same time, development that does not take into account environmental impacts and losses of natural capital, effectively undermines the foundation upon which economic growth is built (in recent years “green accounting approaches” showed that some strongly resource-based economies, e.g. the Russian Federation, would effectively have negative GDP growth, if the cost of resource depletion and environmental damages were duly accounted for).

Indeed, there is no simple answer when it comes to balancing environmental and economic interests. In FCV affected situations a third factor often is the feasibility of environmental regulatory work under security constraints and access restrictions to certain areas. The best way forward almost always involves a dual approach that promotes economic interests while addressing environmental concerns. Context should be taken into account as relative economic benefits and environmental threats vary considerably from one situation to the next.

Regulators could use transparent forms of dialogue (i.e. carried out largely open to the public) to deal with a culture of non-compliance and political interference. Effective checks and balances are indispensable to harmonize development objectives,

2.2.3 Realism of regulatory approach

2.2.4 Practical approach

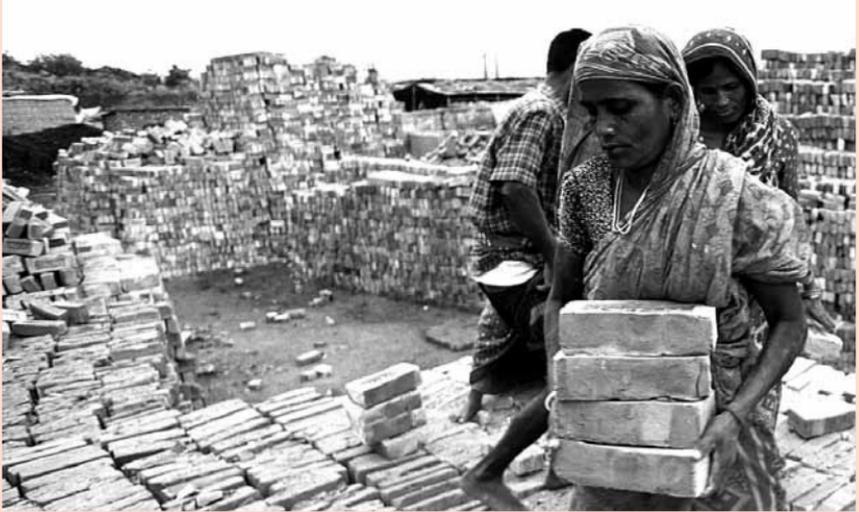
Establishing a regulatory system that works effectively, requires clear recognition of the given economic, governance, security and technical context

poverty alleviation and conservation interests, and negotiate well-informed trade-offs. Additionally, the use of economic and social incentives for environmental regulation has provided a basis for payment of fees, levies and charges under the permit and license system. This should go hand in hand with valuing natural resources and their contribution to GDP.

— **Practical Approach** — Establishing a regulatory system that works effectively, requires clear recognition of the given economic, governance, security and technical context, and takes account of the prevailing environmental baseline, both in terms of actual state of the environment, but also the prevailing management practices and awareness. This requires of course a rather wide scope of technical skills within a regulatory team or agency, which will need staff with backgrounds as diverse as natural science, environmental engineering, economics, environmental policy and governance / security.

These technical skills need to be complemented by an array of soft skills, such as diplomacy and negotiation, results mindfulness, context consideration, and the ability and willingness to identify and accept pragmatic compromise that recognizes and respects all interests.

Finding pragmatic solutions can often be a “moral balancing act”, where compromises may sometimes be seen as a result of vested interests, rather than the best negotiable option. Thus, consultation and participation of the public in the process, and keeping the discussions and dialogue on issues open and



Scott Wallace/World Bank

In some cases industries that may operate on small profit margins and employ comparatively few people may still have considerable environmental impacts. The artisan brickmaking industry is an example for such, where small scale, barely profitable kilns degrade and deforest land (clay mining, charcoal production) and pollute the air (brick-baking) on a significant scale. Here a stronger-handed regulatory approach would inflict little economic damage (at least if measured on the national scale), but yield very tangible environmental benefits. Alternatives to closing down industries may also be the merging into cooperatives that would firstly be easier to regulate, secondly — through economy of scale — experience lesser challenges with compliance by sharing costs and pooling environmental services (see also example of Malian dyers).

Finding pragmatic solutions can often be a “moral balancing act”

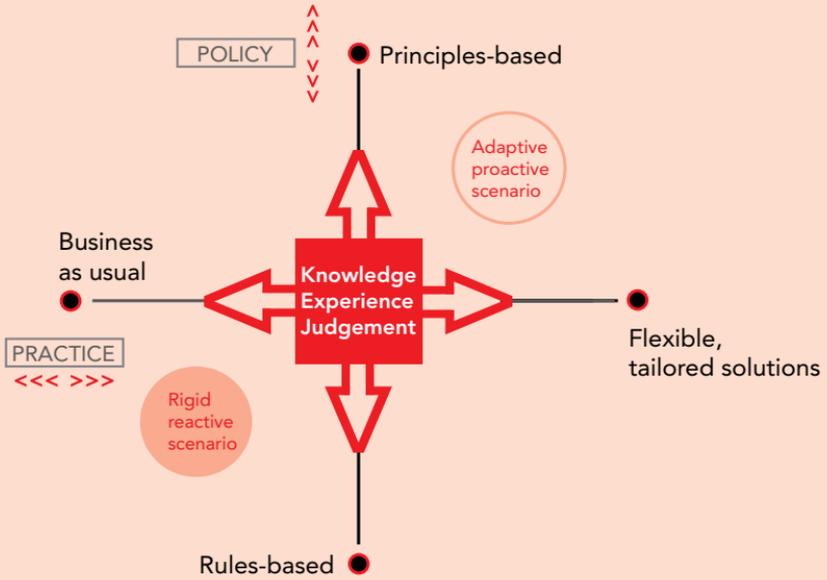
transparent, can often be a key enabling factor. A public that has trust in the process and the key players and has access to all important criteria for decision-making, will be able to understand the rationale behind compromise, and, flexible solutions for specific problems that are outside the regulatory mainstream work.

The following figure 13 underscores that one factor, however, is really key in being able to think and act “out of the box” without compromising the regulators key mandate to act in the interest of environmental quality, performance and sustainability: This factor is the amalgamate of the regulator’s professional knowledge, experience and ability to make an informed judgment on specific situations.

The environmental regulator in her / his daily work navigates in a hypothetical coordinate system, defined by the axes of “policy” (between the extremes of rules based and principles-based) and “practice” (between business as usual, and tailored, flexible solutions). Especially in FCV affected situations experience and testimony show that the quadrant defined by rules-based policy and business as usual will probably show the poorest results, due to the inherent rigidity and inability to respond to dynamically evolving changes and challenges. The policy / practice combination that will usually yield the best results will be in the quadrant defined by a more principles-based (or results-oriented) policy, and a business approach that allows flexible solutions, instead of prescribed, stringent procedures.

Figure 13: Defines the preferred regulatory approach (circle upper right) in a coordinate system of policy and practice. The red

circle (lower left) is empirically the least successful regulatory approach in FCV situations ▽



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Epilogue



Dominic Chavez/World Bank





Dominic Chavez/World Bank



Masaru Goto/World Bank

The figure on page 119 illustrates, and experience and empirical data show, that **a behavioral change towards more flexible, yet effective regulatory approaches need solid professional capabilities, and the ability to recognize, understand, judge a situation and to develop a tailored, workable approach.** Without this key factor of professional judgment “flexibility” might quickly turn into a dilution of environmental due diligence requirements, and “tailored solutions” might result in the lack of compliance and resulting significant environmental deterioration and damage.

To transmit this crucial knowledge, experience and judgment to regulators was the main rationale for the KTF financed workshop on regulatory practice in FCV situations, and this handbook hopes to further consolidate the information and discussions from the workshop in Naivasha in June 2014. While this booklet will certainly not offer a tailored solution for every regulatory problem, it may offer guidance regarding the general approach, direction and methodology in a wide range of situations and problems, specifically in FCV affected countries and situations.

