

## International standards and principles for environmental and social management of renewable energy projects in developing countries

## Document Details

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## **Preface**

On behalf of Energy Norway and the Energy and Development Project Vista Analysis and Norplan has written this compendium describing international standards for environmental and social performance for renewable energy projects, with particular focus on such projects in developing countries.

During the project we have received much appreciated input and comments from the participants in the Energy and Development Project, namely Energy Norway, Norfund, SN Power, Norad, Statkraft, Eidsiva Energi, TrønderEnergi, NTE, BKK, Agder Energi, and Intpow. Comments and input have also been received by additional members of the sub-project Sustainable Energy Investments, i.e. Forum for Development and Environment, FIVAS, Norwegian Church Aid, WWF, Rainforest Foundation Norway, Statnett, NVE, GIEK, Ministry of Foreign Affairs, and Ministry of Petroleum and Energy.

Our contact person at Energy Norway has been Kristin Aase.

We wish to thank all for valuable input during the process. All conclusions and remaining errors are the responsibility of Vista Analysis and Norplan.

16 March 2011

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## Acronyms

AIE	Accredited Independent Entity (CDM)
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CEACR	ILO Committee of Experts on the Application of Conventions and Recommendations
CER	Certified Emission Reductions
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSM	The Convention on the Conservation of Migratory Species of Wild Animals
CSR	Corporate social responsibility
DIHR	Danish Institute for Human Rights
DOE	Designated Operational Entity (CDM)
ECA	Export Credit Agency
EIA	Environmental Impact Assessment
EMAS	The EU Eco-Management and Audit Scheme
EMS	Environmental Management System
EPFI	Equator Principle Financing Institution
ESIA	Environmental and Social Impact Assessment
EU ETS	EU Emission Trading System
FPIC	Free, prior and informed consent
GHG	Greenhouse gas
GIEK	Garanti-instituttet for eksportkreditt
GRI	Global Reporting Initiative
HRIAM	Human Rights Impact Assessment and Management
HSAP	Hydropower Sustainability Assessment Protocol
HSE/EHS	Health, Safety and Environment
IBRD	International Bank of Reconstruction and Development
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICID	International Centre for Investment Disputes
ICOLD	International Commission on Large Dams
IDA	International Development Association
IEG	Independent Evaluation Group (World Bank)

IFC	International Finance Corporation
IHA	International Hydropower Association
ILO	International Labour Organisation
IPP/IPPF	Indigenous Peoples Plan(ning Framework)
IUCN	International Unit for Conservation of Nature
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MDB	Multilateral Development Bank
MIGA	Multilateral Investment Guarantee Agency
NCP	National Contact Point (OECD Guidelines for multinational enterprises)
NGO	Non-governmental Organisation
OHCHR	The Office of the United Nations High Commissioner for Human Rights
POE	Panel of Experts
PPP	Public-Private Partnership
RAP	Resettlement Action Plan
SEA	Strategic Environmental Assessment
SEIA/SIA	Social (and Environmental) Impact Assessment
SP	Safeguard Principle
ToR	Terms of Reference
UDHR	Universal Declaration of Human Rights
UN SGSR	UN Secretary-General Special Representative
UNDRIP	UN Declaration on the rights of indigenous peoples
UNECE	the United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	The United Nations Framework Convention on Climate Change
UNGC	The UN Global Compact
WB/WBG	The World Bank (Group)
WBSP	The World Bank Safeguard Principles
WCD	World Commission on Dams



## **Executive summary**

Renewable energy, including large hydropower plants, is and will continue to be an important part of the solution to the climate challenge and other environmental concerns, and for securing a sustainable development. This is especially the case in developing countries where renewable energy projects can contribute to needed economic development. On the other side poorly managed energy projects can worsen both the environmental and social conditions for those directly and indirectly affected by the project. Therefore it is important that energy projects are managed in a sustainable and socially equitable way, assuring that the renewable energy actually is clean and fair.

The purpose of this compendium, or guidebook, is to guide companies who are planning to engage in, or already are engaged in, renewable energy projects. The focus is on hydropower project in developing countries, and on environmental and social issues (including corporate social responsibility, CSR). The emphasis is on how to ensure that the energy project will be eligible for project financing from international finance institutions, and how to comply with standards and principles in the planning, construction and operation of an energy facility. The Performance Standards from the International Financing Corporation (IFC) is a benchmark that many financing institution base their own assessment criteria on, and therefore the compendium also focuses on these standards. In addition Norad is adhering to these standards and also requires that Norwegian companies operating abroad adheres to. It should however be noted that this in many cases are equivalent to minimum requirements, and that the aim for most projects should be to reach beyond these requirements.

The need to adhere to strict standards is based on the need to execute the project as safely and sustainable as possible and to avoid or reduce the reputational risk that can be high when engaging in developing countries. In addition the Norwegian government expects Norwegian companies investing abroad, and particularly in developing countries, to behave socially responsible. These expectations are clearly stated in the report to the Storting "Corporate Social Responsibility in global economy (St. meld. nr 10 (2008-2009)). The Government expects Norwegian companies that engage in activities abroad to:

- respect fundamental human rights according to international conventions;
- base their operations on the ILO core conventions regarding the right to organise and the abolition of forced labour, child labour and discrimination;
- maintain HSE standards that safeguard employees' safety and health;
- consider environmental impacts and promote sustainable development;
- combat corruption ;
- exhibit transparency in connection with financial flows.

### ***Adhering to national laws and regulations***

When investing in a foreign country the basic requirements are to act in accordance with the national legislation. It is therefore necessary to get a comprehensive overview over relevant legislation. This will for instance include:

- Energy laws, including licence and permit structure
- Taxation issues
- Expropriation laws and property compensation regulations
- Natural resource and water laws (including water right legislation)
- Labour rights, including issues concerning HSE
- Environmental laws and permits (including EIA regulations )
- Human rights, including Indigenous Peoples' rights

Most countries have more or less comprehensive legislation covering these issues, but the enforcement of these laws is often poor in developing countries. Outside of high-income OECD countries, there are often large gaps between international standards and domestic legislation and/or no implementation of local laws. For operations and investments in these countries it is, as a rule, not possible to get international funding or loans by just complying with national laws. Most financing institutions will require the use of international standards on certain issues.

### **INTERNATIONAL STANDARDS**

“International standards” is a broad and vague concept, and it needs to be made operational in order to be a useful concept. In our context international standards refers to international and national laws and conventions, voluntary CSR principles and covenants, and mandatory standards and covenants for project finance, with a focus on such standards that regulate environmental and social issues. Furthermore the focus is on standards that are relevant for a company investing in developing countries. Since many of the company and/or project specific standards or guidelines are founded in international laws and conventions that regulate the state level, such as the Bill of Human Rights, the most important of these are presented in this compendium.

In order to secure sustainable investments several principles and standards have been elaborated, with the aim to define a sustainable project and to guide authorities, organisations and companies working with such investments. The standards have different focus and addresses different actors, but there is a tendency that different standards over time become more harmonised, with similar requirements and terms. In table 1 we have structured the standards and principles that are included in this compendium according to status and which actor and sector it applies to.

**Table 1 International standards, main purpose and target group**

STANDARD	MAIN PURPOSE	Target group/level			
		Government	Financing agencies	Company	Project
I) International conventions					
Bill of Human Rights	Basic rights and obligations. Should be translated to nat. legislation, policies and action for ratifying countries. Basis for CSR guidelines etc.	National legislation <sup>1</sup>			
Environmental conventions		National legislation			
ILO		National legislation			
II) Guidelines/recommendations					
UN SGSR Business & Human Rights	General guidance on human right issues	Vol		Vol	
UN Global Compact	General guidance on CSR			Vol	
OECD Guidelines for multinational enterprises	General guidance on CSR	Bind		Vol	
World Commission on Dams	Decision making framework for dam development	Vol			Vol
IHA Sustainable Guidelines	Guidance for sustainable hydropower				Vol
III) Finance standards					
World Bank Safeguard Principles	Safeguard investments and guide applications for many different kind of projects	Bind			Bind
IFC Performance Standards					Bind
Export Guarantees/OECD Common Approaches			Vol		Bind
Equator Principles			Vol		Bind
Carbon market regulations					Bind
IV) Sector specific auditing framework					
Hydropower Sustainability Assessment Protocol	CSR performance tool for all project phases				Vol

<sup>1</sup> Regardless of national legislation companies and financial institutions are at a minimum obliged to respect human rights wherever they operate.

Vol: Voluntary guidelines or standards

Bind: Legally binding standard

### **Overarching International conventions and declarations**

International conventions are overarching standards, which should be adopted in national legislations and implemented through the relevant policies in countries that have ratified the respective convention. When operating in these countries a company of course has to follow the national laws and regulations. But also when operating in countries that have not ratified the different conventions, a company should act in accordance with human right and other relevant conventions as they form the basis of social and environmental ethics and responsibilities.

There are several international conventions (treaties that are legally binding for states that have ratified them) and declarations (non-binding agreements) that are relevant when investing in renewable energy projects abroad. These declarations and conventions cover several issues, but for the purpose of this compendium the most relevant are universal human rights, indigenous peoples' rights, environmental issues and labour rights.

Even though these declarations and conventions primarily apply to the state, private companies have, as a minimum, a responsibility to respect these, and not contribute to violating them. When investing abroad companies might experience that the host state does not comply with its obligations. This might lead to violations of the provisions in the respective convention, increase the risk of conflicts and thereby putting the implementation of the project at risk. In cases where the state fails to comply with its obligations, the company has to decide if it is willing to take on these responsibilities or if the best choice is to withdraw from the project.

Important conventions include:

- The International Bill of Human Rights, consisting of: the Universal Declaration of Human Rights (UDHR); International Covenant on Civil and Political Rights (ICCPR); and International Covenant on Economic, Social and Cultural Rights (ICESCR). These cover several rights, including the right to life, liberty, freedom of thought, freedom of conscience and religion, freedom from torture, fair trials, adequate standard of living, health, education, fair wages and safe working conditions.
- Convention on International Trade in Endangered Species (CITES), with the objective to ensure that international trade in specimens of wild animals and plants does not threaten their survival.
- Ramsar Convention ("Convention on Wetlands of International Importance especially as Waterfowl Habitat."), with the mission to conserve and wisely use wetlands through local and national actions and international cooperation.
- Agenda 21 – Program for Development of Ecological Actions, a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations system, governments, and major groups in every area in which human impacts on the environment
- Framework Convention on Climate Change, an overall framework for inter-governmental efforts to tackle the climate change challenge.
- Convention on Biological Diversity (CBD), with the objective to promote conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), which seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), aims to conserve terrestrial, marine and avian migratory species

- Convention "On the Protection and Use of Transboundary Watercourses and International Lakes", with the objective to ensure that transboundary waters are used reasonably and equitably.
- ILO conventions on labour rights, with special focus on the eight core conventions governing: prohibition and abolition of forced labour; freedom of association and protection of the right to organise; right to organise and collective bargaining; equal remuneration for men and women; obligation not to discriminate; minimum age for different kind of work; and the elimination of the worst forms of child labour.
- Indigenous peoples' rights as expressed in ILO convention 169 and UN Declaration on the rights of indigenous peoples (UNDRIP).

### ***Voluntary guidelines for sustainable performance***

The conventions and declarations described above are, to greater or lesser extent, reflected in several guidelines and recommendations for companies and other actors as well, with the purpose of guiding them on social and environmental matters. These guidelines and recommendation are, at least in principle, voluntary for the actor it targets. An exception is OECD Guidelines for Multinational Companies that OECD countries are obliged to promote against multinational companies, but where it is voluntary for the companies to adopt these guidelines or not. A company can choose to join a certain initiative (like the UN Global Compact), and these guidelines or recommendations will then become binding for all their operations.

### *UN Secretary- General Special Representative on business and human rights*

In 2005 the UN Secretary-General appointed *John Ruggie* as special representative on issues related to human rights and business. His work has mainly been focused on mapping the challenges transnational corporations and business encounter regarding human rights, and to recommend effective means to address these challenges. Ruggie has introduced a framework resting on three pillars:

- the state duty to *protect* against human rights abuses by third parties, including business, through appropriate policies, regulation, and adjudication;
- the corporate responsibility to *respect* human rights, which means to act with due diligence to avoid infringing on the rights of others and to address adverse impacts that occur;
- and access by victims to effective *remedy*, judicial and non-judicial.

### *UN Global Compact*

The UN Global Compact (UNGC) is an international initiative with a purpose to promote corporate citizenship. UNGC applies to the company level, i.e. a company can decide to adopt the principles and to integrate them into own strategies etc. The UNGC consist of ten principles, stating that business should:

1. Support and respect the protection of internationally proclaimed human rights within their sphere of influence (human rights)
2. Make sure that they are not complicit in human rights abuses (human rights)



3. Uphold the freedom of association and the effective recognition of the right to collective bargaining (labour standards)
4. Uphold the elimination of all forms of forced and compulsory labour (labour standards)
5. Uphold effective abolition of child labour (labour standards)
6. Eliminate discrimination in respect of employment and occupation (labour standards)
7. Support a precautionary approach to environmental challenges (environment)
8. Undertake initiatives to promote greater environmental responsibility (environment)
9. Encourage the development and diffusion of environmentally friendly technologies (environment)
10. Work against all forms of corruption, including extortion and bribery (anti-corruption)

### *OECD Guidelines for Multinational Enterprises*

The OECD Guidelines for Multinational Enterprises are non-binding recommendations for multinational enterprises, providing voluntary principles and standards for responsible business conduct that is consistent with applicable laws. Observance of the Guidelines by enterprises is voluntary and not legally enforceable. The purpose of the guidelines are to ensure that multinational enterprises operates in accordance with government policies, to strengthen the basis of mutual confidence between enterprises and the societies in which they operate, to help improve the foreign investment climate and to enhance these enterprises contribution to sustainable development. Underlying the Guidelines are basic principles stating that enterprises should adhere to established policies in the countries in which they operate, and consider the views of other stakeholders. In their operations enterprises should contribute to sustainable development, respect the human rights, encourage local capacity building working closely with local communities, and encourage human capital formation by creating employment opportunities and facilitating training opportunities for employees. Enterprises should not seek or accept exemptions related to environmental, health, safety, labour, taxation, financial incentives, or other issues. They should support and uphold good corporate governance principles and develop and apply good corporate governance practices, including for instance self-regulatory practices and management systems.

The OECD Guidelines are the only multilaterally endorsed regulatory framework that adhering countries<sup>1</sup> are obliged to promote. All adhering countries must establish a national contact point (NCP), responsible for encouraging observance of the guidelines and promoting the guidelines towards the national business community. The NCP should also handle all enquires about the Guidelines. Anyone can raise a complaint against a company for violating the guidelines. The national contact point will then assess whether the complaint is valid and if the company is in fact violating the

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<sup>1</sup> Adhering countries are the 33 OECD member countries and eleven non-member countries: Argentina, Brazil, Egypt, Estonia, Latvia, Lithuania, Morocco, Peru and Romania.

guidelines. The NCP do not have any legal authority, and the main objective is to resolve any issues regarding the guidelines through dialogue with the parties.

### *World Commission of Dams*

In 1997 the World Bank and the IUCN (International Unit for Conservation of Nature) called together a workshop, in response to the increasing controversies surrounding large dams. The participants were governments, organizations, private sector, international financing institutions and affected peoples. The workshop put together a working group that was to form the World Commission of Dams. The Commission's objectives, as outlined by the workshop, were to: *Review the development effectiveness of large dams and assess alternatives for water resources and energy development; Develop internationally acceptable criteria, guidelines and standards where appropriate, for the planning, design, appraisal, construction, operation, monitoring and decommissioning of dams.*

The WCD built on the UN Declaration of Human Rights, the Right to Development<sup>2</sup> and the Rio Principles<sup>3</sup>, and based on these developed a policy framework and guidelines for energy and water resource development. The framework consists of Strategic Priorities, Policy Principles, and Criteria and Guidelines.

For optimal decision-making seven Strategic Priorities Areas were identified:

- *Public acceptance* of the project, through a process where all stakeholders have full information and full provision of legal and other types of support, and where the rights and risk for all parties affected by the project are being assessed. Projects affecting indigenous and tribal peoples must provide informed, free and prior consent (FPIC).
- *Comprehensive Options Assessment* where the developer identifies the need for water, food and energy, and assesses all alternatives to dams that will provide the same basic needs. Social and environmental aspects should be given the same significance as technical, economic and financial factors in this assessment.
- *Address existing dams* and examine all changes in benefits and impacts from existing dams imposed by alteration in water usage, physical and land use, or other socio-economic factors. The management and operation practices should be adjusted to fit changes in circumstances throughout the projects lifecycle.
- *Sustainable rivers and livelihood* where avoidance of impacts to the ecosystem is prioritized in all phases of decision-making, or when assessing different options.
- *Recognition of entitlements* for people being adversely affected by the project. These should also be the first to benefit from it.
- *Ensuring compliance* requiring that all parties involved meet all commitments made in the assessment phase.

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<sup>2</sup> The right to development was adopted by the United Nations in 1986 in the "Declaration on the Right to Development".

<sup>3</sup> The Rio Principles were agreed to at the UN Conference on Environment and Development in 1992.

- *Shared rivers for peace, development and security*, meaning that riparian states are to negotiate specific river basin agreements on the basis of good faith.

The WCD Criteria consists of 5 key decision points:

1. Needs assessment: validating the needs for water and energy services
2. Selecting alternatives: identifying the preferred development plan from among the full range of options
3. Project preparation: verifying agreements are in place before tender of the construction contract
4. Project implementation: confirming compliance before commissioning
5. Project operation: adapting to changing contexts

In addition WCD developed 26 guidelines, meant to give advice on how to plan and implement dam projects in general terms.

### *International Hydropower Associations Sustainability Criteria*

The International Hydropower Association (IHA) is a non-governmental, mutual association of organisations and individuals, with membership open to all involved in hydropower. The association promotes hydropower as a clean, renewable and sustainable technology that can meet the world's growing water and energy needs. In 2004 IHA published guidelines to promote greater consideration of environmental, social and economic aspects in the sustainability assessment of new hydropower projects and the management and operation of existing power schemes. These guidelines, or principles, span the following six elements:

- IHA policy
- The role of governments
- Decision making processes
- Hydropower - environmental aspects of sustainability
- Hydropower - social aspects of sustainability
- Hydropower - economic aspects of sustainability

The purpose is to assist hydropower developers and operators with the evaluation and management of environmental, social and economic issues that arise in the assessment, operation and management of hydropower projects.

### ***Standards to ensure international financing***

Finance standards are, in most cases, requirements that different financing institutions demand to be met in order to support a project. This is especially the case in countries with weak law enforcement, and where just complying with national laws and regulations would put the projects sustainability performance at risk. Once financing has been granted these standards will be binding for that particular project. Some of the standards are based on or reflected in international and national laws and regulations, and will therefore also be legally binding for companies.

The World Bank safeguard principles are often used as a form of benchmark for financing institutions, but much of the project financing is based on IFC and the Equator principles.

### *World Bank Safeguard Policies*

The World Bank provides financial and technical assistance to developing countries, with the aim to fight poverty by providing resources, sharing knowledge, building capacity and forging partnerships between public and private sectors. The World Bank provides interest free credit or grants and low interest mortgages to developing countries for investments in education, health, public administration, infrastructure, financial and private sector development, agriculture and environmental and natural resource management. The World Bank is primarily providing loans to countries or states, and demands that the borrower follows the World Bank's Operational Policies. This is a comprehensive set of policies and procedures, dealing with the Bank's core development objectives and goals, the instruments for pursuing them, and specific requirements for Bank financed operations. Since many investment projects in developing countries are performed as a public-private partnerships (PPP) where the public participation can be financed by the World Bank, private companies also needs to be aware of these policies.

The World Bank has identified ten key policies that are critical to ensuring that potentially adverse environmental and social consequences are identified, minimized, and mitigated. These ten are known as the "Safeguard Policies" and receive particular attention during the project preparation and approval process. There are 10 safeguard policies, comprising the Bank's policies on Environmental Assessment (EA); Cultural Property; Disputed Areas; Forestry; Indigenous Peoples; International Waterways; Involuntary Resettlement; Natural Habitats; Pest Management; and Safety of Dams.

### *IFC Performance standards*

The International Finance Corporation (IFC) provides financing for private sector investments, mobilizes capital in the international financial markets, and provides advisory services to businesses and governments. IFC require that the client follow IFC's Performance Standards. These standards are applied in order to manage social and environmental risks and impacts whilst enhancing development opportunities from private investments in its member countries. IFC has identified 8 standards, where the first standard establish the importance of identifying the social and environmental risks associated with the project, and the possibilities which lie in communication with the local community that is directly affected by the project. The other standards establish requirements to avoid, reduce, mitigate or compensate for impacts on people and environment, and possibly improve conditions. The eight standards are:

1. *Assessment of Social and Environmental Risk and Impacts*: Such impacts should be identified and evaluated, and mitigation should aim at avoiding these impacts. An effective management system should be implemented. Affected stakeholders and communities should be engaged in an appropriate manner.
2. *Labour and Working Conditions*. Based on ILO core conventions and the UN convention on the rights of the child.

3. *Resource Efficiency and Pollution Prevention.* Avoiding or minimizing adverse impacts on human health and the environment, promoting sustainable use of resources, and reducing project-related GHG emissions.
4. *Community Health, Safety and Security.* Avoiding or minimizing risks to and impacts on the health and safety of the community during the life cycle of the project.
5. *Land Acquisition and Involuntary Resettlement.* Avoiding or at least minimizing involuntary resettlement. Ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected. Improving or restoring livelihoods and standard of living of displaced persons.
6. *Biodiversity Conservation and Sustainable Management of Living Natural Resources.*
7. *Indigenous Peoples.* Ensuring that the development process fosters full respect of the dignity, human rights, aspirations, cultures and natural resource-based livelihood of Indigenous Peoples. Ensuring free, prior and informed consent (FPIC) of the affected communities of Indigenous Peoples if the project is to be located on land they have traditional ownership to, require relocation, or involve commercial use of their cultural resources.
8. *Cultural Heritage.* Protecting cultural heritage from the adverse impacts of project activities and support its preservation. Promoting equitable sharing of benefits from the use of cultural heritage in business activities.

#### *Equator Principles*

Some recent developments in this field have taken place in the context of the so-called “Equator Principles”. These principles were adopted in June 2003 by ten international commercial banks, and are a voluntary set of guidelines for managing environmental and social issues in project finance lending, based on IFC's environmental and social standards. It is estimated that these principles now cover approximately 80 percent of global project lending. The Equator Principles apply to all countries and sectors, and to all project financings with capital costs above US\$ 10 million. Financing institutions that have endorsed the principles are often called Equator Principle Financing Institution (EPFI).

The principles are intended to serve as a common baseline and framework for the implementation by each finance institution of its own internal social and environmental policies, procedures and standards related to its project financing activities. The finance institutions that have adopted the principles will not provide loans to projects where the borrower will not or is unable to comply with the social and environmental policies and procedures in the principles.

#### *Export guaranties*

Export Credit Agencies and Investment Insurance Agencies, commonly known as ECAs, are financial institutions or agencies that provide trade financing to domestic companies for their international activities. ECAs provide financing services such as guarantees, loans and insurance to companies in order to promote exports. The primary objective of ECAs is to remove the risk and uncertainty of payments to exporters when exporting

outside their country. ECAs can underwrite the commercial and political risks of export to and investments in overseas markets that are typically deemed to be high risk. ECAs are collectively among the largest sources of public financial support for foreign corporate involvement in industrial projects in the developing world.

### *OECD Common Approaches*

The 2007 OECD Common Approaches give recommendations on how official ECAs should consider environmental, and to some extent, social impacts of the projects they support. The OECD Common Approaches is not a standard on its own, but give recommendation on what international standards to benchmark project proposals against, in addition to host country laws/standards. Currently, the minimum requirement is to benchmark projects against host country standards and the World Bank Safeguard Principles. Other standards, such as the IFC PS, standards of regional development banks, and sector specific standards (such as the WCD – World Commission on Dams) can be used as benchmark where appropriate, and on an optional basis. The IFC PS is currently only strictly required to be used as benchmark in project finance transactions. Regional Development Bank standards, such as those of the EBRD or IBD, are used when these institutions are involved. Standards from the WCD have been used, however seldom since this is optional.

### *GIEKs policies*

The Norwegian ECAs, GIEK (Garanti-instituttet for eksportkreditt), policy and procedures for evaluating the environmental and social impacts of projects is based on the OECD Common Approaches. GIEK, however, benchmarks against IFC PS as a minimum, and in addition to environmental impacts, takes attention to working conditions, labour rights, and social impacts of a project and its associated facilities. All projects are screened for potential environmental impacts, given a categorisation from 'A – C' depending on the level of environmental impact, and followed up accordingly with regard to necessary EIAs, environmental management plans and, if needed, covenants. GIEK has regularly applied IFC PS 2 on Labour and Working Conditions in dam projects, including requirements for the standard to be applicable to contractors and sub-contractors. Certifiable standards such as SA8000 (for labour rights and working conditions) and OHSAS 18001 (occupational health and safety) are accepted as equivalent to, or better than, IFC PS2.

GIEK normally requires ESIA (Environmental and Social Impact Assessments), Resettlement Action Plans, and Compensations Plans for larger dam projects. The focus in these assessments is determined on a case-by-case basis, however common issues include: biodiversity, resettlement, livelihood restoration, and social and environmental impacts from associated facilities, such as access roads and transmission lines.

### *Carbon credits*

Hydropower projects can be implemented under the Clean Development Mechanism (CDM) as defined in the Kyoto Protocol. This is the case if the power generated by the project displaces fossil fuel based power generation, and thereby reduces emissions of greenhouse gases. As a consequence, the project developer will obtain emission reductions certificates (Certified Emission Reductions, CERs) that can be sold to industrialized countries to provide additional revenues to the project. Various methodologies for determining the amount of CERs generated by a project has been approved by the CDM

regulatory body, the CDM Executive Board (CDM EB). Hydropower plants with reservoirs must meet certain power density thresholds to minimise the risks associated with scientific uncertainty concerning greenhouse gas (GHG) emissions from reservoirs.

A Joint implementation (JI) project as defined in the Kyoto Protocol can obtain emission reduction certificates via a simplified procedure if the host country fulfils certain requirements. In this case the eligibility of the project and the calculation of emission reductions are subject to national rules and procedures and the national rules and regulations for hydropower projects would apply. However, if the host country does not fulfil the UNFCCC requirements the JI project must follow approval procedures determined by the JI regulatory body, the Joint Implementation Supervisory Committee (JISC). In this case the project developer can choose to follow approved CDM eligibility rules and methodologies.

The EU allows participants to use a certain amount of emission reductions from CDM and JI projects in order to cover their emission reduction requirements in the EU Emission Trading System (ETS). The EU has however attached certain conditions for the use of emission reductions from hydropower projects, and they are primarily based on the provision in World Commission of Dams.

#### ***Hydropower Sustainability Assessment Protocol***

The Hydropower Sustainability Assessment Forum is a collaboration of representatives from different sectors who aim to develop an enhanced sustainability assessment tool to measure and guide performance in the hydropower sector, based on the Hydropower Sustainability Guidelines developed by IHA. These guidelines determine the relevant issues to be included in the assessment protocol and the measurement approach for each of these issues. The members of this forum represents developing and developed country governments, the hydropower sector, social and environmental NGOs (WWF, Oxfam, TI, Nature Conservation), and commercial and development banks.

HSAP is a measurement system mainly intended for internal purposes, based on self-assessment. Subject to terms and conditions of use, the Protocol is available to all parties without charge. The Protocol is free to be used without license for informal purposes, such as informing dialogue, guiding business systems and processes, and for in-house assessments. Formal use of the Protocol, including translation, training, disclosure of assessment results and any income- and fee-generating activities, is controlled by license. The terms and conditions for obtaining a license to formally use the Protocol will be made publicly available, as soon as they are finalized.

The protocol is structured in four stages: early stage, preparation, implementation, and operation. For the stages Preparation, Implementation, and Operation the protocol is based on a scoring system, in order to establish a sustainability profile for the project. Each topic has a score ranging from 1 to 5:

- Level 1: there are significant gaps relative to basic good practice
- Level 2: most elements of basic good practice have been undertaken, but that there still are significant gaps

- Level 3: basic good practice, which all projects should be able to achieve regardless of circumstances. For some issues level 3 is consistent with the demands in WCD.
- Level 4: all elements of basic good practice have been achieved and in one or more cases exceeded – but not all
- Level 5: proven best practices, which can be reached for many projects but not without significant effort. It is unlikely that a project will score 5 on all topics.

### ***Comparing standards***

Many of the standards and/or guidelines have developed more or less in parallel, and are based on the same international declarations and conventions. Over time there has been a tendency that the standards become more similar to each other, at least when it comes to overarching and strategic principles. There are, however still some differences between them, differences that in some cases have a limited importance whereas others are more fundamental. The main difference is what issues the respective standards cover. IFC Performance Standards has the most comprehensive coverage, whereas WCD for instance focuses on environmental and social issues and do not include labour and working conditions.

## **USE OF STANDARDS IN PROJECT DEVELOPMENT**

### ***Overall sustainability principles***

A good starting point in the work with CSR and sustainability issues is to commit to a sustainability policy for the whole company. This can take the form of certification according to international standards like ISO 14000, ISO 26000 or EMAS, or just an obligation to follow these standards without certification. Adhering to the OECD Guidelines for Multinational Enterprises, however non-binding, can give a signal that sustainability issues are of importance to the company. For larger companies membership in the UN Global Compact can also be a viable option.

Overall sustainability principles for a company typically includes references to:

- Acting responsible and transparent
- Caring for the environment
- Delivering value to local communities
- Developing competence
- Promoting health and safety
- Supporting human rights

The sustainability policy, included processes to ensure ethical business practices, can be expressed through for instance a business Code of Ethics, an employee Code of Conduct, a business Integrity Pact, procedures for reporting and investigation (internal and external), and a whistle-blowing arrangement.

### ***Early stage: country knowledge and identification of areas of concern***

The Early Stage is the stage where a proposed or possible project is being screened, in order to assess project risks and opportunities and to identify challenges before pro-



ceeding with a more detailed project investigation. This process should identify both conflicts and consensus relating to energy and water needs and opportunities in a sustainability context.

The key topics in the first stage are a review of existing needs, options and policies, an assessment of the country including political situation and institutional capacities, followed by an assessment of the social and environmental risks. The latter should of course also include an early assessment of economic and technical risks, but these are not subject of this compendium.

The early stage is an important stage, and a comprehensive analysis of potential risk factors is necessary in order to make an informed decision on further investigations/-preparation and, in case one decides to proceed with the project, in order to manage potential risks and impacts in a proper manner. Resources used at this stage will most likely result in resources (i.e. costs) saved in later stages. But at the same time there is a trade off between additional resources used and expected gains later. The more information about the potential project that is readily available already before the developer enters the project the better. This is especially the case for an inexperienced developer.

Regardless of when the developer enters the project the following issues should be given extra attention at this stage:

- Country analysis, including assessment of political risk.
- Existing plans and policies: is there an Energy Master Plan or Option Assessment? If not, do you as a developer run a risk of becoming responsible for such a study?
- Legal requirements for Environmental and Social Impacts Assessments, and a comparison/gap analysis with applicable international standards.
- Social impacts and risks
- Environmental impacts and risks

When it comes to the decision whether to continue with the project development or not the following issues are the most critical:

- human rights at risk: earlier performance of government,
- unstable policies and regulatory framework,
- large resettlement or livelihood restoration required,
- indigenous peoples or other vulnerable groups, and
- possible loss of valuable biodiversity and habitats.

If one or several of these issues are present for the proposed project it is of outmost importance to be aware of, and have systems to handle, the risk associated with continuing with the project.

### ***Planning phase: engaging stakeholders and preparing plans***

If the assessments performed in the early stage lead to a decision to continue with the project plans, the next stage is planning and preparation of the project. In this stage communication and dialogue with affected stakeholders must begin, at the latest – in

many cases this should have been initiated already at the early stage. The same holds for several of the plans that are discussed below, these will build on the assessments and studies performed at the early stage, and some of the plans should already be in progress when entering this stage.

In the planning phase the following elements are important:

- Establish procedures for communication and consultation with affected stakeholders if not already existing. This should be based on an identification and assessment of stakeholders.
- Engage in stakeholder consultations and negotiations, based on good faith and informed participation for all directly affected stakeholders
- Perform a feasibility study that takes into account environmental and social concerns, in order to ensure a sustainable outcome.
- Perform an Environmental Impact Assessment, preferably integrating social issues. This can be integrated in the feasibility study, at least for projects with minor impacts, but preferably be a stand-alone study.
- Develop plans for management of environmental and social issues through the following stages. This can include Environmental Management Plan, Social Development Plan, Resettlement Action Plan and Indigenous Peoples Plan.
- Design mechanisms for Benefit Sharing that preferably are compatible with national legislation and regulations, but at the same time ensures benefits for the local communities most affected by the project. The purpose of Benefit Sharing is to make sure that affected stakeholders are better off than before the project (i.e. it should not be just a compensation for possible losses).
- If not already existing an integrated project management system should be established for the project.

### ***Implementation: management of environmental and social issues and of contractors***

At this stage the decision to proceed with the project and start the construction has been taken. Providing that environmental and social issues have been properly dealt with in the planning phase, the challenges in this phase is the implementation of the provisions in the environmental and social plans, including monitoring and reporting. Other important issues are connected to the construction work, like setting up a local organisation, managing HSE issues and contractors. These issues should, however already have been prepared in the planning phase.

In the implementation phase the important issues are:

- Follow up the environmental and social plan(s), including monitoring and internal and external reporting
- Continuous communication with affected local communities, with disclosure of information in a manner that is accessible.
- Establish a grievance mechanism, where community concerns and complaints can be properly handled

- If not already existing establish HSE routines and sustainable working conditions, building on or instance ILO. IFC EHS Guidelines can provide valuable guidance.
- Manage contractors with an objective to ensure that they follow the same standards and apply the same environmental, social and HSE policy as the developer.
- Ensuring that all technical, environmental and social issues are in line with plans before commissioning.

### ***Operation: evaluations and eventual decommissioning***

This stage includes continuing management of environmental and social issues that are prevailing during the operational phase. This include for instance ongoing communication and consultation with affected communities, project management and possible phasing out of the involvement from the developer. Of special concern at this stage is benefit sharing, since it is in this phase that the benefits from the project are starting to accrue.

Adaptive management is important in order to continuously assess and adjust operational decisions within the changing context of environmental, social, physical and market conditions. This requires a close relationship between the local community, other stakeholders and owners and operators in order to minimise problems and quickly resolve any that do arise.

As in the implementation phase follow up of environmental and social management, to ensure a sustainable operation of the power plant is the most important in the operational phase. Given that an integrated and adaptive management system was established in earlier phases, this phase is mainly about maintaining these systems and making sure that new actors/stakeholders (including employees) are given proper education and training in environmental and social issues.

A part of the maintenance of the management systems are regular evaluations, that both monitors performance and can be used to make needed adjustment. How often such evaluations should be undertaken should be based on the complexity of the project, and also on earlier identified problems and issues. WCD recommends regular evaluations every 5 to 10 years.

Eventually a hydropower plant needs a larger re-design and to be decommissioned. In the case of re-design a “new” project cycle has to start, at least from the planning phase. Decommissioning can have large environmental and social impacts, and should therefore be preceded by a comprehensive impact assessments. What to include in this impact assessment is dependent on specific features of the plant, but important subjects can for instance be sediment management and water quality issues.

## **1. Introduction**

Over time there has been an increased involvement from Norwegian companies in international energy investments, including projects in developing countries. Such projects are often complex, both with regard to technical and financial issues but also with regard to environmental and social impacts. In order to successfully perform such energy projects it is of outmost importance to deal with these environmental and social issues in a proper manner. There exist several international principles, standards, guidelines and tools covering these issues that can, and normally should be followed in such investment projects. For energy investors and developers there is a need to have an overview and understanding of these principles and standards, and their implication for the planning and development of energy projects. This compendium intends to provide easy access to relevant international standards and their use in different stages of an energy project. The compendium is initiated and financed by the Energy and Development project initiated by Energy Norway.

### **1.1 Purpose**

The purpose of this compendium, or guidebook, is to guide companies who are planning to engage in, or already are engaged in, renewable energy projects in foreign countries. The focus is on hydropower project in developing countries, and on environmental and social issues (including corporate social responsibility, CSR).

In order to be a useful tool the emphasis is on how to ensure that the energy project will be eligible for project financing from international finance institutions, and how to comply with standards and principles in the planning, construction and operation of an energy facility. The latter is important both in order to execute the project as safely and sustainable as possible and to avoid or reduce the judgemental risk that can be high when engaging in developing countries.

The main target group is people in leading position in energy companies, with overall responsibility for planning and implementing new energy projects. The compendium can also be used for skills development for employees in energy companies.

This compendium is not intended to establish a new standard, or a common understanding guide between different stakeholders. Some stakeholders might find that certain topics are not being addressed thoroughly enough, but by extensive use of references and links to more detailed information there should be possible to easily access more information on these topics.

The compendium focuses on social and environmental issues, whereas financial and technical issues regarding the project are only briefly discussed. Several of the social and environmental issues will of course influence the economics of the project and the technical solutions, both in the term of enabling external financing and assess to loans and also as a direct cost for the project. But at the same time a project not considering social and environmental issues properly might generate much higher long term costs than a well handled project where extra resources are used to deal with environmental and social issues already from the start. This will both reduce the risk of costly unforeseen events and prevent conflicts with affected stakeholders.

## **1.2 Background**

### ***Large potential for hydropower***

Installed hydropower capacity in operation or under construction in 2008 was around 860 GW. Most of the remaining potential is in countries in Africa, Asia and Latin America. According to the World Bank (2009) the total economically feasible potential hydropower capacity in developing countries exceeds 1,900 GW, of which 70 percent is not yet exploited. These estimates cover only potential new site development. Significant additional amounts of energy and capacity are available from rehabilitation of existing energy and water assets, from redesign of infrastructure, and from modification of water allocations and management (reoperation) for a different set of outcomes.

Norway has a long experience with hydropower, and through this high competence in designing and building hydropower has evolved – an expertise that can be utilised in the development of hydropower capacities in other parts of the world.

### ***Energy and Development***

The project “Energy and Development” was established in May 2009 by Energy Norway, and it will continue until May 2011. The project has as its main objective to ensure that the Norwegian government has a long-term and stable focus of promoting and enabling the use of Norwegian expertise on renewable energy in developing countries. The Energy and Development project should give insight into the market in developing countries for renewable energy and highlight the commercial opportunities inherent in these markets, in order to foster political focus. The project should also contribute to active openness and dialogue on the challenges Norwegian power industry investing in developing countries have met and will continue to meet, both in terms of environment, safety, corruption and human rights. The project is realized in cooperation between Energy Norway, Norfund, SN Power, Norad, Statkraft, Eidsiva Energi, TrønderEnergi, NTE, BKK and Agder Energi, whereas Intpow has status an observer in the project.

Energy and Development has established a sub-project called Sustainable energy investments, consisting of a dialogue between energy companies, civil society and government on how energy investments in developing countries should be done in a sustainable manner. The following actors have participated in the dialogue: Forum for Development and Environment, FIVAS, Norwegian Church Aid, WWF, Rainforest Foundation Norway, Statkraft, SN Power, TrønderEnergi, BKK, Norfund, Statnett, Energy Norway, NVE, GIEK, the Ministry of Foreign Affairs, the Ministry of Petroleum and Energy and Norad. The outcome from the dialogue has provided useful input to this compendium. But the compendium is not a direct result or outcome of the dialogue.

## **1.3 Norwegian Government white paper on CSR**

Another important background is the expectations the Norwegian government have on companies investing abroad, and particularly in developing countries. These expectations are clearly stated in the report to the Storting “Corporate Social Responsibility in global economy (St. meld. nr 10 (2008-2009)).

Norwegian companies should be at the forefront in terms of implementing social responsibility, and thereby contribute to innovation and value creation. The Government expects Norwegian companies that engage in activities abroad to:

- respect fundamental human rights according to international conventions;
- base their operations on the ILO core conventions regarding the right to organise and the abolition of forced labour, child labour and discrimination;
- maintain HSE standards that safeguard employees' safety and health;
- consider environmental impacts and promote sustainable development;
- combat corruption ;
- exhibit transparency in connection with financial flows.

In their CSR efforts, Norwegian companies are expected to:

- integrate a clear awareness of CSR into their boards, management teams and corporate culture;
- build and further develop the necessary expertise within the company;
- acquaint themselves with the OECD Guidelines for Multinational Enterprises and follow them in their operations;
- consider joining the UN Global Compact;
- develop and implement guidelines for social responsibility;
- follow their own guidelines in the supply chain, by setting requirements, implementing control procedures and building capacity;
- take good corporate practices with them from Norway, including models for cooperating with employees and employee representatives;
- develop their own CSR standards, using best practice within their field or branch as their guiding principle and goal;
- establish mechanisms or schemes for whistleblowing or notification of unacceptable circumstances;
- show transparency with regard to the economic, social and environmental consequences of their operations;
- actively seek out information and guidance in connection with international operations, particularly in developing countries.

The Norwegian Aid Directorate, Norad, are using environmental and social guidelines that are built solely on international standards. Norad is also engaged in the development of these standards, for instance through membership in International Hydropower Association (IHA) and their development of Hydropower Sustainability Assessment Protocol (HSAP).

### **1.4 Readers guide**

The compendium consists of two parts: 1) description of the most relevant standards for environmental and social management of renewable energy projects; 2) use of these standards and management of environmental and social issues during the different project phases/stages. The two parts can be read more or less independently, which means that there are some repetitions of text/descriptions between them.

Each part starts with an introduction giving some guidance about the topics discussed and the structure of the rest of the chapters in the part.

For a quick overview of the issues discussed we either refer to the executive summary or the first parts of each chapter. In part 2 the main message in each chapter is summed up at the end – together with the introduction to the chapter this will provide a good, but still superficial, knowledge of the respective issue. Especially in part two we have illustrated some of the issues with examples from Norwegian companies, preferably in text boxes.

In this compendium we use the concept “standards” in a rather broad sense, i.e. that it includes principles, standards, guidelines and tools. It should be noticed that most of the “standards” covered primarily are procedural outlining documentation, consultation and presentation requirements. There are few legally binding standards or guidelines addressing social- or environmental issues.

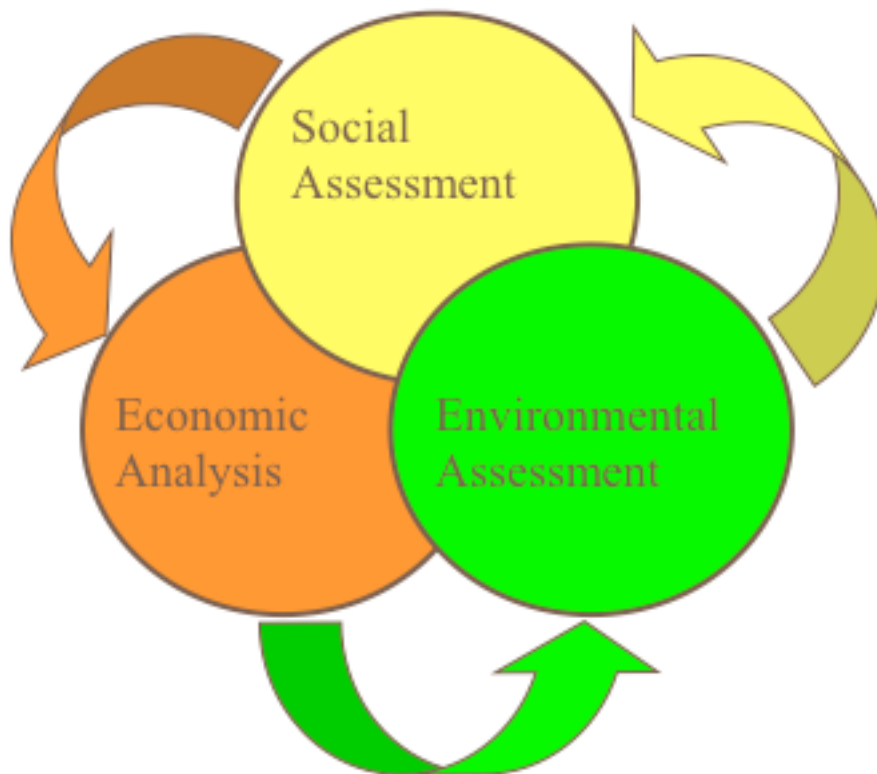
As mentioned the focus is on hydropower<sup>4</sup>, but most of the standards will also apply for other renewable energy projects. Most hydropower projects are likely to have more severe environmental and social impacts than for instance wind power, so that applying the standards we present for other renewable energy projects will in many cases be equal to using the most strict recommendations.

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<sup>4</sup> We use the term hydropower, whereas several of the standards described uses the term hydro-electric.

## PART 1

### INTERNATIONAL STANDARDS





## **2. Introduction to international standards and national laws**

Renewable energy, including large hydropower plants, is and will continue to be an important part of the solution to the climate challenge and other environmental concerns, and for securing a sustainable development. This is especially the case in developing countries where such projects can contribute to needed economic development. On the other side poorly managed energy projects can worsen both the environmental and social conditions in a country, and in particular have negative consequences for those who are directly or indirectly affected by the project. Therefore it is important that energy projects are managed in a sustainable way, ensuring that the renewable energy actually is clean and fair.

### **2.1 *International standards***

“International standards” is a very broad and vague concept, and must be made operational in order to be a useful concept. In our context international standards refers to international and national laws and conventions, voluntary CSR principles and covenants, and mandatory standards and covenants for project finance, with a focus on such standards that regulate environmental and social issues. Furthermore, the focus is on standards that are relevant for a company investing in developing countries. Since many of the company and/or project specific standards or guidelines are founded in international laws and conventions that regulate the state level, such as the Bill of Human Rights, the most important of these are presented in this compendium.

In order to secure sustainable investments several principles and standards have been elaborated, with the aim to define a sustainable project and to guide authorities, organisations and companies working with such investments. The standards have different focus and addresses different actors, but there is a tendency that different standards over time become more harmonised, with similar requirements and terms. In table 2.1 we have structured the standards and principles that are included in this compendium according to status and which actor and sector it applies to.

International conventions are overarching standards, which should be adopted in national legislations in countries that have ratified the respective convention. When operating in these countries a company of course has to follow the national laws and regulations. But also when operating in countries that have not ratified the different conventions, a company should act in accordance with most of these conventions as they establish a form of basis of social and environmental ethics and responsibilities.

Guidelines and recommendation are, at least in principle, voluntary for the actor it targets. An exception is OECD Guidelines for Multinational Companies that OECD countries are obliged to promote towards multinational companies, but where it is voluntary for the companies to adopt these guidelines or not. A company can choose to join a certain initiative (like the UN Global Compact), and these guidelines or recommendations will then become binding for all their operations.

Finance standards are, in most cases, requirements that different financing institutions demand to be met in order to support a project. Once financing has been granted these standards will be binding for that particular project. Some of the standards are based on or reflected in international and national laws and regulations, and will therefore also be legally binding for companies.

**Table 2.1 International standards and principles**

STANDARD	MAIN PURPOSE	Target group/level			
		Government	Financing agencies	Company	Project
I) International conventions					
Bill of Human Rights	Basic rights and obligations. Should be translated to nat. legislation, policies and action for ratifying countries. Basis for CSR guidelines etc.	National legislation <sup>1</sup>			
Environmental conventions		National legislation			
ILO		National legislation			
II) Guidelines/recommendations					
UN SGSR Business & Human Rights	General guidance on human right issues	Vol		Vol	
UN Global Compact	General guidance on CSR			Vol	
OECD Guidelines for multinational enterprises	General guidance on CSR	Bind		Vol	
World Commission on Dams	Decision making framework for dam development	Vol			Vol
IHA Sustainable Guidelines	Guidance for sustainable hydropower				Vol
III) Finance standards					
World Bank Safeguard Principles	Safeguard investments and guide applications for many different kind of projects	Bind			Bind
IFC Performance Standards					Bind
Export Guarantees/OECD Common Approaches <sup>2</sup>			Vol		Bind
Equator Principles			Vol		Bind
Carbon market regulations					Bind
IV) Sector specific auditing framework					
Hydropower Sustainability Assessment Protocol	CSR performance tool for all project phases				Vol

<sup>1</sup> Regardless of national legislation companies and financial institutions are at a minimum obliged to respect human rights wherever they operate.

<sup>2</sup> OECD Common Approached have a wider purpose than just project finance, but for the purpose of this compendium we have chosen to structure it as a project finance standard.

Vol: Voluntary guideline or standard

Bind: Legally binding standard

For the purpose of this compendium the most commonly used standards are probably performance guidelines from international financing organisations, like IFC.

There are several internationally certifiable standards that a company can choose to adhere to that are compatible with, or complementary to the international standards discussed in this compendium. The most relevant are ISO 14000 Environmental

Management<sup>5</sup>, SA 8000 pertaining to labour rights and working conditions<sup>6</sup>, and OHSAS 18001 pertaining to Occupational Health and Safety<sup>7</sup>. ISO 26000 Social Responsibility is also a relevant standard in this regard, however, unlike the other standards listed, a company cannot be certified against it.

### **2.2 National legislation and requirements**

When investing in a foreign country the basic requirements are to act in accordance with the national legislation. It is therefore necessary to get a comprehensive overview over relevant legislation. This will for instance include:

- Energy laws, including licence and permit structure
- Taxation issues
- Expropriation laws and property compensation regulations
- Natural resource and water laws (including water right legislation)
- Labour rights, including issues concerning HSE
- Environmental laws and permits (including EIA regulations)
- Human rights, including Indigenous Peoples' rights

Most countries have more or less comprehensive legislation covering these issues, but the enforcement of these laws is often poor in developing countries. The international standards and guidelines, and in particular those used by financing institutions such as Equator Principle Financial Institutions (EPFI) and Export Credit Agencies (ECA), often make a distinction between OECD and non-OECD countries, and between high and low income OECD countries. Outside of high-income OECD countries, there are often large gaps between international standards and domestic legislation and/or no implementation of local laws. For operations/investments in these countries it is, as a rule, not possible to get international funding or loans by just complying with national laws. Most financing institutions will require the use of international standards on certain issues.

Most countries, even developing countries, have today established Environmental Impact Assessment laws and regulations. The development of these systems has been a activity often supported by bilateral and multilateral aid organisations and as a consequence the thematic coverage and processes show great similarities from country to country. There are examples, however, that some countries have systems with specific procedural steps or requirements that differ from a standard World Bank Group process. It is therefore important to study the local EIA regulations and follow these requirements in preparation of the EIA documents. EIA studies are more often rejected because of procedural shortcomings than the technical and scientific quality of the document.

Some countries have specific water right legislations. It is important for a developer of water resources – like a hydropower developer - to be aware of such legislation and

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<sup>5</sup> [www.iso.org](http://www.iso.org)

<sup>6</sup> [www.sa-intl.org/\\_data/n\\_0001/resources/live/2008StdEnglishFinal.pdf](http://www.sa-intl.org/_data/n_0001/resources/live/2008StdEnglishFinal.pdf)

<sup>7</sup> [www.ohsas-18001-occupational-health-and-safety.com](http://www.ohsas-18001-occupational-health-and-safety.com)

study upfront the restriction existing water rights might pose on the use of water for power production.

For Norwegian investors there is an obligation to obey the laws in the country where they are investing. If these laws and regulations are less strict than the appropriate international standard Norwegian authorities expects Norwegian companies to voluntarily follow the strictest regulations or guidelines.

### **2.3 *Environmental and social impact assessment***

The basic tool for assessing and manage environmental and social impacts of a development project is the Environmental (and Social) Impact Assessment (EIA). Since EIA is a basic concept that we will return to often in this compendium, but also because different actors use different terms to express more or less the same concept, we start with a short description of EIA.

The concept of Environmental Impact Assessment was “invented” around 1970 in USA. In the following decades most countries and many organisations has introduced the EIA as an element of the planning and decision making process of projects.

Initially the main purposes of establishing the EIA process were to improve and modernise the traditional decision making process at that time by:

- increasing the recognition of environment in project planning, and
- increasing public participation in project planning.

The definition of “environment” included both physical and biological environment and social environment and human living conditions, but in the beginning the focus was more on the “natural” environment than on human environment.

Over the years the EIA systems and regulations have focused more and more on the socio-economic and human aspects and on conflicts. This has resulted in a diversification of issues included in the impacts assessment process and a confusing plethora of acronyms. The “old” EIA report has in many cases been renamed ESIA (Environment and Social Impact assessment) or SEIA (Social and Environment Impact Assessment) in order to render the social part of the process more visibility. In some cases the social and environmental parts are issued as separate SIA and EIA volumes.

In parallel with the separation in environmental and social issues the requirements for coverage and specification has increased for many aspects of the EIA. This relates in particular to the Management Action Plans and Resettlement Action Plans which originally were seen as parts (chapters) of the main EIA Report. Today it is in many cases required to prepare separate environmental and/or social management plan reports (ESMPs, EMP, SMP, or other mix of letters) and resettlement action plans (RAP). In addition other reporting requirements are sometimes included in the total “EIA package” like for instance Cultural Heritage Plan, Ethnic Minority Action Plan, Gender Action Plan, Health Action Plan, etc.

A rather uniform practise on how to organise the EIA in different stages has been established. The standard is a 4 stages process with defined purposes and reporting:

- *Screening*: Based on a notification with some project information or an Initial Environmental Evaluation or similar from the developer, the responsible authority will decide on whether the project needs a full EIA, a simplified EIA or no additional documentation.
- *Scoping*: The scoping phase or focusing phase of a full EIA process will contain a preliminary overview of issues and potential problems and result in a proposal for a Terms Of Reference (ToR) for the next phase assessment.
- *Draft EIA*: Based on the ToR approved by the competent authorities the developer (normally supported by a consultant) will prepare a draft EIA.
- *Final EIA*: A final EIA will be prepared taking into account comments from the relevant authorities, specialists, NGOs and general public.

### **3. Standards, principles and guidelines**

In this chapter we briefly describe and discuss the most relevant international standards, principles and guidelines. The chapter is intended to give an introduction to these, but for more details links are provided to internet resources.

The chapter consist of four parts:

- International conventions that regulate the responsibility of states;
- Guidelines/recommendations that typically apply to the company level but also more project specific;
- Finance standard, focusing on standards that a company/developer must comply to in order to be eligible for project financing from different kind of finance institutions; and
- Sector specific auditing tools.

#### **3.1 *Overarching/International conventions (state level)***

There are several international conventions (legally binding treaty for ratifying States) and declarations (non-binding agreements) that are of relevance when investing in renewable energy projects abroad. These declarations and conventions cover several issues, but for the purpose of this compendium the most relevant are universal human rights, environmental issues and labour rights. These conventions apply primarily to the state level, but since they constitute part of the basis of the standards applying for companies and projects it is important also for private companies to be aware of them. In addition private companies are gradually held accountable for violations of these rights, and have, as a minimum, a responsibility to respect these rights, and not contribute to violation of them. When investing abroad companies might experience that the host state does not comply with their obligations. This might lead to human rights violation, and increase the risk of conflicts, thereby putting the implementation of the project at risk. In cases where the state fails to comply with its obligations, the company has to decide if it is willing to take on these responsibilities or if the best choice is to withdraw from the project.

The conventions presented in this compendium are:

- The International Bill of Human Rights;
- Convention on International Trade in Endangered Species (CITES);
- Ramsar Convention ("Convention on Wetlands of International Importance especially as Waterfowl Habitat.");
- Agenda 21 – Program for Development of Ecological Actions;
- Framework Convention on Climate Change;
- Convention on Biological Diversity;
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention);
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);

- Convention "On the Protection and Use of Transboundary Watercourses and International Lakes";
- ILO conventions on labour rights.

In addition we have added a section about indigenous peoples rights.

### **3.1.1 The International Bill on Human Rights**

The International Bill of Human Rights consist of the following declaration and covenants (another word for convention):

- Universal Declaration of Human Rights, UDHR
- International Covenant on Civil and Political Rights, ICCPR
- International Covenant on Economic, Social and Cultural Rights, ICESCR

In addition to these declarations and covenants there are seven other core human rights treaties, covering: racial discrimination; discrimination against women; torture and other cruel, inhuman or degrading treatment and punishment; rights of children; migrant workers; enforced disappearance; and persons with disabilities.

The Office of the United Nations High Commissioner for Human Rights (OHCHR) is the United Nations office with primary responsibility for promoting and protecting the enjoyment and full realization of human rights for all. OHCHR support the work of the United Nations human rights mechanisms, such as the Human Rights Council and the core treaty bodies set up for monitoring State Parties' compliance with international human rights treaties. More information about OHCHR and the international Human Rights treaties can be found at [www.ohchr.org](http://www.ohchr.org).

#### ***The Universal Declaration of Human Rights***

In 1948 the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights. These are common standard of achievement for all peoples and all nations. Every individual and every organ of society, shall strive to promote respect for these rights and freedoms and secure their universal and effective recognition and observance. See [www.un.org/en/documents/udhr/](http://www.un.org/en/documents/udhr/) for the whole declaration.

The declaration is not formally legally binding, but has been adopted in or influenced most national constitutions since 1948. It serves as the foundation for a growing number of international treaties and national laws and international, regional, national and sub-national institutions protecting and promoting human rights.

#### ***The International Covenant on Civil and Political Rights, ICCPR***

This covenant makes some of the rights stated in UDHR legally binding. The rights governed by this treaty include for instance the right to freedom of conscience and religion, freedom from torture and the right to a fair trial. The covenant includes both absolute rights (like the right to life and the right not to be held in slavery) and rights that are not absolute. In the latter case the rights are subject to reasonable limitations, for instance in order to protect national security or the general welfare of a democratic society. The covenant was opened for signature in 1966, entering into force in 1976. So far (2010) 167 parties have ratified the covenant.

The ICCPR has two optional protocols. The first governs a complaint mechanism where individuals alleging that their government has violated their rights according to ICCPR can express their case to the UN Human Rights Committee. The purpose of the second protocol is to eliminate death penalty.

### ***The International Covenant on Economic, Social and Cultural Rights, ICESCR***

The rights expressed in the ICESCR include the right to an adequate standard of living, the right to education, the right to fair wages and to safe working conditions. The covenant was opened in 1966 and entered into force in 1976. So far 160 parties have ratified the covenant.

The rights provided in the ICESCR may be limited by law, but only in so far as it is compatible with the nature of the rights and promotes the general welfare in a democratic society. The ICESCR requires that the State takes steps to achieve the “progressive realisation” of the ICESCR rights, and that they demonstrate in good faith the fulfilment of the rights within their capacities.

The ICESCR has one optional protocol establishing a complaint and inquiry mechanisms. It was adopted by the UN General Assembly in 2008, and opened for signature in 2009. So far the Protocol has 35 signatories and 3 parties, and it will enter into force when ratified by 10 parties.

Monash University Castan Centre for Human Rights Law have published a guide to each of the rights in the ICCPR and ICECCR using practical examples: *Human Rights Translated. A Business Reference Guide*, see: [www.unglobalcompact.org/Issues/human\\_rights/Tools\\_and\\_Guidance\\_Materials.html](http://www.unglobalcompact.org/Issues/human_rights/Tools_and_Guidance_Materials.html)

### **3.1.2 Environmental conventions**

#### ***Convention on International Trade in Endangered Species (CITES)***

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement to which states adhere voluntarily (and it is also possible to withdraw from the convention). Adhering states must implement the provisions in the convention into national legislation. The aim of the convention is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

The convention entered into force in 1975, and has at present (2010) 175 parties. See [www.cites.org](http://www.cites.org) for more information about this convention.

#### ***Ramsar Convention (Convention on Wetlands of International Importance especially as Waterfowl Habitat)***

The Convention on Wetlands of International Importance, called the Ramsar Convention, provides a framework for conservation and use of wetlands and their resources. The treaty was adopted in 1971 and presently has 160 parties. The Convention's mission is "*the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world*".



The Convention uses a broad definition of wetlands, including lakes and rivers, swamps and marshes, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans. The wise use of wetlands is defined as "the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development". For more information see [www.ramsar.org](http://www.ramsar.org)

### ***Agenda 21 – Program for Development of Ecological Actions.***

Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations system, governments, and major groups in every area in which human impacts on the environment. Agenda 21 were adopted by more than 178 governments at the United Nations Conference on Environment and Development (UNCED) held in Brazil 1992. See [www.un.org/esa/dsd/agenda21/](http://www.un.org/esa/dsd/agenda21/) for more information.

### ***Framework Convention on Climate Change***

The United Nations Framework Convention on Climate Change (UNFCCC), entered into force in 1994, sets an overall framework for intergovernmental efforts to tackle the climate change challenge. Currently there are 194 parties to the convention. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions, whereas the Convention primarily just encourages industrialised countries to stabilize GHG emissions. For more information see [www.unfccc.int](http://www.unfccc.int).

### ***Convention on Biological Diversity***

The convention on biological diversity (CBD) has as its objective to promote conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the utilisation of genetic resources. The convention was adopted at the 1992 Rio Earth Summit, and at present it has 193 parties. See [www.cbd.int](http://www.cbd.int) for more information.

### ***Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)***

The international treaty Convention concerning the Protection of the World Cultural and Natural Heritage, was adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1972, and in 2010 187 states had ratified it. The convention seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. See [whc.unesco.org](http://whc.unesco.org) for more information.

### ***Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);***

The Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention) aims to conserve terrestrial, marine and avian migratory species. The Convention entered into force in 1983, and in 2010 it had 114 Parties.

The convention lists migratory species threatened with extinction, and migratory species that need or would significantly benefit from international co-operation. CMS is

in this respect a framework convention encouraging regional cooperation on species listed in the convention. Regional or global cooperation can range from legally binding treaties to less formal instruments, such as Memoranda of Understanding. See [www.cms.int](http://www.cms.int) for more information about the Bonn convention.

### ***Convention on the Protection and Use of Transboundary Watercourses and International Lakes***

The convention on the Protection and Use of Transboundary Watercourses and International Lakes (the UNECE Water Convention) was adopted by the United Nations Economic Commission for Europe (UNECE) in 1992. The objective is to ensure that transboundary waters are used reasonably and equitably. The Convention takes a holistic approach based on the understanding that water resources play an integral part in ecosystems as well as in human societies and economies. In 2003, the Water Convention was amended to allow accession by countries outside the UNECE region. See [www.unece.org/env/water](http://www.unece.org/env/water) for more information.

### **3.1.3 ILO**

The ILO is the international organization responsible for drawing up and overseeing international labour standards. It is a 'tripartite' United Nations agency where representatives of governments, employers and workers jointly shape policies and programmes. The ILO was founded in 1919, to pursue a vision based on the premise that universal, lasting peace can be established only if it is based on social justice. The ILO became the first specialized agency of the UN in 1946.

The main objectives of the ILO are to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues. See [www.ilo.org](http://www.ilo.org) for more information.

The international labour standards are legal instruments drawn up by ILO's constituents, and consist of legally binding conventions and non-binding recommendations. The recommendations are often supplements to conventions with more details on how to apply these. There are a total of 76 "active" conventions, where 8 are fundamental (or core) conventions:

- *Forced labour* (no. 29): This convention prohibits all forms of forced or compulsory labour, which is defined as "*all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily.*" There are however some exceptions where forced labour can be allowed, for instance for compulsory military service, normal civic obligations, and minor communal services performed by the members in the direct interest of the community. It is also required that illegal extraction of forced or compulsory labour is punishable as a penal offence, and that the relevant penalties imposed by law are adequate and strictly enforced.
- *Freedom of Association and Protection of the Right to Organize* (No. 87): This convention regulates the right for workers and employers to establish and join organizations of their own choosing without previous authorization.
- *Right to Organize and Collective Bargaining* (No. 98): According to this convention workers shall enjoy adequate protection against acts of anti-union discrimination (not having to neither join or leave a union in order to be employed, or be

discharged because of union membership or participation in union activities). Workers' and employers' organizations shall be protected against any acts of interference by each other. The convention also enshrines the right to collective bargaining.

- *Equal Remuneration* (No. 100): The purpose of this convention is to ensure that all workers are covered by the principle of equal remuneration for men and women workers for work of equal value. The term "remuneration" include the ordinary, basic or minimum wage or salary and any additional emoluments payable directly or indirectly, whether in cash or in kind, by the employer to the worker and arising out of the worker's employment.
- *Abolition of Forced Labour* (No. 105): This convention prohibit forced or compulsory labour for several reasons, including as a political mean; for purposes of economic development; to increase labour discipline; as a punishment for having participated in strikes; and as a means of racial, social, national or religious discrimination.
- *Discrimination (Employment and Occupation)* (No. 111): In this convention discrimination is defined as any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation.
- *Minimum Age Convention* (No. 138): This convention sets the general minimum age for admission to employment or work at 15 years (13 for light work) and the minimum age for hazardous work at 18 (16 under certain strict conditions). If the economy and educational facilities are insufficient it is possible to set the general minimum age at 14 (12 for light work).
- *Elimination of the Worst Forms of Child Labour* (No. 182): A "child" is a person under 18 years of age. The worst forms of child labour, including all forms of slavery or practices similar to slavery should be eliminated. Ratifying states shall provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration. It also requires states to ensure access to free basic education and, wherever possible and appropriate, vocational training for children removed from the worst forms of child labour.

In addition to these core conventions ILO has designated four conventions as priority instruments. These are called governance conventions as they affect the governance of labour markets etc.

- *Labour Inspection Convention* (no. 81): requires that ratifying states maintain a system of labour inspection for workplaces in industry and commerce. It sets out a series of principles respecting the determination of the fields of legislation covered by labour inspection, the functions and organizations of the system of inspection, recruitment criteria, the status and terms and conditions of service of labour inspectors, and their powers and obligations.
- *Employment Policy Convention* (No. 122): requires that ratifying states declare and pursue an active policy designed to promote full, productive and freely chosen employment.

- *Labour Inspection (Agriculture) Convention* (No. 129): requires ratifying states to establish and maintain a system of labour inspection in agriculture.
- *Tripartite Consultation (International Labour Standards) Convention* (No. 144): sets forth the meaning of "representative organizations" of employers and workers and requires ratifying states to operate procedures that ensure effective consultations between representatives of the government, of employers and of workers on ILO related matters. Employers and workers shall be represented on an equal footing, and consultations shall take place at least once every year.

The main ILO supervisory body is the Committee of Experts on the Application of Conventions and Recommendations (CEACR). CEACR assesses whether a given Convention is duly applied in law and in practice, i.e. whether legislation is in place, whether it is applied in practice and whether it is reaching the desired results. These assessments are based on reports from ratifying states, but also on CEACR's own investigations. In addition ILO also has a "complaint" procedure for violations of ratified conventions. Whenever a complaint is received and admitted, a tripartite committee is established to examine the case and come up with conclusions and recommendations.

### **3.1.4 Indigenous peoples' rights**

Indigenous individuals hold the same universal rights that are recognized to all individuals. Beside the fact that all general human rights principles and norms apply equally to all, all indigenous peoples also have specific rights as peoples, or cultural groups with a right to uphold, enjoy and further develop their culture within the context of the state they are in. Their rights should be interpreted and applied with regard to the specific historical, cultural, social and economic circumstances of these peoples. Over time there has developed a common understanding that the rights of indigenous peoples encompass all aspects of indigenous culture including rights to lands and resources. A more-or-less intrinsic feature of indigenous peoples is that they have special/traditional ties to a certain land area and that they tend to be the original inhabitants of these lands.

The two main standards governing the rights for indigenous peoples are the ILO convention 169 and the UN Declaration on the rights of indigenous peoples (UNDRIP).

There are no commonly agreed definitions of tribal and indigenous peoples, since this is a very heterogeneous group of peoples. There are, however, some general characteristics and the ILO convention 169 describes tribal and indigenous peoples as:

- tribal peoples whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations;
- peoples who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

Even if no definition of indigenous exists on the international level, the state tends to define who is indigenous on the national level. These national definitions are at times contested by national ethnic groups claiming to be indigenous.

### ***ILO Convention No. 169***

ILO Convention No. 169 on the rights of indigenous and tribal peoples (C169) is an international treaty that is legally-binding for States that has ratified it. It was adopted by the ILO in 1989. So far, C169 has been ratified by 22 States, most of these in Latin-America. ILO C169 consists of 44 articles regulating the rights of indigenous and tribal peoples, see <http://www.ilo.org/ilolex/english/convdisp1.htm> for the full text and an overview of countries that has ratified the convention

Consultations is a main principle in the C169, and Article 6 states that “*governments shall consult the peoples concerned, through appropriate procedures and in particular through their representative institutions, whenever consideration is being given to legislative or administrative measures which may affect them directly*”. Consultations shall be undertaken in good faith and with the objective of achieving agreement or consent to the proposed measures.

Indigenous peoples shall have the right to decide their own priorities for development processes that affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use, and to exercise control, to the extent possible, over their own economic, social and cultural development (article 7). When appropriate, studies shall be carried out in order to assess the social, spiritual, cultural and environmental impact on indigenous peoples of planned development activities. The results of these studies shall constitute a fundamental criterion for the implementation of these activities.

There are several articles covering issues concerning indigenous peoples right to land. The rights of ownership and possession over the lands which they traditionally occupy shall be recognised, and measures shall be taken to safeguard the right to use lands not exclusively occupied by them, but to which they have traditionally had access for their subsistence and traditional activities. The land rights shall also apply to the natural resources pertaining to the lands, including the right of these peoples to participate in the use, management, and conservation of these resources and in the benefits accrued from use of these resources. Governments shall establish and maintain procedures for consulting with these peoples, before undertaking or permitting any programmes for the exploration or exploitation of resources pertaining to their lands.

Indigenous or tribal peoples shall not be removed from the lands which they occupy. In cases where relocation is considered necessary as an exceptional measure, it can only take place with their *free and informed consent* (see box 3.1). If consent cannot be obtained, relocation shall take place only following appropriate procedures established by national laws and regulations, including public inquiries where appropriate, which provide the opportunity for effective representation of the peoples concerned.

The main responsibility for implementation of C169 lies with the States, but the Convention has clear legal implications for private sector actors operating in these countries. In many ratifying countries, there are still severe challenges in terms of applying the Convention in law and practice, particularly with regards to the right to consultation. Other countries, for instance in Asia and Africa, have potential hydropower resources located in areas populated by indigenous peoples, but as long as these countries have not ratified the convention these peoples might have limited national legal protection. The ILO 169 has however, and quite recently, been ratified by Nepal and by the Central

African Republic. Private sector actors risk being caught between the standards of a legally-binding instrument, with institutionalized supervisory mechanisms, and the practice of a given State, which fails to live up to these standards. Evidently, this may pose a risk to the investments of private sector actors.

***UN Declaration on the rights of indigenous peoples (UNDRIP)***

The provisions of C169 and the UNDRIP are compatible and mutually reinforcing. All provisions of C169 are covered in the UNDRIP, while the latter (adopted 18 years later) addresses a number of subjects that are not covered by C169, such as the demilitarisation of indigenous lands, the protection of their traditional knowledge, the right to self-determination and the right to Free Prior and Informed Consent (FPIC).

The UNDRIP was adopted in the UN General Assembly in 2007, and constitute the most recent and fullest expression of indigenous peoples' aspirations. UNDRIP is a standard of achievement to be pursued in a spirit of partnership and mutual respect. The UNDRIP is a broad governance instruments, which specifies the rights of indigenous peoples and the obligations of States. It covers a series of general governance principles, including the right to self-determination, to consultation, participation and free, prior informed consent, as well as more specific rights, to land and resources, education, health etc. The UNDRIP do not establish any new rights but is an articulation of existing rights to the context of indigenous peoples, and serves as an instrument to ensure equality between indigenous peoples and other peoples.

The UNDRIP is a UN Declaration, and therefore not subject to ratifications and not legally binding for states. However, it reflects the collective views of the UN Member States, which must be taken into account by all members in good faith. It may also be reflected in customary international law, general principles of law and existing obligations of States under treaty law. The duty of States to consult with indigenous peoples is also grounded in the core human rights treaties of the United Nations, including the International Convention on the Elimination of All Forms of Racial Discrimination and the International Covenant on Civil and Political Rights. Indigenous peoples regard the UNDRIP as providing the minimum standards required to protect their human rights.

Although the responsibility for compliance with the provisions of the UNDRIP lies primarily with State parties, the principles stated might also have implications for private sector actors.

**Box 3.1 Free, prior and informed consent**

One of the main differences between the UNDRIP and C169 is that the UNDRIP explicitly uses the notion of free, prior and informed consent (FPIC):

- *Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return (Article 10).*
- *States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources. (Article 32).*

FPIC means that consent is given voluntarily, before a decision to undertake a certain activity or project is taken and is built on an understanding of what and how large consequences the activity or project in question can give. The consultation process should have as a target to reach FPIC, and FPIC should also be a bearing principle in communication and negotiations throughout the whole project cycle. For FPIC to be effective it should respect indigenous peoples' rights to control their customary lands, represent themselves through their own institutions and make decisions according to procedures and rhythms of their choosing.

### **3.2 Guidelines and recommendations**

The conventions and declarations described above are, to greater or lesser extent, reflected in several guidelines and recommendations for companies and other actors as well, with the purpose of guiding them on social and environmental matters. Below we present some of the most prominent guidelines, and guidelines that are especially relevant for energy (hydropower) projects, including

- Guidelines for business and human rights, illustrated by the work of UN Secretary-General Special Representative on business and human rights
- Guidelines for overall CSR policies for companies
  - a. UN Global Compact
  - b. OECD Guidelines for multinational enterprises
- Guidelines developed for the energy sector
  - World Commission of dams, a decision framework
  - International Hydropower Associations sustainability guidelines

#### **3.2.1 UN Secretary-General Special Representative on business & human rights**

In 2005 the UN Secretary-General appointed *John Ruggie* as special representative on issues related to human rights and business. His work has mainly been focused on mapping the challenges transnational corporations and business encounter regarding human rights, and to recommend effective means to address these challenges.

The strategic objectives for the special representative has been two-fold:

- To reduce the incidence of corporate-related human rights harm as far and as quickly as possible.
- To level the playing field, i.e. to establish a focal point around which the expectations and actions of relevant stakeholders could converge. The number of public and private initiatives in business and human rights has increased rapidly in recent years, but none of these has acquired sufficient scale to truly shift markets. Hence there is a need to establish an authoritative framework.

Ruggie documents the legal foundation and policy rationale of the States duty to protect human rights from corporate abuses in his 2008 and 2009 official reports, and explains that the corporate responsibility to respect human rights is a standard of expected conduct acknowledged in virtually every voluntary and soft-law instrument related to corporate responsibility.

In his recommendations to the Human Rights Council in 2008 John Ruggie presented a conceptual and policy framework: the *Protect, Respect and Remedy* framework. This framework intends to provide a common foundation for all stakeholders, and thus be instrumental in the work to generate progress over time. The Human Rights Council extended John Ruggies mandate until 2011 with the task of making this framework operational and to promote it.

The framework rests on three pillars:

- the state duty to *protect* against human rights abuses by third parties, including business, through appropriate policies, regulation, and adjudication;
- the corporate responsibility to *respect* human rights, which means to act with due diligence to avoid infringing on the rights of others and to address adverse impacts that occur;
- and access by victims to effective *remedy*, judicial and non-judicial.

A draft “Guiding Principles for the implementation of the Protect, Respect and Remedy framework” was posted on Internet late 2010, and opened for comments until 31 January 2011, with the intention to present a final report in June 2011. Regarding the second pillar, the corporate responsibility to respect human rights, some suggested important guiding principles are:

- The responsibility to respect human rights refers to, as a minimum, internationally recognised human rights, like the International Bill of Human Rights and ILOs eight core conventions (see above), and applies across all activities of the enterprise and through relationships with third parties associated with these activities and regardless of the enterprises size and ownership structure.
- Enterprises should have in place appropriate policies and processes, enabling them to identify, prevent, mitigate and remediate any adverse human right impacts they cause or contribute to.
- Enterprises should state the commitment through policies that are approved by the most senior level, and informed by appropriate consultation with relevant expertise (internal or external). These policies should stipulate the expectations of personnel and business partners, and should be communicated internally and externally and reflected in appropriate operational policies.



- Human right due diligence should be carried out on a regular basis. This process should include assessment of actual and potential human right impacts, integrating and acting upon the findings, and tracking and communicating their performance.
- Integration of the findings across internal functions and processes are important to prevent and mitigate potential adverse human rights impacts. Responsibility for addressing the impacts should be assigned at appropriate level and function and internal decision-making and budget-allocations should be sufficient to allow effective integration.
- Enterprises should track their performance and be prepared to publicly communicate their performance.
- If an enterprise finds that it has been responsible for adverse impacts, it should provide for or cooperate in the remediation of these impacts through legitimate processes.

The draft guidelines have been well received by governments and business actors, whereas human right groups like Amnesty International have been more critical. The latter argue for instance that the draft fails to outline clearly enough how governments should regulate business activity, and how companies in practice should avoid abusing human rights. Instead of just recommending companies to adopt “human rights due diligence” procedures, human rights groups argue these should be mandatory for all private and state-owned companies.

For more information about the work of SRSG see <http://www.business-humanrights.org/SpecialRepPortal/Home>.

### **3.2.2 UN Global Compact**

The UN Global Compact (UNGC) is an international initiative with a purpose to promote corporate citizenship. UNGC applies to the company level, i.e. a company can decide to adopt the principles and to integrate them into own strategies etc.

The UNGC consist of ten principles, stating that business should:

1. support and respect the protection of internationally proclaimed human rights within their sphere of influence (human rights)
2. make sure that they are not complicit in human rights abuses (human rights)
3. uphold the freedom of association and the effective recognition of the right to collective bargaining (labour standards)
4. Uphold the elimination of all forms of forced and compulsory labour (labour standards)
5. uphold effective abolition of child labour (labour standards)
6. eliminate discrimination in respect of employment and occupation (labour standards)
7. support a precautionary approach to environmental challenges (environment)
8. undertake initiatives to promote greater environmental responsibility (environment)

9. encourage the development and diffusion of environmentally friendly technologies (environment)
10. work against all forms of corruption, including extortion and bribery (anti-corruption)

The Global Compact is a public-private initiative, offering a framework for development, implementation and disclosure of sustainable principles and practises. Present there are over 7,700 business participants from more than 130 countries. As it is a leadership initiative the Chief Executive Officer must commit to the principles, supported also by the Board (or equivalent). When joining the initiative a company are expected to make the principles an integral part of business strategy, decision-making processes, operational processes and organisational culture. An annual fee, where the size is dependent on annual sales/revenues, must be paid to the UN Global Compact Office.

On a policy level, the Global Compact is a useful point of reference for companies with regard to signalling their general commitment to human rights, labour rights, environmental and governance issues. Adoption of and reference to the UN Global Compact is not in itself considered by financial institutions as demonstrating adherence to the principles therein. Concrete procedure, plans and management systems are still needed to demonstrate how the policy is operationalised. The UN Global Compact website provides many useful links to tools which can assist companies in developing these procedures and management systems.

Information about the Global Compact principles, benefits of participation etc. can be found at <http://www.unglobalcompact.org/index.html>.

### **3.2.3 OECD Guidelines for multinational enterprises**

The OECD Guidelines for Multinational Enterprises are non-binding recommendations for multinational enterprises, providing voluntary principles and standards for responsible business conduct that is consistent with applicable laws. Observance of the Guidelines by enterprises is voluntary and not legally enforceable. The purpose of the guidelines are to ensure that multinational enterprises operates in accordance with government policies, to strengthen the basis of mutual confidence between enterprises and the societies in which they operate, to help improve the foreign investment climate and to enhance these enterprises contribution to sustainable development.

Multinational enterprise are not clearly defined in the Guidelines, but the term usually comprise companies established in more than one country and linked to each other making it possible for them to co-ordinate their operations in various ways. Ownership may be private, state or mixed. The Guidelines addresses all the entities within a multinational enterprise, i.e. including parent companies and/or local entities. The guidelines offer general orientation on the issue of corporate responsibility, but is not a concrete how-to-do guide. At the same time OECD has published some guidance that have a more concrete focus, like OECD (2005) on environmental tools and OECD (2006) on risk awareness in weak governance zones.

The Guidelines are thoroughly described on [www.oecd.org/daf/investment/guidelines](http://www.oecd.org/daf/investment/guidelines), and below we just give a short introduction to the different tasks addressed in the Guidelines.

Underlying the Guidelines are basic principles stating that enterprises should adhere to established policies in the countries in which they operate, and consider the views of other stakeholders. In their operations enterprises should contribute to sustainable development, respect the human rights, encourage local capacity building working closely with local communities, and encourage human capital formation by creating employment opportunities and facilitating training opportunities for employees. Enterprises should not seek or accept exemptions related to environmental, health, safety, labour, taxation, financial incentives, or other issues. They should support and uphold good corporate governance principles and develop and apply good corporate governance practices, including for instance self-regulatory practices and management systems.

Issues covered in the guidelines include:

- *Employment and Industrial Relations:* Enterprises should respect the right of their employees to be represented by trade unions etc, and engage in negotiations in order to reach agreements on employment conditions. They should not discriminate employees on grounds such as race, colour, sex, religion, political opinion, national extraction or social origin. Furthermore enterprises should contribute to abolition of child labour, and elimination of all forms of forced or compulsory labour.
- *Environment:* Enterprises should take due account of the need to protect the environment, public health and safety. This work should be performed in accordance with existing framework of laws, regulations and administrative practices in the countries of operation, and relevant international agreements, principles, objectives, and standards.
- *Combating bribery:* Enterprises are supposed not to, directly or indirectly, offer, promise, give, or demand a bribe or other undue advantage to obtain or retain business or other improper advantage. Nor should enterprises be solicited or expected to render a bribe or other undue advantage.
- *Consumer Interests:* Enterprises should act in accordance with fair business, marketing and advertising practices and take all reasonable steps to ensure the safety and quality of the goods or services they provide.
- *Science and Technology:* Enterprises should ensure that their activities are compatible with the science and technology policies and plans of the countries in which they operate and contribute to the development of local and national innovative capacity. They should also adopt practices that permit transfer and diffusion of technologies and know-how.
- *Competition:* Enterprises should conduct their activities in a competitive manner, refrain from any anti-competitive behaviour. It is also recommended that they co-operate with the competition authorities.
- *Taxation:* It is important that enterprises contribute to the public finances of host countries by making timely payment of their tax liabilities. In particular, enterprises should comply with the tax laws and regulations in all countries in which they operate and should exert every effort to act in accordance with both the letter and spirit of those laws and regulations.

- *Disclosure:* Enterprises should ensure disclosure of timely, regular, reliable and relevant information regarding their activities, structure, financial situation and performance. The disclosure should follow high quality standards, and the same holds for accounting and auditing.

### ***National contact point, enquires and complaints***

The OECD Guidelines are the only multilaterally endorsed regulatory framework that adhering countries<sup>8</sup> are obliged to promote. All adhering countries must establish a national contact point (NCP), responsible for encouraging observance of the guidelines and promoting the guidelines towards the national business community. The NCP should also handle all enquires about the Guidelines. The Norwegian NCP consist of four members, all appointed based on personal competence and experience. Contact data and more information about the Norwegian NCP can be found at the Ministry of Foreign Affairs web page, see <http://www.regjeringen.no/nr/dep/ud/Tema/norgesfremme-og-kultursamarbeid/norges-omdomme/ncp.html?id=557899>.

Anyone can raise a complaint against a company for violating the guidelines. The national contact point will then assess whether the complaint is valid and if the company is in fact violating the guidelines. The NCP do not have any legal authority, and the main objective is to resolve any issues regarding the guidelines through dialogue with the parties.

OECD Watch, a network of civil society organisations with the aim to facilitate these organisations activities regarding the OECD guidelines, operates an online case database with information on OECD Guidelines cases raised by civil society organisations at National Contact Points. The database contains relevant information about the cases, including the complaint, supporting documents, letters and statements. See <http://oecdwatch.org> for more information about OECD Watch and the cases.

### ***Update of the guidelines***

In 2010 an update of the Guidelines was initiated, with an aim to be completed during 2011. The current guidelines were updated in 2000, but since then changing circumstances and conditions have resulted in a need to revise the guidelines again. The landscape for multinational enterprises is rapidly changing, with more complex production and consumption patterns, and a larger share of investments in non-OECD countries. The financial and economic crisis, the climate change issue and the need to reaffirm development goals are also important factors driving the need for an update.

The main topics in the update are supply chain issues, human rights (especially drawing on the work of the UN Secretary-General Special Representative on business & human rights) and a increased attention on environmental issues such as climate change and bio-diversity. More information about the update can be obtained at [http://www.oecd.org/document/33/0,3343,en\\_2649\\_34889\\_44086753\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/33/0,3343,en_2649_34889_44086753_1_1_1_1,00.html)

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<sup>8</sup> Adhering countries are the 33 OECD member countries and eleven non-member countries: Argentina, Brazil, Egypt, Estonia, Latvia, Lithuania, Morocco, Peru and Romania.

### 3.2.4 World Commission on Dams, WCD

In 1997 the World Bank and the IUCN (International Unit for Conservation of Nature) called together a workshop, in response to the increasing controversies surrounding large dams.<sup>9</sup> The participants were governments, organizations, private sector, international financing institutions and affected peoples. The workshop put together a working group that was to form the World Commission of Dams. The Commission's objectives, as outlined by the workshop, were to:

- *"Review the development effectiveness of large dams and assess alternatives for water resources and energy development.*
- *Develop internationally acceptable criteria, guidelines and standards where appropriate, for the planning, design, appraisal, construction, operation, monitoring and decommissioning of dams"*  
<http://www.dams.org/about/history.htm>.

The WCD built on the UN Declaration of Human Rights, the Right to Development<sup>10</sup> and the Rio Principles<sup>11</sup> to develop a new policy framework and guidelines for energy and water resource development. In short, the three declarations are regarded as worldwide norms for ensuring economically possible, socially fair, and environmentally sustainable development. Figure 3.1 illustrates the main contributions of the WCD, building on the norms from the UN rights and principles above.

#### ***Stakeholder-led process***

The commission worked for over two years, performing in-depth research, and with extensive consultations and dialogue with a wide range of stakeholders. A Stakeholder Forum, consisting of 68 members acted as a sounding board and advisory group for the WCD. In addition the commission draw on a wider stakeholder community for experts and analysts in developing the WCD Knowledge Base, and for funds to support the Commission's work. Four Regional Consultations in different parts of the world provided a platform where 1,400 individuals from 59 countries and from every type of stakeholder group took part. During its two-year lifetime the Commission received 947 submissions from over 80 countries.

#### ***Rights and Risks Approach***

WDC considers the traditional cost benefit analysis as an inadequate tool for effective development planning and decision-making. The main reasons being that the trade-offs involved are too complex to be captured by the traditional analysis and that the values attached to the resources cannot be adequately measured in the context of development. The Commission introduced a rights and risks approach as a superior and more justifiable approach to decision-making. It is considered an effective way to determine who should be involved in the decision-making and which issues should be assessed. It is the opinion of the WCD that such an assessment will lead to fair, negotiated outcomes.

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<sup>9</sup> WCD encompasses all uses of large dams, not just hydropower, but also for purposes like irrigation.

<sup>10</sup> The right to development was adopted by the United Nations in 1986 in the "Declaration on the Right to Development".

<sup>11</sup> The Rio Principles were agreed to at the UN Conference on Environment and Development in 1992.

**Figure 3.1 The WCD policy framework**



Source: WCD (2000)

### ***Strategic priorities***

Building on the first part of the mandate (constructing a knowledge base) WCD developed strategic priorities and policy principles, and WCD Criteria and Guidelines. For optimal decision-making seven Strategic Priorities Areas were identified, see figure 3.2.

**Figure 3.2 The WCD's seven strategic priorities**



Source: WCD (2000)

According to WCD employing the different strategic priorities will ensure equitable and sustainable development of water and energy resources. A thorough description of each of the strategic priorities can be found in WCD (2000). A short description follows here:

1. Any project should seek *public acceptance* through assessing the rights and risk for all parties affected by the project, particularly any marginalized group. All stakeholders must have full information and full provision of legal and other types of support. Projects affecting indigenous and tribal peoples must provide informed, free and prior consent achieved through open and transparent process' conducted in good faith.
2. Trough the *Comprehensive Options Assessment* the developer identifies the need for water, food and energy, and seeks to convey all alternatives to dams that will provide the basic needs identified. The primer goal is to ensure development. Social and environmental aspects are given the same significance as technical, economic and financial factors in assessing the options to dams.
3. The developer must *address existing dams* and examine all changes in benefits and impacts from existing dams imposed by alteration in water usage priorities, physical and land use, or other socio-economic factors that might change over time. The management and operation practices should be adjusted to fit changes in circumstances throughout the projects lifecycle. Social issues must also be addressed. This includes a post-project monitoring and evaluation process.
4. Avoidance of impacts to the ecosystem is prioritized in all phases of decision-making, or when assessing different options. The developer should acquire a good understanding of the ecosystem to ensure the *sustainability of rivers and livelihood*.

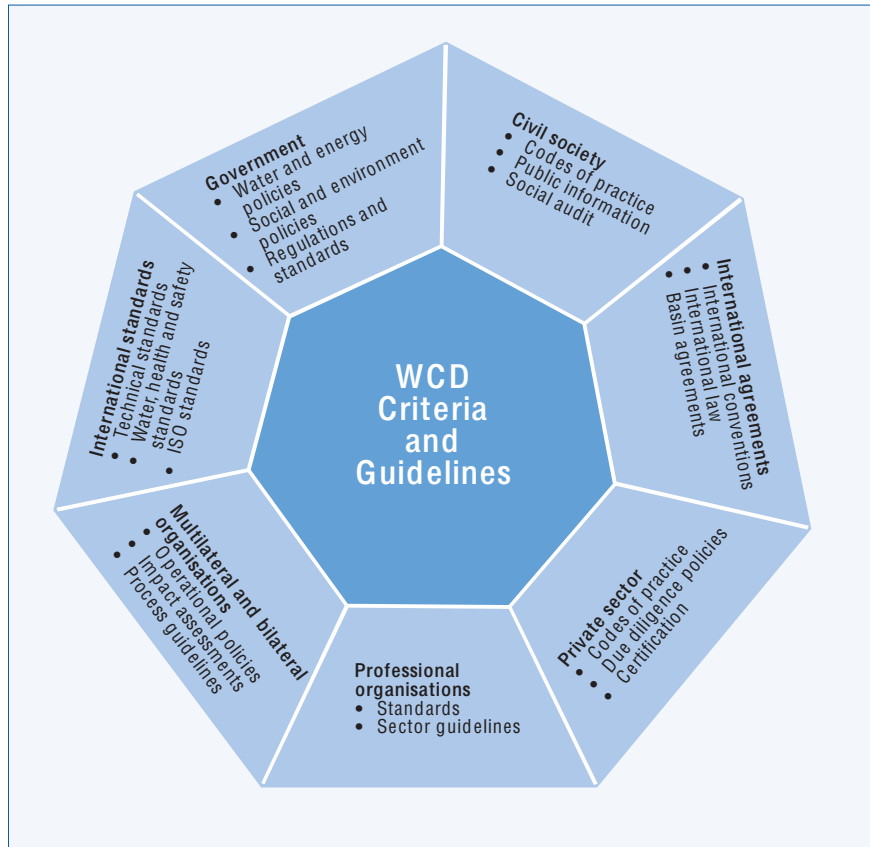


5. People being adversely affected by the project should be the first to benefit from it. Through *recognition of entitlements* and legal means, the developer must ensure joint negotiations resulting in informed consent.
6. *Ensuring compliance* requires that all parties involved meet all commitments made in the assessment phase. Mutually reinforcing incentives and sanctions are required for governments, developers and controllers to meet all commitments. In each project there will be a compliance plan describing all relevant criteria and guidelines. This should specify binding arrangements of all technical, environmental and social commitments. All costs related to the compliance mechanisms and implementation must be built into the project budget.
7. Rivers should be *shared for peace, development and security*. Riparian states are to negotiate specific river basin agreements on the basis of good faith. If a riparian state is to object a dam on a shared river, and the objection is upheld by an independent panel, the dam will not be built. If a government agent is to plan or facilitate the construction of a dam, where there has been contravention of good faith negotiation between riparian states, the external funding should be withdrawn.

### Decision criteria

The WCD outlines a comprehensive and integrated framework for decisions on the provision of water and energy services. The aim is to provide a framework that emphasises a structural process incorporating the full range of social, environmental,

**Figure 3.3 WCD Guidelines and criteria for different sectors**



Source: WCD (2000)



technical, economic and financial criteria and standards. The framework consists of criteria and guidelines and is built on the seven Strategic Priorities outlined above. Further the framework recognises the rights and assesses the risks of all stakeholders in the projects.

WCD's opinion is that social, environmental, governance and compliance aspects have been undervalued in the past. By recognising these elements and applying these criteria and guidelines, rights will be safeguarded, and risk and overall costs will be reduced.

The WCD developed a set of criteria and guidelines that apply to different sectors, and figure 3.3 summarizes the responsibilities of each sector.

The WCD Criteria consists of 5 key decision points:

- Needs assessment: validating the needs for water and energy services
- Selecting alternatives: identifying the preferred development plan from among the full range of options

Where a dam emerges as a preferred option, the following key decision points occur for project preparation, implementation and operation:

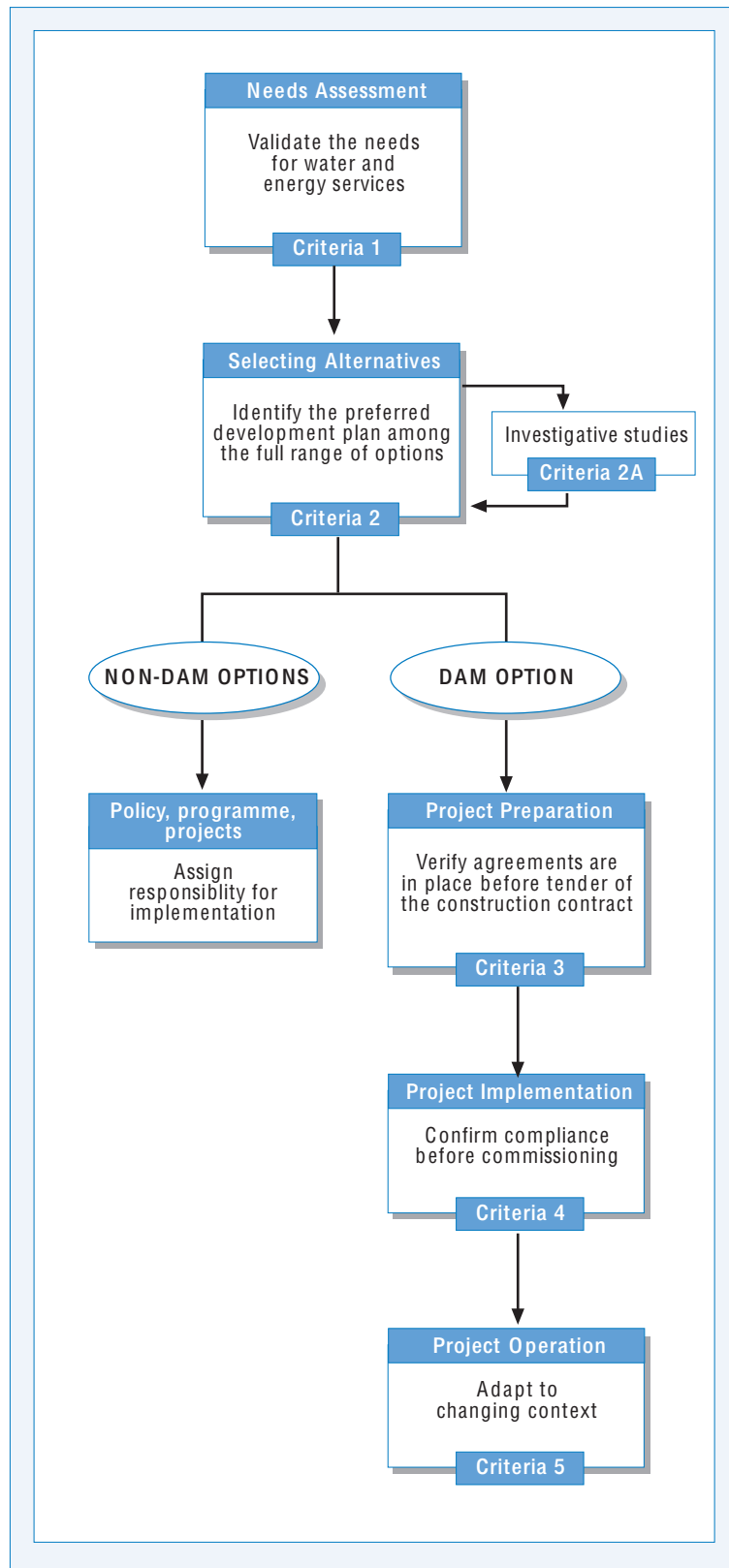
- Project preparation: verifying agreements are in place before tender of the construction contract
- Project implementation: confirming compliance before commissioning
- Project operation: adapting to changing contexts

The decision structure is represented in figure 3.4.

### ***Guidelines for good practice***

The WCD developed 26 guidelines. These guidelines are meant to give advice on how to plan and implement dam projects in general terms. The guidelines are organized according to the seven Strategic Priorities as illustrated in figure 3.5. A more thorough explanation of the guidelines is given in the WCD (2000).

**Figure 3.4 Five key decision points in the planning and project development**



Source: WCD (2000)

**Figure 3.5 WCD Guidelines for sustainable development of dams**

<b>Strategic Priority 1: Gaining Public Acceptance</b> <ol style="list-style-type: none"> <li>1 Stakeholder Analysis</li> <li>2 Negotiated Decision-Making Processes</li> <li>3 Free, Prior and Informed Consent</li> </ol>	<b>Strategic Priority 4: Sustaining Rivers and Livelihoods</b> <ol style="list-style-type: none"> <li>14 Baseline Ecosystem Surveys</li> <li>15 Environmental Flow Assessment</li> <li>16 Maintaining Productive Fisheries</li> </ol>
<b>Strategic Priority 2: Comprehensive Options Assessment</b> <ol style="list-style-type: none"> <li>4 Strategic Impact Assessment for Environmental, Social, Health and Cultural Heritage Issues</li> <li>5 Project-Level Impact Assessment for Environmental, Social, Health and Cultural Heritage Issues</li> <li>6 Multi-Criteria Analysis</li> <li>7 Life Cycle Assessment</li> <li>8 Greenhouse Gas Emissions</li> <li>9 Distributional Analysis of Projects</li> <li>10 Valuation of Social and Environmental Impacts</li> <li>11 Improving Economic Risk Assessment</li> </ol>	<b>Strategic Priority 5: Recognising Entitlements and Sharing Benefits</b> <ol style="list-style-type: none"> <li>17 Baseline Social Conditions</li> <li>18 Impoverishment Risk Analysis</li> <li>19 Implementation of the Mitigation, Resettlement and Development Action Plan</li> <li>20 Project Benefit-Sharing Mechanisms</li> </ol>
<b>Strategic Priority 3: Addressing Existing Dams</b> <ol style="list-style-type: none"> <li>12 Ensuring Operating Rules Reflect Social and Environmental Concerns</li> <li>13 Improving Reservoir Operations</li> </ol>	<b>Strategic Priority 6: Ensuring Compliance</b> <ol style="list-style-type: none"> <li>21 Compliance Plans</li> <li>22 Independent Review Panels for Social and Environmental Matters</li> <li>23 Performance Bonds</li> <li>24 Trust Funds</li> <li>25 Integrity Pacts</li> </ol>
	<b>Strategic Priority 7: Sharing Rivers for Peace, Development, and Security</b> <ol style="list-style-type: none"> <li>26 Procedures for Shared Rivers</li> </ol>

Source: WCD (2000)

### ***Special case: Dams in the pipeline***

The Strategic Policies and guidelines also apply to existing dams or dams under construction. There are possibilities of improving the outcome by applying the Commission's recommendations in all phases of the lifecycle, also the stakeholder groups will benefit from following the recommendations. The framework will help reviewing the project by:

- Assessing the rights and risks associated with the project in question
- Ensuring that all stakeholders have all available information
- Assuring that benefits are shared in a just manner
- Developing and applying mitigation or resettlement plans

- Avoiding irreversible ecosystem impacts
- Designing and implementing compliance mechanisms.

### ***Use of WCD***

WCD should be viewed as a normative tool, providing recommendations and principles, rather than operational standards. Several countries have implemented the findings into national policies (for instance Germany, Sweden, South Africa and Nepal) and numerous financial institutions have given their support to the recommendations, see International Rivers (2010). Some financial institutions require compliance to the WCD in order to provide funding. This holds especially for carbon credits, as the Gold Standard and linking CDM and JI credits to EU ETS (see below).

But, there are also several countries with large hydropower resources that have chosen not to adhere to the whole WCD framework. These countries often endorse the overall principles and strategic priorities, but with some reservations. The Norwegian response to WCD is presented in box 3.2.

#### **Box 3.2 Norwegian Response to the WCD**

The Commission's report is extremely interesting and useful, and will be a valuable contribution to the further debate about large dams.

Norway agrees that people who will be directly affected by a dam-building project should be drawn into the decision-making process;

The Commission recommends a decision-making process which emphasizes negotiations between the developer and local communities that are directly affected (e.g. the local population who will be displaced by a reservoir) and that gives indigenous and tribal peoples the right of veto over development projects. Norway supports the intentions behind the Commission's proposal on this point, i.e. that adversely affected local populations must be given much more influence over decisions than has so far been the case in many countries.

However, in our opinion the Commission has gone rather too far in the direction of consensus-based decision-making systems. The Commission's model might reduce the influence of public-sector bodies on the decision-making process, and this is unlikely to be a constructive way of dealing with major infrastructure projects, which frequently involve conflicts of interest.

A decision to build a dam should not be taken until all affected parties have had an opportunity to express their views on social, cultural and environmental matters relating to the plans and the environmental impact assessment.

Norway has a somewhat divergent opinion on how the decision-making process should be organized. In Norway's view, it is extremely important to establish adequate legislation and a licensing system for dam-building, and to develop national or regional plans for the utilization of water resources. In this connection, we would like to emphasize the sovereign right of states within the framework of international law to make decisions on the use of their own natural resources based on national priorities.

Source: Norad

### **3.2.5 IHA Sustainability Guidelines**

The International Hydropower Association (IHA) is a non-governmental, mutual association of organisations and individuals, with membership open to all involved in hydro-

power ([www.hydropower.org](http://www.hydropower.org)). The association promotes hydropower as a clean, renewable and sustainable technology that can meet the world's growing water and energy needs. In 2004 IHA published guidelines to promote greater consideration of environmental, social and economic aspects in the sustainability assessment of new hydropower projects and the management and operation of existing power schemes (IHA, 2004). These guidelines, or principles, span the following six elements:

- IHA policy
- The role of governments
- Decision making processes
- Hydropower - environmental aspects of sustainability
- Hydropower - social aspects of sustainability
- Hydropower - economic aspects of sustainability

The purpose is to assist hydropower developers and operators with the evaluation and management of environmental, social and economic issues that arise in the assessment, operation and management of hydropower projects.

The core values underlying the guidelines are equity, efficiency, participatory decision-making, sustainability, and accountability, and these are based on the findings in WCD (2000). Furthermore eco-efficiency and the precautionary approach are promoted values.

A decision to develop hydropower resources should be preceded by a broad assessment of existing energy option assessment. Such assessments are normally the responsibility of national and/or regional governments. In this assessment the guidelines recommends use of a total of 11 sustainability indicators to assess the different options against: the need for new energy production against supply-side and demand-side efficiency measures; depletion of non-renewable resources; energy payback ratio; economic viability over the projects lifespan; availability and cost of resources over the projected life of the facility; appropriateness of the technology, levels of efficiency and service required; additional or multiple use benefits; poverty reduction through flow on benefits to local communities via employment, skills development and technology transfer; carbon intensity and greenhouse gas emissions; land area affected (environmental footprint) and associated aquatic and terrestrial ecological impact; and waste products (emissions or discharges to air, water and land).

If the option assessment shows that hydropower is viable and sustainable option, and a decision is taken to develop hydropower, then different hydropower alternatives should be assessed and compared. The purpose is to eliminate unsustainable hydropower projects early in the project planning phase. Prioritization between different alternatives should be based on the following sustainability criteria: upgrading of existing facilities; alternatives with multiple-use benefits; already develop river-basins; minimisation of the area flooded per unit of energy; maximised opportunities for, and not pose significant unsolvable threats to vulnerable, social groups; enhanced public health and/or minimise public health risks; minimised population displacement; avoidance of exceptional natural and human heritage sites; lower impacts on rare, vulnerable or threatened species; maximised habitat restoration and protection of high quality

habitats; associated catchment management benefits and lower sedimentation and erosion risks.

In the decision making process an Environmental Assessment should normally be performed, and at least for all projects that will have significant impacts on the environment. The assessment should be based on good science and factual information.

Operational practices should preferably be guided by a formal environmental management system (EMS), for instance based on recognised systems such as ISO 14001. The environmental management of a hydropower project can include, as appropriate: water quality; sediment transport and erosion; downstream hydrology and environmental flows; rare and endangered species; passage of fish species; pest species within the reservoir; health issues; construction activities.

The management of social impacts could include for instance:

- Changes to resource use and biodiversity in the affected area and the impacts this may have on the local community.
- Distribution of benefits among affected parties.
- Effectiveness and on-going performance of compensatory and benefits programmes.
- Public health issues that can result from the modification of hydrological systems, especially in tropical and sub-tropical areas, where water-borne diseases can be a significant issue. In some reservoirs, a further concern is the management of the temporary rise of mercury levels in fish.
- The impacts of displacement on individuals and communities, including physical loss of homes and lands; transition to alternative means of earning a livelihood; disruption of established community networks and loss of cultural identity.

The economic aspects of hydropower give guidance on how to distribute the benefits in a just and equitable manner. The principal stakeholders in any project are the developer, the electricity user/supplier (if different), governments/state, financing agencies, communities and individuals directly affected by the scheme (for example, traditional resource users). Since most water resources belong to the State, some of the benefit must accrue, either directly or indirectly, to the State. For projects supplying domestic electricity demand, this might take the form of stable energy prices and other benefits to the utility in the form of ancillary services; but for an export project where power is being used in another country, a more explicit system of payment is needed. Benefits to other stakeholders can include, for instance:

- job creation, local industry, recreation, training, improved health care and sanitation, or environmental benefits for local communities.
- energy and power benefits (generally measured in terms of the displaced alternative) and ancillary benefits such as spinning reserve, system regulation and improved thermal efficiency.
- Multi-purpose / multiple use benefits to downstream users and other riparian interests, including irrigation, water supply, flood mitigation, water-based

transport, and the improved regulation of other hydropower stations downstream.

### **3.3 Finance standards**

In order to make a project "bankable", i.e. to ensure financing from international finance institutions and several international banks, the lender has to comply with certain standards or principles. This is especially the case in countries with weak law enforcement, and where just complying with national laws and regulations would put the projects sustainability performance at risk.

Project financing, a method of funding in which the lender looks primarily to the revenues generated by a single project both as the source of repayment and as security for the exposure, plays an important role in financing development throughout the world. Project financiers may encounter social and environmental issues that are both complex and challenging, particularly with respect to projects in the emerging markets.

The World Bank safeguard principles are often used as a form of benchmark, but a large majority of the project financing is based on IFC and the Equator principles. In addition to these standards we also present standards used by so called Export Credit Agencies (ECA) and requirements for making a project eligible for carbon credits.

#### **3.3.1 World Bank Safeguard Principles**

The World Bank provides financial and technical assistance to developing countries, with the aim to fight poverty by providing resources, sharing knowledge, building capacity and forging partnerships between public and private sectors. The World Bank provides interest free credit or grants and low interest mortgages to developing countries for investments in education, health, public administration, infrastructure, financial and private sector development, agriculture and environmental and natural resource management. The World Bank is divided in 5 branches: International Bank of Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA) and International Center for Investment Disputes (ICID).

The World Bank is primarily providing loans to countries or states, and demands that the borrower follow the World Bank's Operational Policies (OP), a comprehensive set of policies and procedures, dealing with the Bank's core development objectives and goals, the instruments for pursuing them, and specific requirements for Bank financed operations. Many investment projects in developing countries are performed as a public-private partnerships (PPP) where the public participation can be financed by the World Bank, and for these projects the banks safeguard principles will apply for the whole project.

The World Bank has identified ten key policies that are critical to ensuring that potentially adverse environmental and social consequences are identified, minimized, and mitigated. These ten are known as the "Safeguard Policies" (SP) and receive particular attention during the project preparation and approval process. There are 10 safeguard policies, comprising the Bank's policies on Environmental Assessment (EA); Cultural Property; Disputed Areas; Forestry; Indigenous Peoples; International Waterways; Involuntary Resettlement; Natural Habitats; Pest Management; and Safety of Dams

(<http://go.worldbank.org/L0WZ82PW60>). Below we shortly describe these, with the exception of Pest Management, Forests and Disputed Areas, since these are of less interest for energy projects like hydropower. For the Operational Manual following these policies see: <http://go.worldbank.org/DZDZ9038D0>.

Since the World Bank primarily assist governments the OP and SP are of minor interest as such for private investors, but the SPs are often used as benchmark (or yard stick) for other guidelines/standards regulating private investments and will therefore have some relevance also for private investors. And as mentioned many investment projects, especially larger ones, are being performed as PPP where World Bank SP can be binding through the public part of the project.

### ***Project categories***

The Bank screens each project to determine what kind of Environmental Assessment or other safeguard policy the project triggers. Then the project is classified as one of four groups depending on location, magnitude, sensitivity and environmental risk. The categorization facilitates in determining which degree and type of EA to apply and if other Safeguard Principles are to be applied, in each case.

The categories are A, B, C and FI, and a project is classified as A) if it is likely to have adverse environmental impacts that are unprecedented, sensitive or diverse and if the impact goes beyond the physical works of the project. In the case that the impacts are less severe, but still potentially harmful for the environment or people, it will be characterized as category B. Both A and B-characterizations requires thorough Environmental Assessments going through all potential negative and positive environmental impacts and recommending any measures needed to mitigate, minimize, prevent or compensate for adverse impacts and improve environmental performance. If a project is likely to have minimal or no environmental impacts, it is classified as category C and screening is the only Environmental Assessment required. For projects involving Bank financing through an intermediary, the category FI applies if the environmental impact is likely to be severe in one of the subprojects. In this case the Bank requires that each FI screen all proposed subprojects and ensure that appropriate EAs are conducted for each subproject. The borrower<sup>12</sup> is responsible for providing the assessments required by the Safeguard Policies, while the Bank can provide general advice.

Certain rules apply considering disclosure. The results should be available for all project-affected groups and local NGOs for projects characterizes as A or B.

During implementation the projects should report on compliance with the measures agreed with the Bank, the status of mitigating measures and what the findings of the monitoring programs are.

### ***Environmental Assessment***

To help ensure that the projects proposed for Bank financing are sustainable and environmentally sound, the Bank requires an Environmental Assessment from the project in question. The EA takes into account the natural environment, human health and safety, social aspects (involuntary resettlement, indigenous peoples and physical

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<sup>12</sup> The borrower is the entity seeking financing from the World Bank.



social resources) and transboundary and global environmental aspects, whilst considering physical and social impacts in an integrated way. It also takes each country's specificities into consideration. The borrower is usually responsible for conducting the assessment and the sovereignty of the Environmental Assessment experts depends on the classification of the project. The content of an Environmental Assessment Report for a category A project is shown in box 3.3.

**Box 3.3                      Environmental Assessment Report for a category A project**

1. Executive summary
2. Policy, legal, and administrative framework: the framework within which the EA has been carried out.
3. Project description: geographical, social and temporal context. Need for resettlement plan, and indigenous peoples development plan. Map of project area
4. Baseline data: relevant physical, biological, and socioeconomic conditions, and anticipated changes not connected to the project. Description of data used: accuracy, reliability, and sources.
5. Environmental impacts: the project likely negative and positive impacts. Mitigation measures.
6. Analysis of alternatives: comparison of feasible alternatives to the proposed project.
7. Environmental Management Plan: Mitigation measures, monitoring, institutional strengthening
8. Appendixes

Source: The World Bank, <http://go.worldbank.org/FPFVBIUFPO>

The procedures for obtaining loans vary among projects beyond the characterization of severity of environmental impact. For Environmental Assessments of dam and reservoir projects the borrower have to appoint a team of independent and recognized entities/-professionals, and the qualifications and terms of references (ToR) of the group must be accepted by the Bank. The group should identify the potential environmental impacts of the project, verify the scope of the assessment, including any resettlements and indigenous peoples concerns, and assess the borrowers capacity to manage an Environmental Assessment process and give advising on the need for an independent group of environmental researchers.

More information about this SP can be found at <http://go.worldbank.org/OSARUTOMP0>.

### ***Physical Cultural Resources***

Physical Cultural Resources are defined as movable or immovable objects, sites, structures, groups of structures, and national features and landscapes that have archaeological, paleontological, historical, religious, aesthetic, or of other cultural significance. They may be located under or over ground, in urban or rural settings or under water. Their interest may be of local, provincial, national or international scale.

The borrower should addresses impacts on physical cultural resources as an integral part of the environmental assessment (EA) process; including screening; developing terms of reference (ToRs); collecting baseline data; impact assessment; and formulating mitigating measures and a management plan.

The borrower should identify physical cultural resources likely to be affected by the project and assesses the project's potential impacts on these resources as an integral part of the EA process. Appropriate measures for avoiding or mitigating these impacts should be addressed. These measures may range from full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost. Furthermore the borrower should develop a physical cultural resources management plan, including measures for avoiding or mitigating any adverse impacts on physical cultural resources, provisions for managing chance finds, any necessary measures for strengthening institutional capacity, and a monitoring system to track the progress of these activities. The physical cultural resources management plan should be consistent with the country's overall policy framework and national legislation.

More information about this SP can be found at <http://go.worldbank.org/UBUBZD7NA0>.

### ***Indigenous peoples***

For the purpose of the policy the term "indigenous peoples" refers to a distinct, vulnerable, social and cultural group that is identified as a distinct indigenous cultural group both by the members and others. The group inhabits a collective attachment to a geographically distinct habitat, and their customs, culture, economy, social life or political institutions are distinct from that of the dominant society. Also, the group may practice indigenous language.

The policy of how to treat indigenous peoples aim at ensuring the dignity, culture, economies and culture of indigenous peoples. The Bank only provides financing if the borrower can provide free, prior and informed consultation results that have broad support in the community, that avoids potentially adverse effect on the indigenous group or, if avoidance is not possible, fully compensates the indigenous peoples affected.

The borrower must perform a social assessment to evaluate the projects potential negative and positive impacts on the indigenous peoples affected. This assessment should be carried out by social scientist, who should be approved by the Bank.

The borrower should prepare an Indigenous Peoples Plan (IPP) or Indigenous Peoples Planning Framework (IPPF)<sup>13</sup>, which should be disclosed for the indigenous peoples communities in a form they can understand. The plans should assure that the affected peoples receive culturally appropriate social and economic benefits, and that potential adverse effects are identified and avoided, minimized, mitigated or compensated.

More information about this SP can be found at <http://go.worldbank.org/IBZABS9UU0>.

### ***International Waterways***

The safeguard principle on international waterways applies to the following waterways:

- any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states;

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<sup>13</sup> This is used for long term investment programs or projects with several subprojects, and where it is not possible to determine in advance if indigenous peoples actually will be affected by the project as it evolves.

- any tributary or other body of surface water that is a component of any waterway described above; and
- any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states--and any river flowing into such waters.

International aspects of a project on an international waterway should be dealt with at the earliest possible opportunity. For such projects the Bank requires that the beneficiary state formally notifies the other riparians of the proposed project and its details. The Bank ascertains whether the riparians have entered into agreements or arrangements or have established any institutional framework for the international waterway concerned. In the latter case, the Bank ascertains the scope of the institution's activities and functions and the status of its involvement in the proposed project. Normally the Bank will only grant loans if the riparians agree to the project.

More information about this SP can be found at <http://go.worldbank.org/RKU8MDSGV0>.

### ***Involuntary resettlement***

Involuntary resettlement can cause severe long term hardship, impoverishment, and environmental damage unless appropriate measures are taken. Therefore this safeguard Principle states that involuntary resettlement should be avoided where feasible, or minimized if no other project is viable. If involuntary resettlement is unavoidable, it should be executed in accordance with sustainable development programs. Persons having to resettle must be included in the plans and process of resettlement and must also be given project benefits. Also, displaced persons should be assisted in their efforts to enhance their standards of living at least as to get to the pre-displacement level or higher (in real terms).

The impacts covered are: involuntary taking of land resulting in relocation or loss of shelter, loss of assets or loss of access to assets, or loss of livelihood or income (irrespective of relocation), or involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. The policy applies to all components resulting in involuntary resettlement, regardless of the source of financing, for all projects that might be related to the project seeking financing from the Bank.

More information about this SP can be found at <http://go.worldbank.org/ZDIJXP7TQ0>.

### ***Natural habitats***

All projects must take the conservation of biodiversity and also the environmental services and products that the natural habitats provide into account. This policy prohibits Bank support for projects which might lead to damage or significant loss of any Critical Natural Habitat. A critical Natural Habitat is one that is either: legally protected, officially proposed for protection, unprotected, but of high conservation value. In other natural habitats, which are not critical, the Bank can only support projects that might cause degradation or significant loss if there are no feasible alternative to achieve the project's overall net benefit or if there exist acceptable mitigation measures, such as compensatory protected areas.

More information about this SP can be found at <http://go.worldbank.org/GIFQKJA130>

### ***Safety of dams***

For the life of any dam, the owner is responsible for assuring safety of the dam, irrespective of the financing source.

If the project in question is a new dam, the Bank requires that the construction and building of the dam is supervised by experienced and competent professionals and that the borrower implements certain requirements concerning design, bid tendering, construction, operation and maintenance of the dam and associated works.

The Bank distinguishes between large and small dams. For large dams (15 meters or more of height) the Bank requires reviews by an independent panel of experts (POE) and preparation and implementation of detailed plans for construction, supervision and quality assurance, instrumentation, operation and maintenance, and emergency. The POE should be independent from the government and/or dam owner, appointed and contracted by the borrower with acceptance of the Bank, consist of three or more experts, and hold periodic panel meetings through the investigation, design, construction, initial filling and start-up phases of the dam. Other requirements are prequalification of bidders and periodic safety inspections of the dam after completion. For small dams the generic dam safety measures designed by qualified engineers are usually sufficient.

More information about this SP can be found at <http://go.worldbank.org/6G6AB69P30>.

### ***Assessment of World Bank SP***

The SP focuses on environmental issues, as six of the ten principles concern this. Regarding human rights this is considered in some parts, but the SP do not cover issues regarding labour rights and working conditions, aspects of community safety outside of dam safety, vulnerable segments of society, community consultation, discrimination, use of private security, livelihood restoration, gender issues, grievance mechanisms and access to remedy.

In September 2010, the Independent Evaluation Group (IEG) of the World Bank Group released a report on the first comprehensive evaluation of all the Safeguard Policies and Performance Standards of the WBG (IEG, 2010). This is not a comprehensive gap analysis against the body of internationally recognised human rights, but the evaluation points at some major gaps. Specifically, the IEG (2010) concluded that “the current World Bank social safeguards do not provide adequate coverage of community impacts, labour and working conditions, and health, safety, and security issues at the project level, provisions that are integral to IFC and MIGA Performance Standards”. The overall findings of the IEG support the view that the WBSP do not address social impacts as comprehensively as the IFC Performance Standards and as such, do not address human rights risks to the same extent. One of the recommendations in IEG (2010) is to establish clearer guidelines and risk assessment criteria for project categorisation, that are consistent throughout the World Bank group, see also [www.worldbank.org/ieg/](http://www.worldbank.org/ieg/).

### **3.3.2 IFC Performance standards**

The International Finance Corporation (IFC) provides financing for private sector investments, mobilizes capital in the international financial markets, and provides advisory services to businesses and governments. IFCs requirements and guidelines that

the clients seeking founding are to follow are the IFC's Performance Standards: <http://www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards>. A web-based learning course on environmental and social performance is available on [http://www.ifc.org/ifcext/sustainability.nsf/Content/RiskManagement\\_Training](http://www.ifc.org/ifcext/sustainability.nsf/Content/RiskManagement_Training).

The Performance Standards are applied in order to manage social and environmental risks and impacts whilst enhancing development opportunities from private investments in its member countries. IFC has identified 8 Standards, where the first Standard seeks to establish the importance of identifying the social and environmental risks associated with the project and the possibilities which lie in communication with the local community that is directly affected by the project. The other Standards establish requirements to avoid, reduce, mitigate or compensate for impacts on people and environment, and possibly improve conditions. A developer/client<sup>14</sup> seeking financing through IFC is obliged to follow these standards throughout the lifetime of the investment.

### ***Revision of the Standards***

The IFC Performance standards are presently under revision, and new standards are expected during 2011. The most important drivers for the proposed changes are changes in the products (financial services) that IFC offers, and a changing global environment with increased focus on issues such as human rights, climate change, ecosystem services and indigenous peoples.

In the revision process the present standards have been reviewed by IFC it self (IFC, 2009a), by Compliance Advisor/Ombudsman (CAO, 2010) and by The World Banks Independent Evaluation Group (IEG, 2010). The main recommendations in these reviews are:

- clearer guidelines and risk assessment criteria for project categorisation, that are consistent throughout the World Bank group.
- clearer framework for which different environmental and social risk and impact factors trigger different levels of engagement
- clarification of engagement requirements for low-impact projects
- addressing emerging issues such as supply chains and climate change
- addressing migrant workers
- increased community engagement on issues such as water
- increased focus on disclosure issues, especially local disclosure
- develop an Environmental, Health, and Safety Guideline for safety of dams
- increased use of independent evaluations of projects with involuntary resettlement.

More information about the revision can be found at:

<http://www.ifc.org/ifcext/policyreview.nsf/Content/Home>

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<sup>14</sup> A client refers to the party responsible for implementing and operating the project that is financed, or the entity that receives the financing.

Our description of the standards is based on the so called phase III version of the revised standards, dated December 1 2010. It is foreseen that any changes in the final document compared with this version will be minor, and not bring any substantial changes.

***Performance Standard 1 – Assessment of Social and Environmental Risk and Impacts***

The objective of PS1 is to:

- Identify and evaluate social and environmental risks and impacts of the project
- To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible minimize or compensate for/offset for risk and impacts to workers, affected communities, and the environment.
- Promote improved social and environmental performance of clients through the effective use of management systems
- Ensure that grievances from Affected Communities and external communications from other stakeholders are appropriately responded to and managed
- To promote and provide means for adequate engagement by affected communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disseminated.

The Standard requires that the client establishes and maintain a Social and Environmental Management System appropriate to the project scale, risk and potential damage. The Management System should incorporate the following elements: Social and Environmental assessment; management program; organizational capacity; training; community engagement (including disclosure, consultation, and grievance mechanism); monitoring; and reporting.

The assessment process and the management system should handle, as appropriate, the issues covered in the following Performance Standards.

The revised version of the PS1 put more emphasis on engagement from affected communities and other stakeholders, and on external communication and disclosure. A major revision is that Free, Prior, and Informed Consent (FPIC) is included as a requirement in case the project will affect indigenous peoples, see PS 7.

***Performance Standard 2 – Labour and Working Conditions***

The PS2 on labour and working conditions has been guided by the ILO core conventions (see section 3.1.3) and the United Nations convention on the rights of the child.

The objective of PS2 is to:

- Promote the fair treatment, non-discrimination, and equal opportunity of workers
- Establish, maintain, and improve the worker-management relationship
- Promote compliance with national employment and labour laws
- Promote due diligence in areas in which labor risks exist, such as migrant workers, workers engaged by third parties, and workers in the client's supply chain

- Protect the workforce by addressing child labor and forced labor
- Promote safe and healthy working conditions, and to protect and promote the health of workers.

The developer shall adopt a human resources policy appropriate to its size and workforce that is consistent with the requirements of PS2. Employees shall be given information regarding their rights under national labour and employment law, including their rights related to wages and benefits. Working conditions and terms of employment, including their entitlement to wages and any benefits, should also be documented and communicated to all employees.

Collective bargaining agreements should be respected, but if such agreements do not exist, the developer shall provide reasonable working conditions and terms of employment that, at a minimum, comply with national law.

The developer shall respect existing workers' organizations, and in cases where such organisations do not exist (for instance restricted by national law) ensure alternative ways for workers to express their grievances. The developer shall comply to non-discrimination in employment.

Children should not be employed in a manner that is economically exploitative, or is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where national laws have provisions for the employment of minors, the client will follow those laws applicable to the client. Children below the age of 18 years should not be employed in dangerous work. All work of persons under the age of 18 should be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work.

### ***Performance Standard 3 – Resource Efficiency and Pollution Prevention***

The PS3 outlines a project approach to pollution prevention and abatement in accordance with internationally available technologies and practices.

The objective of PS3 is to:

- avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities
- promote more sustainable use of resources, including energy and water
- reduce project-related GHG emissions.

It is required that the client considers the ambient condition and applies pollution prevention and control technologies best suited to avoid or, where avoidance is not possible, minimize pollution, while remaining technically and financially feasible, through all stages of the project's lifecycle. Requirements describing abatements considerations; greenhouse gas emissions; and pesticides use and management must also be applied.

EHS Guidelines or other internationally recognized sources should be used when evaluating and selecting resource efficiency and pollution prevention and control techniques for the project. If the host country regulations differ from the levels and measures in the



EHS Guidelines, the most stringent regulation should be achieved. If less stringent levels or measures than the EHS Guidelines are appropriate, full and detailed justification must be provided.

***Performance Standard 4 – Community Health, Safety and Security***

PS4 recognizes that project activities, equipment and infrastructure often bring benefits to communities including employment, services, and opportunities for economic development. However, the presence of projects also leads to exposure to risk and impact from equipment and release of hazardous material.

The objective of PS4 is to:

- Avoid or minimize risks to and impacts on the health and safety of the community during the life cycle of the project, both from routine and no-routine circumstances.
- Ensure that the safeguarding of personnel and property is carried out in a manner that minimizes the risk for the local community.

The client must evaluate the risk and impact to the health and safety of the local community through all phases of the project's lifecycle and establish preventive measures to address the different life cycle stages in accordance with the identified risks and impacts. These measures should favour avoidance of risk and impact over minimization and reduction.

The client should provide descriptions of the following: Action Plan; Infrastructure and Equipment Safety; Hazardous Materials Safety; Environmental and Natural Resource Issues; Community Exposure to Disease; Emergency preparedness and Response; and Security Personnel Requirements.

***Performance Standard 5 – Land Acquisition and Involuntary Resettlement***

Involuntary resettlement refers both to physical displacement and the loss of income sources and livelihood. It is considered involuntary if the affected community does not have the right to refuse land acquisition that result in displacement. Experience shows that direct involvement from the client can ensure cost-effective, efficient, and timely implementation, however the resettlement should be avoided if possible. Negotiated settlements help reduce the need for governmental authority to remove people forcibly. Negotiated settlements can provide fair and appropriate compensation and other incentives or benefits for affected groups. Clients are encouraged to acquire land rights through settlements, even if they have the legal means to gain access to the land in question without the seller's consent.

The objectives of PS5 are to:

- Avoid or at least minimize involuntary resettlement wherever feasible, by exploring alternative project designs
- Avoid forced eviction
- Mitigate adverse social and economic impacts from land acquisition or restriction on land use by (i) providing compensation for loss of assets at replacement cost, and (ii) ensuring that resettlement activities are implemented with appropriate



disclosure of information, consultation, and the informed participation of those affected.

- Improve or restore livelihoods and standard of living of displaced persons.
- Improve living conditions among physically displaced persons through provision of adequate housing with security of tenure at resettlement sites.

The developer should consider feasible alternative project designs to avoid or at least minimize physical or economic displacement. If displacement cannot be avoided, displaced persons and communities should be offered compensation for loss of assets at full replacement cost and other assistance to help them improve or at least restore their standards of living or livelihoods. Furthermore displaced persons and communities should be provided opportunities to derive appropriate development benefits from the project.

Following disclosure of all relevant information, there should be consultations with and informed participation of affected persons and communities, including host communities, in decision-making processes related to resettlement. Consultation shall continue during the implementation, monitoring, and evaluation of compensation payment and resettlement.

Grievance mechanism should be established in order to receive and address specific concerns about compensation and relocation that are raised by displaced persons or members of host communities, including a recourse mechanism designed to resolve disputes in an impartial manner.

If involuntary resettlement is unavoidable, the developer should carry out a census to identify the persons who will be displaced by the project, to determine who will be eligible for compensation and assistance, and to discourage inflow of people who are ineligible for these benefits. In the absence of host government procedures, a cut-off date for eligibility should be established, and well documented and disseminated throughout the project area.

A resettlement action plan (RAP) or a resettlement framework based on a Social and Environmental Assessment should normally be prepared. This should be designed to mitigate the negative impacts of displacement, identify development opportunities, and establish the entitlements of all categories of affected persons (including host communities), with particular attention paid to the needs of the poor and the vulnerable. The implementation of this plan should be monitored and evaluated, and if necessary corrective actions should be taken. If necessary an external audit of the RAP should be performed. All transactions to acquire land rights should be documented, as well as compensation measures and relocation activities. Procedures to monitor and evaluate the implementation of resettlement plans and take corrective action as necessary should be established.

If people living in the project area must move to another location, they should be offered choices among feasible resettlement options, including adequate replacement housing or cash compensation where appropriate, and provided with relocation assistance. The choice of replacement property should be of equal or higher value, equivalent or better characteristics and advantages of location, or cash compensation at full replacement value where appropriate.

If land acquisition for the project causes loss of income or livelihood, regardless of whether or not the affected people are physically displaced, the following requirements must be met:

- Promptly compensate economically displaced persons for loss of assets or access to assets at full replacement cost
- Compensate affected business owner for the cost of reestablishing commercial activities elsewhere, for lost net income during the period of transition, and for the costs of the transfer and reinstallation of the plant, machinery or other equipment
- Provide replacement property of equal or greater value, or cash compensation at full replacement cost where appropriate, to persons with legal rights or claims to land which are recognized or recognizable under the national laws
- Compensate economically displaced persons who are without legally recognizable claims to land for lost assets (such as crops, irrigation infrastructure and other improvements made to the land) other than land, at full replacement cost. The client is not required to compensate or assist opportunistic settlers who encroach on the project area after the cut-off date
- Provide additional targeted assistance and opportunities to improve or at least restore their income-earning capacity, production levels, and standards of living to economically displaced persons whose livelihoods or income levels are adversely affected
- Provide transitional support to economically displaced persons, as necessary, based on a reasonable estimate of the time required to restore their income-earning capacity, production levels, and standards of living

Where land acquisition and resettlement are the responsibility of the host government, the developer should collaborate with the responsible government agency, to achieve outcomes that are consistent with the objectives of this Performance Standard. If government capacity is limited, the developer is supposed to take an active role during resettlement planning, implementation and monitoring.

***Performance Standard 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources***

PS6 recognizes that protecting and conserving the bio-diversity is fundamental to sustainable development. The Standard reflects the objectives of the Convention of Biological Diversity (CBD) to conserve biodiversity and promote use of renewable natural resources in a sustainable manner. Ecosystem services is included as an important aspect of biodiversity conservation and management in the revised performance standard.<sup>15</sup>

The objectives of PS6 are to:

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<sup>15</sup> IFC defines ecosystem services as: benefits that people, including businesses, derive from ecosystems. Ecosystem services are organized into four types of services: (i) provisioning services, which are the products people obtain from ecosystems; (ii) regulating services, which are the benefits people obtain from the regulation of ecosystem processes; (iii) cultural services, which are the nonmaterial benefits people obtain from ecosystems; and (iv) supporting services, which are the natural processes that maintain the other services.

- Protect and conserve biodiversity.
- maintain the benefits arising from ecosystem services
- Promote the sustainable management of living natural resources through the adaption of practices that integrate conservation needs and development priorities.

In order to avoid or minimize adverse impacts to biodiversity in the project's area of influence the developer shall assess the significance of project impacts on all levels of biodiversity as an integral part of the Social and Environmental Assessment process. The Assessment shall take into account the differing values attached to biodiversity by specific stakeholders, as well as identify impacts on ecosystem services. The Assessment shall focus on the major threats to biodiversity, which include habitat destruction and invasive alien species. For critical habitats and legally protected areas qualified and experienced external experts should assist in conducting the Assessment.

For critical habitats, i.e. areas with high biodiversity value, activities can only be implemented if there will be net positive gains for the biodiversity values that are at risk. A mitigation strategy should be described in a Biodiversity Action Plan.

***Performance standard 7 (PS7) – Indigenous Peoples***

PS7 acknowledges that Indigenous Peoples are often among the most marginalized and vulnerable segments of the population. They are particularly vulnerable if their lands and resources are degraded or transformed.

The objectives of PS7 are to:

- Ensure that the development process fosters full respect of the dignity, human rights, aspirations, cultures and natural resource-based livelihood of Indigenous Peoples.
- Avoid adverse impacts of projects on communities of Indigenous Peoples, or when avoidance is not feasible, to minimize, restore and/or compensate for such impacts
- Promote sustainable development benefits and opportunities in a culturally appropriate manner.
- Establish and maintain an ongoing relationship based on informed consultation and participation with the Indigenous Peoples affected by a project through the lifecycle of the project.
- Ensure the free, prior and informed consent (FPIC) of the affected communities of Indigenous Peoples on project design, implementation, and expected outcomes when the special circumstances described in this PS are present.
- Respect and preserve the culture, knowledge, and practices of Indigenous Peoples.

In the Social and Environmental Assessment the developer shall identify all communities of Indigenous Peoples who may be affected by the project within the project's area of influence, as well as the nature and degree of the expected social, cultural (including cultural heritage), and environmental impacts on them, and avoid adverse impacts whenever feasible. If it is not possible to avoid negative impacts these should be

minimized, mitigated or compensated in a culturally appropriate manner. The proposed action should be developed with the informed participation of affected indigenous peoples and contained in an Indigenous Peoples Development Plan, or a broader community development plan. There should be established an ongoing relationship with the affected communities of indigenous peoples from as early as possible in the project planning and throughout the life of the project. This process should be based on informed consultation and participation, and be adjusted to cultural circumstances.

Free, prior and informed consent from the affected peoples is required when projects (i) are to be located on or make commercial use of natural resources on lands subject to traditional ownership and/or under customary use by indigenous peoples; (ii) require relocation of indigenous peoples from traditional or customary lands; (iii) involve commercial use of indigenous peoples' cultural resources.

Development benefits for affected indigenous peoples should be culturally appropriate, with the aim of improving their standard of living and livelihoods and to foster the long-term sustainability of the natural resource on which they depend.

For projects located on traditional or customary lands under use, and where adverse impacts the following steps need to be taken:

- Document efforts to avoid/minimise the size of land proposed for the project
- Document efforts to avoid/minimise impacts on important natural resources and areas
- In case leasing or purchasing of land, all property interests and traditional uses should be identified and reviewed.
- Ensure that affected communities are informed about their rights
- The Indigenous Peoples' land use should be documented by experts in collaboration with the affected communities
- Affected communities of Indigenous Peoples shall be offered compensation. This compensation should preferably be land-based or in-kind and not in cash. Continued access to natural resources or to equivalent replacement resources should be identified, and if this is not feasible alternative livelihoods should be identified.

***Performance standard 8 (PS8) – Cultural Heritage***

PS8 recognizes the importance of cultural heritage for current and future generations. Consistent with the Convention Concerning the Protecting the World Cultural and Natural Heritage PS8 aims to protect irreplaceable cultural heritage and guide clients on protecting the cultural heritage in the course of their actions.

The objectives of PS8 are to:

- Protect cultural heritage from the adverse impacts of project activities and support its preservation.
- Promote the equitable sharing of benefits from the use of cultural heritage in business activities.

The client is required to follow internationally recognized practices for cultural heritage and to design and site a project to avoid significant damage to cultural heritage expected to be found. The client is also required to consult affected communities, and local and national regulatory agencies, and should not move the heritage; it is only to be moved under special conditions.

### **3.3.3 Equator Principles**

Some recent developments in this field have taken place in the context of the so-called “Equator Principles” ([www.equator-principles.com](http://www.equator-principles.com)). These principles were adopted in June 2003 by ten international commercial banks, and are a voluntary set of guidelines for managing environmental and social issues in project finance lending, based on IFC's environmental and social standards. As of June 2006, 41 banks had adopted the Principles, and it is estimated that they now cover approximately 80 percent of global project lending.

The principles were revised in 2006, reflecting revisions to IFC's own Performance Standards on Social and Environmental Sustainability. The new Equator Principles apply to all countries and sectors, and to all project financings with capital costs above US\$ 10 million.

The principles are intended to serve as a common baseline and framework for the implementation by each finance institution of its own internal social and environmental policies, procedures and standards related to its project financing activities. The finance institutions that have adopted the principles will not provide loans to projects where the borrower will not or is unable to comply with the social and environmental policies and procedures in the Principles.

Finance institutions using the principles categorise potential projects in accordance with the environmental and social screening criteria of IFC. For A or B project the borrower must conduct a Social and Environmental Assessment process in order to address the relevant social and environmental impacts and risks of the proposed project. The assessment should also propose mitigation and management measures relevant and appropriate to the nature and scale of the proposed project (Principle 1). The principles and their requirements differs according to where the project is located, demanding stricter adherence for projects in non-OECD countries or OECD countries not defined as high-income by the World Bank Development Indicators Database. For high-income OECD countries a well functioning legal system for environmental and social assessments is assumed and regarded as satisfactory for the finance institution. Below we briefly describe the principles that adhere to projects in non-OECD and low-income OECD countries.

The assessment shall preferably refer to applicable IFC Performance Standards and Industry Specific EHS Guidelines. The borrower must justify any deviation from these standards. The Assessment process shall in all cases be in compliance with relevant host country laws, regulations and permits that pertain to social and environmental matters (Principle 3).

For all Category A and Category B projects the borrower must prepare an Action Plan (AP), which addresses the relevant findings, and draws on the conclusions of the Assessment. The AP shall describe mitigation measures, corrective actions and monitoring

measures necessary to manage the impacts and risks identified in the Assessment. Borrowers shall build on, maintain or establish a Social and Environmental Management System (Principle 4).

For all Category A and, as appropriate, Category B projects the borrower or third party expert shall consult with project affected communities in a structured and culturally appropriate manner. For projects with significant adverse impacts on affected communities, the process shall ensure their free, prior and informed consultation and facilitate their informed participation. The Assessment documentation and AP, or non-technical summaries of these, shall be made available to the public by the borrower for a reasonable minimum period in the relevant local language and in a culturally appropriate manner. The borrower shall take account of and document the process and results of the consultation, including any actions agreed resulting from the consultation. For projects with adverse social or environmental impacts, disclosure should occur early in the Assessment process and in any event before the project construction commences, and on an ongoing basis. Consultation, disclosure and community engagement shall continue throughout construction and operation of the project (Principle 5).

For all Category A and, as appropriate, Category B projects, the borrower shall establish a grievance mechanism as part of the management system. This will allow the borrower to receive and facilitate resolution of concerns and grievances about the project's social and environmental performance raised by individuals or groups from project-affected communities. The borrower will inform the affected communities about the mechanism in the course of its community engagement process and ensure that the mechanism addresses concerns promptly and transparently, in a culturally appropriate manner, and is readily accessible to all segments of the affected communities (Principle 6).

For all Category A projects and, as appropriate, for Category B projects, an independent social or environmental expert not directly associated with the borrower shall review the Assessment, AP and consultation process documentation in order to assist the finance institutions due diligence, and assess Equator Principles compliance (Principle 7). To ensure ongoing monitoring and reporting over the life of the loan, it is required that an independent environmental and/or social expert verifies the borrowers monitoring information (Principle 9).

For Category A and B projects, the borrower shall covenant in financing documentation to the requirements mentioned above, i.e., to comply with all relevant host country laws, regulations and permits; comply with the AP during the construction and operation of the project; provide periodic reports in a format agreed with the financing institution; and decommission the facilities in accordance with an agreed decommissioning plan.

If a borrower does not comply with these covenants, the finance institution will work with the borrower to bring it back into compliance. If the borrower fails to re-establish compliance within an agreed period, the finance institution reserve the right to exercise remedies, as they consider appropriate.

The Equator Principles has published a Best Practice Guidance for EPFI on how to incorporate environmental and social concerns in loan documents, see [www.equator-principles.com/bestpractices.shtml](http://www.equator-principles.com/bestpractices.shtml).

### **3.3.4 Export guaranties**

Export Credit Agencies and Investment Insurance Agencies, commonly known as ECAs, are financial institutions or agencies that provide trade financing to domestic companies for their international activities. ECAs provide financing services such as guarantees, loans and insurance to companies in order to promote exports. The primary objective of ECAs is to remove the risk and uncertainty of payments to exporters when exporting outside their country. ECAs can underwrite the commercial and political risks of export to and investments in overseas markets that are typically deemed to be high risk. ECAs come in a variety of forms, some are part of government departments and others are private companies. Most industrialized nations have at least one ECA, which is usually an official or quasi-official branch of their government. ECAs are collectively among the largest sources of public financial support for foreign corporate involvement in industrial projects in the developing world.

The “Promote, respect and remedy” framework developed by Professor Ruggie (see chapter 3.2.1), require that ECAs act with responsibility to avoid, as a minimum, the infringement of human rights as a result of business activities they support.

#### ***OECD Common Approaches***

The 2007 OECD Common Approaches give recommendations on how official ECAs should consider environmental, and to some extent, social impacts of the projects they support (OECD, 2007). The OECD Common Approaches is not a standard on its own, but give recommendation on what international standards to benchmark project proposals against, in addition to host country laws/standards. Currently, the minimum requirement is to benchmark projects against host country standards and the World Bank Safeguard Principles. Other standards, such as the IFC PS, standards of regional development banks, and sector specific standards (such as the WCD – World Commission on Dams) can be used as benchmark where appropriate, and on an optional basis. The IFC PS are currently only strictly required to be used as benchmark in project finance transactions. Regional Development Bank standards, such as those of the EBRD (European Bank for Reconstruction and Development), are used when these institutions are involved. Standards from the WCD have been used, however seldom since this is optional.

The objectives of the Common Approaches are to promote coherence between different ECAs policies for promoting sustainable development; develop common procedures and processes for environmental review of proposed projects; promote good environmental practice; and, most importantly, promote a level playing field for officially supported export credits.

All applications for official export credit support must be identified to a specific project, screened for potential environmental and social risks, and then categorised by ECAs as A, B, or C according to their potential environmental impacts. Category A projects have the most significant adverse environmental impacts, and in principle include projects in sensitive sectors and sensitive areas. Annex 1 of the Common Approaches provides an illustrative list of possible category A projects, including for instance “Large dams and other impoundments designed for the holding back or permanent storage of water.” The definition of a “large dam” is taken from the International Commission on Large Dams (ICOLD): “ICOLD defines a large dam as a dam with a height of 15m or more from the

foundation. Dams that are between 5 and 15m high and have a reservoir volume of more than 3 million m<sup>3</sup> are also classified as large dams.” Moreover, projects planned to be carried out in sensitive locations such as areas of importance for indigenous peoples or vulnerable groups, or which involve the involuntary resettlement of a significant number of affected people, are (or should always be) categorised as A projects.

When a project is categorised, appropriate information needs to be obtained in order to review the project. All category A projects must submit, as a minimum, an EIA (Environmental Impact Assessment), which is used to benchmark the project against host country standards and international standards as mentioned above.

If there are major gaps between the project and international standards, the ECA can either decline support for the project, or, more commonly, set covenants or conditionalities in order to bring the project up to international standards. This can include action plans and monitoring requirements to ensure implementation of the action plans. These covenants are most often incorporated into the loan or guarantee documents.

The Common Approaches is presently being revised. The OECD is considering inter-alia to revise the international standards by which ECAs are required to benchmark projects against, as well as incorporating more explicit reference to social and/or human rights impacts. As mentioned, the main standard being utilised is the World Bank Safeguard Policies. By using the revised 2011 IFC Performance Standards as benchmark one would improve the review of social issues. An informal working group on Human Rights has been created within the OECD (in which Norway has taken a leading role) in order to provide recommendation on issues like human rights, labour rights, and working conditions, in the revision of the agreement. However, such a revision will require consensus by all OECD members, and thus might be difficult to accomplish.

### ***GIEK's Policy and Internal Procedures: Hydro- Dam Projects***

The Norwegian ECAs, GIEK (Garanti-instituttet for eksportkreditt, <http://giek.no>), policy and procedures for evaluating the environmental and social impacts of projects is based on the OECD Common Approaches. GIEK however benchmarks against IFC PS as a minimum, and in addition to environmental impacts, takes attention to working conditions, labour rights, and social impacts of a project and its associated facilities. All projects are screened for potential environmental impacts, given a categorisation from ‘A – C’ depending on the level of environmental impact, and followed up accordingly with regard to necessary EIAs, environmental management plans and, if needed, covenants.

As instructed by the Government White Paper on CSR (Ministry of Foreign Affairs, 2008) *“Norway (GIEK) is to be a driving force in the OECD’s export credit groups in their efforts to implement concrete guidelines for ensuring good working conditions.”* GIEK therefore takes the issues of labour rights and working conditions into account when assessing projects, including energy projects. GIEK has regularly applied IFC PS 2 on Labour and Working Conditions in dam projects, including requirements for the standard to be applicable to contractors and sub-contractors. Certifiable standards such as SA8000 (for labour rights and working conditions) and OHSAS 18001 (occupational health and safety) are accepted as equivalent to, or better than, IFC PS2. According to GIEK SA8000 may be accepted by companies, which are less familiar with IFC PS, and feel more comfortable using a certifiable standard.



GIEK normally requires ESIA (Environmental and Social Impact Assessments), Resettlement Action Plans, and Compensations Plans in all category A and some category B dam projects. The focus in these assessments is determined on a case-by-case basis, however common issues of priority include, inter alia, biodiversity issues, resettlement, livelihood restoration, and social and environmental impacts from associated facilities, such as access roads and transmission lines. GIEK regularly requires covenants requiring action plans and monitoring schemes which must be systematically followed. Cooperation with loaning institutions is seen as essential in ensuring that covenants for resettlement monitoring, grievance mechanism implementation, etc. are included in loan agreements and followed up. Failure to follow up the special covenants could lead to an event of default on the loan.

### **3.3.5 Carbon markets regulations**

#### ***CDM Regulations for hydropower projects***

Hydropower projects can be implemented under the Clean Development Mechanism (CDM) as defined in the Kyoto Protocol. This is the case if the power generated by the project displaces fossil fuel based power generation, and thereby reduce emissions of climate gases. As a consequence, the project developer will obtain emission reductions certificates (Certified Emission Reductions, CERs) that can be sold to industrialized countries to provide additional revenues to the project.

CDM revenues increase the project's financial attractiveness by improving the key financial indicators and due to the high environmental and economic standards required for CDM projects, many financing institutions are specifically targeting CDM projects or at least prefer CDM projects over "regular" investment projects.

Various methodologies for determining the amount of CERs generated by a project have been approved by the CDM regulatory body, the CDM Executive Board (CDM EB). There exist several approved methodologies for renewable energy projects, where some also are applicable for hydropower plants, see the UNFCCC website (<http://cdm.unfccc.int>). The CDM EB has encouraged project participants to submit new methodologies for consideration and approval, particularly in relation to hydropower projects with reservoirs with no significant vegetative biomass in their catchments area.

However, the CDM EB has clarified that hydropower plants with reservoirs must meet certain power density thresholds to minimise the risks associated with scientific uncertainty concerning greenhouse gas (GHG) emissions from reservoirs. At their 23<sup>rd</sup> meeting the EB approved the "thresholds and criteria for the eligibility of hydroelectric power plants with reservoirs as CDM project activities." The thresholds values are expressed in power densities (calculated from installed power generation capacity divided by the flooded surface area), and are:

- Less than or equal to 4 W/m<sup>2</sup> cannot use current methodologies;
- Greater than 4 W/m<sup>2</sup> but less than or equal to 10 W/m<sup>2</sup> can use the currently approved methodologies, with an emission factor of 90 g CO<sub>2</sub>eq/kWh for project reservoir emissions; and
- Greater than 10 W/m<sup>2</sup> can use current approved methodologies and the project emissions from the reservoir may be neglected (EB 23, Annex 5).

### ***Joint Implementation regulations for hydropower projects***

A Joint implementation (JI) project as defined in the Kyoto Protocol can obtain emission reduction certificates via a simplified procedure (Track 1) if the host country fulfils certain UNFCCC requirements (<http://ji.unfccc.int/>). Under the Track 1 process, the eligibility of the project and the calculation of emission reductions are subject to national rules and procedures and the national rules and regulations for hydropower projects would apply.

However, if the host country does not fulfil the UNFCCC requirements the JI project must follow approval procedures determined by the JI regulatory body, the Joint Implementation Supervisory Committee (JISC). Under track 2 the project developer can choose to follow approved CDM eligibility rules and methodologies, whereby the “thresholds and criteria for the eligibility of hydroelectric power plants with reservoirs as CDM project activities” as described under the section on CDM Regulations will apply.

### ***The CDM/JI Gold Standard***

The Gold Standard is an independent standard and certification scheme for high-quality CDM and JI projects. It was designed to ensure the projects are real and verifiable and make measurable contributions to sustainable development. As of March 2009, 60 environmental and development non-profit organizations internationally officially had endorsed The Gold Standard (<http://www.cdmgoldstandard.org/>).

Hydropower projects are eligible for Gold Standard registration. However, specific eligibility criteria apply to these projects:

- Project activities involving hydropower plants with an installed capacity of less than, or equal to 20 MW are eligible for Gold Standard registration.
- Hydropower projects with an installed capacity greater than 20 MW will be evaluated on a case by- case basis by the Gold Standard Foundation, in the light of a Prefeasibility assessment and in accordance with procedures provided by the Gold Standard Foundation. These projects will have to provide the following additional information as part of the documentation to be reviewed:
  - A Local Stakeholder Consultation Report, in accordance with guidelines for a Local Stakeholder Consultation. For project activities involving existing dams (such as dams built for irrigation purposes), the stakeholder consultation shall include a site-visit by local stakeholders taking part to the consultation.
  - A report (‘Compliance Report’) showing that the project activity is in compliance with the latest WCD guidelines, validated by a Designated Operational Entity (DOE) or Accredited Independent Entity (AIE).

### ***The EU Emission Trading Scheme***

The EU allows participants to use a certain amount of emission reductions from CDM and JI projects in order to cover their emission reduction requirements.

The EU has attached certain conditions for the use of emission reductions from hydropower projects. According to article 11 b (6) of the Emissions Trading Directive “*In the case of hydroelectric power production project activities with a generating capacity*

*exceeding 20 MW, Member States shall, when approving such project activities, ensure that relevant international criteria and guidelines, including those contained in the World Commission on Dams November 2000 Report “Dams and Development – A New Framework for Decision-Making” will be respected during the development of such project activities.”*

To avoid uncertainty around the interpretation of this article the EU has established a set of uniform guidelines and a template for hydropower projects guiding project proponents through the preparation of a compliance report. The EU Harmonised Guidelines and Template for Hydropower CDM projects (2009) aims to ensure that hydropower projects are developed along the options least damaging to the environment and addressing such issues as gaining public acceptance, and fair and equitable treatment of all affected stakeholders, including local and indigenous people.

The Compliance Report is modelled after Chapter 8 of the WCD recommendations, consisting of seven strategic priorities for good practice and must be approved (validated) by an Independent Validating Entity.

More information about linking CDM and JI projects to EU ETS can be found at the EU ETS website: [http://ec.europa.eu/clima/policies/ets/linking\\_ji-cdm\\_en.htm](http://ec.europa.eu/clima/policies/ets/linking_ji-cdm_en.htm).

### **3.4 Sector specific auditing tools**

Most of the standards included in this compendium require that the developer uses an environmental management system, and some also include social issues in this. As mentioned there are several general management systems that can be used for this purpose. There are however no standard management system that is designed especially for the energy sector (as far as we know). But an auditing tool for hydropower projects has recently been developed – this is not a management system, but adhering to this tool can both support a structured management of the project and constitute the basis of a management system.

#### ***Hydropower Sustainability Assessment Protocol***

The Hydropower Sustainability Assessment Forum is a collaboration of representatives from different sectors who aim to develop an enhanced sustainability assessment tool to measure and guide performance in the hydropower sector, based on the Hydropower Sustainability Guidelines developed by IHA (see above). These guidelines determine the relevant issues to be included in the assessment protocol and the measurement approach for each of these issues. The members of this forum represents developing and developed country governments, the hydropower sector, social and environmental NGOS (WWF, Oxfam, TI, Nature Conservancy), and commercial and development banks.

The process of developing the Hydropower Sustainability Assessment Protocol (HSAP) have involved experts on key hydropower sustainability themes, on-ground assessments of schemes, workshop sessions focused on the Protocol, and input from key stakeholder reference groups.

HSAP is a measurement system mainly intended for internal purposes, based on self-assessment. Subject to terms and conditions of use, the Protocol is available to all parties without charge, see [www.hydropower.org](http://www.hydropower.org). The Protocol is free to be used without license for informal purposes, such as informing dialogue, guiding business systems and

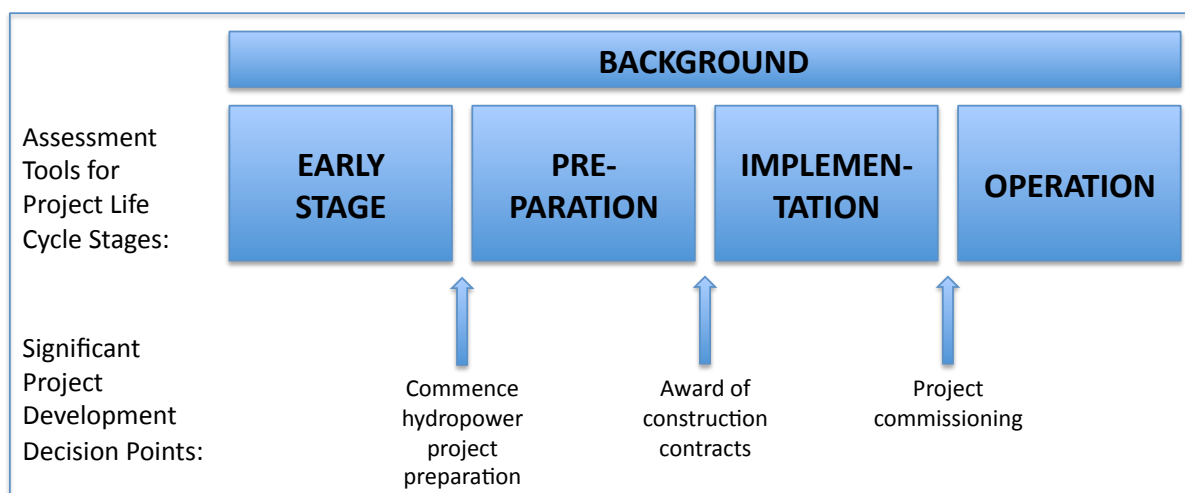
processes, and for in-house assessments. Formal use of the Protocol, including translation, training, disclosure of assessment results and any income- and fee-generating activities, is controlled by license. The terms and conditions for obtaining a license to formally use the Protocol will be made publicly available, as soon as they are finalized.

The protocol is structured in four stages: early stage, preparation, implementation, and operation, see figure 3.6 for the overall structure. The different issues handled in each stage are listed in table 3.1.

For the stages Preparation, Implementation, and Operation the protocol is based on a scoring system, in order to establish a sustainability profile for the project. Each topic has a score ranging from 1 to 5:

- Level 1: there are significant gaps relative to basic good practice
- Level 2: most elements of basic good practice have been undertaken, but that there still are significant gaps
- Level 3: basic good practice, which all projects should be able to achieve regardless of circumstances. For some issues level 3 is consistent with the demands in WCD.
- Level 4: all elements of basic good practice have been achieved and in one or more cases exceeded – but not all
- Level 5: proven best practices, which can be reached for many projects but not without significant effort. It is unlikely that a project will score 5 on all topics.

**Figure 3.6 HSAP Assessment tools and major decision points**



Source: IHA, HSAF

**Table 3.1 HSAP Topics by stages**

<b>ES- Early Stage</b>	<b>P – Preparation</b>	<b>I – Implementation</b>	<b>O – Operation</b>
ES-1 Demonstrated needs	P-1 Communications & Consultation	I-1 Communications & Consultation	O-1 Communications & Consultation
ES-2 Options Assessment	P-2 Governance	I-2 Governance	O-2 Governance
ES-3 Policies & Plans	P-3 Demonstrated Needs & Strategic Fit		
ES-4 Political Risks	P-4 Siting & Design		
ES-5 Institutional Capacity	P-5 Environmental & Social Impact Assessment & Mgmt	I-3 Environmental & Social Issues Mgmt	O-3 Environmental & Social Issues Mgmt
ES-6 Technical Issues & Risks	P-6 Integrated Project Management	I-4 Integrated Project Management	
ES-7 Social issues & Risks	O-4 Hydrological Resources		O-4 Hydrological Resources
ES-8 Environmental Issues & Risks			O-5 Asset Reliability & Efficiency
ES-9 Economic & Financial Issues & Risks	P-8 Infrastructure Safety	I-5 Infrastructure Safety	O-6 Infrastructure Safety
	P-9 Financial Viability	I-6 Financial Viability	O-7 Financial Viability
	P-10 Project Benefits	I-7 Project Benefits	O-8 Project Benefits
	P-11 Economic Viability		
	P-12 Procurement	I-8 Procurement	
	P-13 Project Affected Communities & Livelihoods	I-9 Project Affected Communities & Livelihoods	O-9 Project Affected Communities & Livelihoods
	P-14 Resettlement	I-10 Resettlement	O-10 Resettlement
	P-15 Indigenous Peoples	I-11 Indigenous Peoples	O-11 Indigenous Peoples
	P-16 Labour & Working Conditions	I-12 Labour & Working Conditions	O-12 Labour & Working Conditions
	P-17 Cultural Heritage	I-13 Cultural Heritage	O-13 Cultural Heritage
	P-18 Public Health	I-14 Public Health	O-14 Public Health
	P-19 Biodiversity & Invasive Species	I-15 Biodiversity & Invasive Species	O-15 Biodiversity & Invasive Species
	P-20 Erosion & Sedimentation	I-16 Erosion & Sedimentation	O-16 Erosion & Sedimentation
	P-21 Water Quality	I-17 Water Quality	O-17 Water Quality
		I-18 Waste, Noise & Air Quality	
	P-22 Reservoir Planning	I-19 Reservoir Preparation & Filling	O-18 Reservoir Management
	P-23 Downstream Flow Regimes	I-20 Downstream Flow Regimes	O-19 Downstream Flow Regimes

Source: IHA, HSAF

The HSAF Knowledge Base captures information considered by the Forum during development of the Protocol, and it can be accessed at [http://www.hydropower.org/sustainable\\_hydropower/HSAF.html](http://www.hydropower.org/sustainable_hydropower/HSAF.html). The Knowledge Base is a resource with information on Protocol topics and cross-cutting issues, including the standards that were important reference points for the different topics and themes addressed in the Protocol. Important reference points include the World

Commission on Dams 2000 report, the UNEP Dams & Development Project (UNEP, 2007), the IFC Performance Standards, the World Bank and other multi-lateral safeguards policies, ISO standards, and numerous UN declarations and conventions.

### **3.5 *Comparing standards***

As the presentation above shows there are several standards and/or guidelines that have developed more or less in parallel. Over time there has been a tendency that they become more similar to each other, at least when it comes to overarching and strategic principles. The inclusion of FPIC in the latest revision of the IFC Performance Standards is an example of this tendency. There are however still some differences between them, differences that in some cases have a limited importance whereas others are more fundamental.

We do not intend to perform any in-depth assessment and comparison of the different standards presented in this compendium, but in table 3.2 we have listed some important issues and how they are treated in the standards. As can be seen from the table the main difference is in the coverage. The only standard covering all issues is IFC Performance standard. World Commission of Dams also have a comprehensive coverage, with the exception of labour and working conditions.

**Table 3.2 Comparing different standards**

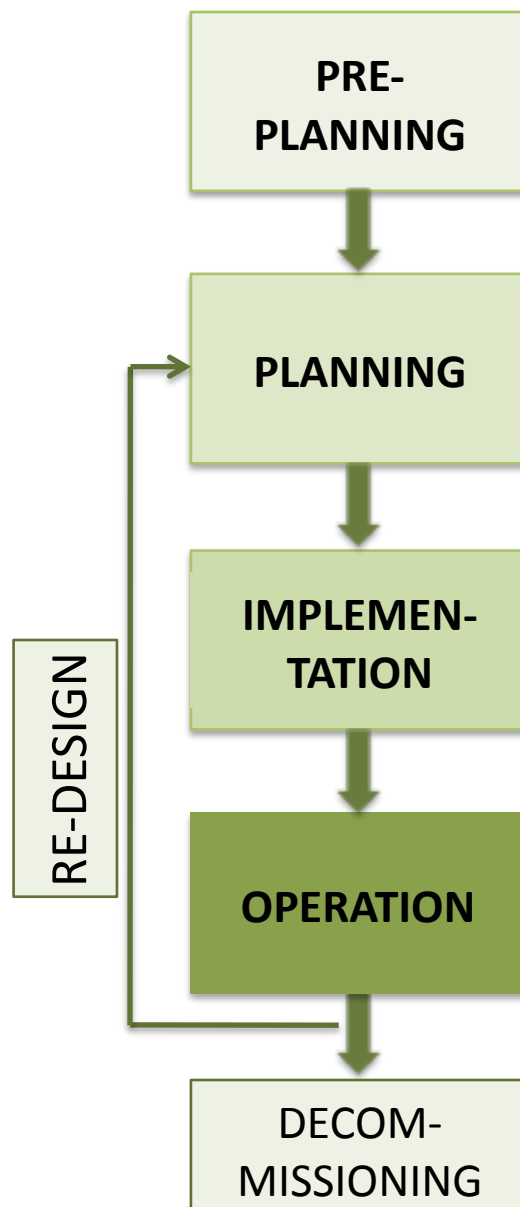
	Based on	EIA	Labour & working condition	Communication
<b>OECD Guidelines ME</b>	ILO, Rio declaration, Aarhus Convention	Assess environmental, health, and safety-related impacts, if significant prepare an appropriate EIA Establish EMS Improving environmental performance over time	Trade unions Negotiations Abolition of child labour and forced labour non-discriminatory Observe standards not less favourable than competing employers in host country OHS	Disclosure should be timely, regular, reliable and relevant.  Communicate and consult with affected communities
<b>WCD</b>	UDHR, UN Right to development, Rio decl.	Options assessment (Strategic Impact Assessment), covering environmental, social, health and cultural heritage issues. Project level: comprehensive impact assessment		Public acceptance strategic priority. Recognition of rights, avoiding risks and safeguarding entitlements. All stakeholders should be informed Negotiated decision process
<b>IHA</b>	WCD	Options assessment responsibility of government. Project level: EIA based on good science and factual information. Establish EMS	Utilise local and regional labour resources	Stakeholder given opportunities to participate in decision making Transparency principle Adequate consultation with affected stakeholders Seek community acceptance
<b>WBSP</b>	Not explicit	EIA needed, scope depending on project category (A-C, FI).		Consultation with affected groups for category A & B Disclosure: relevant, timely, accessible, understandable
<b>IFC PS</b>	Not explicit	ESIA Priority: Avoid risk and impacts. If not possible minimise and/or compensate Management system	Fair treatment Non-discriminatory Collective bargaining Trade unions Equal opportunities Restrictions on child labour Abolition of forced labour	Stakeholder engagement is essential Procedures for external communication and dissemination of information Two-way exchange with affected communities

	<b>Social development (Benefit sharing, resettlement etc.)</b>	<b>Indigenous peoples and other vulnerable groups</b>	<b>Examples of other issues covered</b>
<b>OECD Guidelines ME</b>	Contribute to social progress		Bribery Consumer interests Science and technology Competition Taxation
<b>WCD</b>	Affected people should be the first to benefit Compensation for lost assets: replace, substitute, cash & allowances Livelihood restoration & enhancement BS: induce demonstrable improvements in standard of living Distributional analysis of who gains and who loses Grievance mechanism	FPIC Self-identification	Independent Review panel for social & environmental matters Compliance Shared Rivers
<b>IHA</b>	Improving living and health conditions Support additional community infrastructure Benefits should be equitably distributed Displacement processes should be fair and equitable, and all possible alternatives assessed		Safety (1 <sup>st</sup> priority) Community health and safety
<b>WBSP</b>	Involuntary resettlement should be avoided or minimised. Benefit sharing in order to restore/improve standards of living for displaced persons Resettlement Action Plan	Free, prior and informed consultation Self-identification	Physical cultural resources Safety of dams International waterways Disputed Areas
<b>IFC PS</b>	Avoid or at least minimise displacement. Compensation and benefits for displaced at full replacement cost. Improve or restore standard of living Resettlement Action Plan Grievance mechanism	FPIC if project located on land IP have traditional ownership to, require relocation, or involve commercial use of their cultural resources	Cultural heritage Ecosystem services



## PART 2

### GUIDE TO THE USE OF STANDARDS



## 4. Introduction

In this part of the compendium the standards are seen in relation to the different stages of a project, or more specifically give guidance on how to work with the issues addressed in the standards presented in part 1. The purpose is not to give detailed guidance, but to point at issues and challenges that need to be handled, and give good examples on how this can be done. For more detailed guidance we refer to guidelines for the respective standards and such, and we also provide links to internet pages where these documents can be found.

In the guidance the requirement in the IFC performance standards are used as benchmark, partly because these standards constitute the basis for the standards used by different financing institutions, and partly because Norad is adhering to these standards and also requires that Norwegian companies operating abroad adheres to. It should however be noted that this in many cases are equivalent to minimum requirements, and that the aim for most projects should be to reach beyond these requirements. Stricter requirements are commented throughout the text as appropriate.

As in HSAP the project stages are divided in four major sections: pre-planning (early stage), planning (preparation), implementation/construction and operation. The guidance follows the topics in HSAP to a certain extent, but with focus on environmental and social issues.

Before turning to the project phases or stages we will shortly discuss the benefits of overall company policies on sustainability that covers all operations, regardless of where these take place.

### 4.1 *Company policies*

A good starting point in the work with CSR and sustainability issues are to commit to a sustainability policy for the whole company. This can take the form of certification according to international standards like ISO 14000, ISO 26000 or EMAS, or just an obligation to follow these standards without certification. Adhering to the OECD Guidelines for Multinational Enterprises, however non-binding, can give a signal that sustainability issues are of importance to the company. For larger companies membership in the UN Global Compact can also be a viable option. By being a member the company commits to follow the principles in the compact, and get access to information, tools and resources that can guide the company and a network of other companies around the world (see [www.unglobalcompact.org](http://www.unglobalcompact.org) for a description of benefits from membership). For smaller companies, where the member fee is regarded as high and/or membership is seen as irrelevant, a voluntarily commitment to the principles could be useful.

#### ***Overall sustainability principles***

Overall sustainability principles for a company typically include references to:

- Acting responsible and transparent
- Caring for the environment
- Delivering value to local communities
- Developing competence

- Promoting health and safety
- Supporting human rights

It is important that the sustainability policy, regardless of system or guidelines being followed, is anchored at the top level. The UN Global Compact, for instance, requires that the CEO must commit to the principles.

A sound corporate business structure, policy and practices, which addresses transparency, integrity and accountability issues are helpful in order to manage external governance issues that can arise in projects in developing countries, for instance institutional capacity shortfalls, political risks including transboundary issues, public sector corruption risks, and to ensure compliance with legal requirements and requirements in applicable international standards.

Processes to ensure ethical business practices can include, for example: a business Code of Ethics, an employee Code of Conduct, a business Integrity Pact, anti-bribery or anti-corruption policies, procedures for reporting and investigation), and a whistle-blowing arrangement. Guidelines etc. for such documents include for instance Transparency International's Business Principles for Countering Bribery (BPCB, [www.transparency.org/global\\_priorities/private\\_sector/business\\_principles](http://www.transparency.org/global_priorities/private_sector/business_principles)) and the Global Reporting Initiative (GRI, [www.globalreporting.org](http://www.globalreporting.org)). Box 4.1 and box 4.2 gives examples of an overarching environmental policy and a Code of Conduct.

### **Box 4.1      Statkrafts Business Policy regarding sustainable development**

Statkraft is committed to the sustainable development of natural resources and shall seek to achieve outstanding environmental performance locally and globally. Incidents that impact the environment shall be avoided.

The main environment principles are:

- All activities shall be guided by care for the environment
- Recognised competence shall characterise the environmental management
- Outstanding environmental performance shall be achieved through continuous improvement
- Environmental impacts related to all activities shall be communicated openly

A company-wide environmental management system (EMS) supports these governing principles for the environment.

Source: Statkraft

### Box 4.2 SN Power Code of Conduct

SN Power Code of conduct is intended to guide employees on how to handle challenges that are likely to occur when operating in emerging markets. The code is based on Norwegian Law and the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. It integrates recommendations from Transparency International and the UN Global Compact. The issues covered in the code are for instance:

*Safety: SN Power is committed to maintaining a work environment that is safety conscious and a work force that is equipped, properly trained, and aware of safety and health requirements and guidelines.*

*Integrity and professionalism: employees are required to read, understand and commit to the company's Business Principles and Core Values before joining the company and will be regularly reviewed as to their compliance. Employees must refrain from all conduct that can have a negative effect on their colleagues, the working environment or SN Power. This includes harassment or intimidation, sexual harassment, discrimination or other behaviour that colleagues or business associates may regard as threatening or degrading.*

*Corruption and fraud: SN Power employees shall never offer or accept a bribe, facilitation payment, kickback or other improper payment for any reason. The direct or indirect offer, payment, soliciting or acceptance of bribes in any form by employees, is unacceptable.*

*Impartiality (conflict of interest): Employees must act in the Company's best interest at all times, are prohibited from taking advantage of their positions with the Company for personal gain or for the gain of family members, friends and acquaintances.*

*Confidentiality: Information other than general business knowledge and work experience that becomes known to the individual in connection with the performance of their work shall be regarded as confidential and treated as such.*

*Political activity: SN Power does not make contributions to political parties, individual politicians or organizations directly affiliated with political parties. SN Power may participate in public debate when this is in the Company's interest. The individual is free to participate in political activities on his/her own behalf.*

*Transparency: SN Power is committed to transparency and accuracy in all its dealings. SN Power's business information will be communicated accurately and fully, both internally and externally. All accounting information shall be true and fair, and registered and reproduced in accordance with laws and regulations, including relevant accounting standards.*

*Fair Competition and anti-trust laws: SN Power will compete within the framework of the anti-trust and competition rules in the markets in which the Company operates*

*Professional work standards: SN Power employees should refrain from buying sexual services when on assignments and business trips for SN Power...SN Power is a drug-free workplace. Employees are prohibited from reporting to work unfit for duty as the result of use of any controlled dangerous substance, such as alcohol or other illegal drugs.*

*Compliance and reporting of concerns: Line management is responsible for making the Code of Conduct known to all employees and for promoting and monitoring compliance with the Code. Managers must ensure that activities within their area of responsibility are carried out in accordance with the requirements set out in this document. Managers are responsible for communicating the requirements and for providing advice with respect to the interpretation and application of the rules.*

Source: SN Power ([www.snpower.com](http://www.snpower.com))

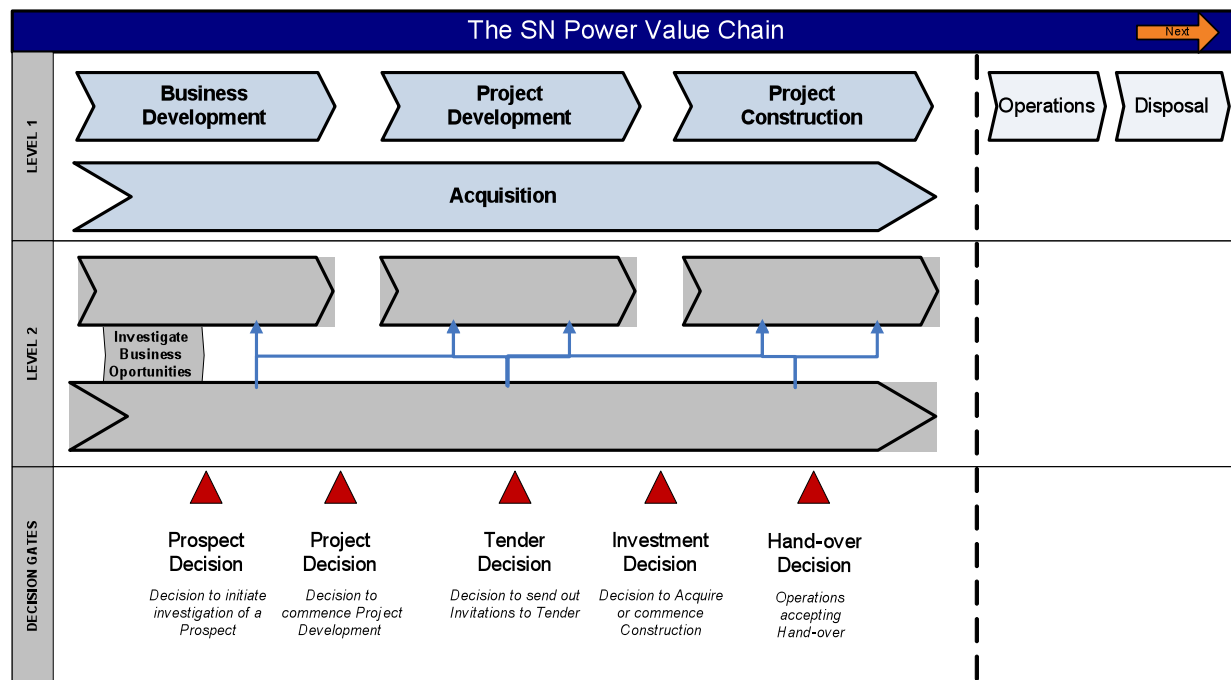
### Management system

In order to become operational the sustainability policy should, preferably, be reflected in the different management systems that the company uses. By doing this sustainability

issues will stay on the agenda, and become an integral part of all business operations. Below we give a short description of the project management system used by SN Power (PROMAS). Other issues regarding project management and management tools are more thoroughly discussed in chapter 6.

SN Power has developed an internal project management system, PROMAS, which describes the distinct phases of project execution. PROMAS is a decision gate model adapted to SN Powers business and value chain, see figure 4.1.

**Figure 4.1 PROMAS – Project Management System**



- Level 1 shows the SN Power Value Chain
- Level 2 describes the main processes within the value chain, but is still on a high-level perspective
- Level 3 shows the workflows within level 2 processes. Navigate to level 3, by clicking on the activities in Level 1 or 2
- Level 4 describes the activities within each functional area for the different work flows. Reach to level 4 by clicking in level 3

Source: SN Power

The different activities in PROMAS are

- **Start:** activities required to define objectives, scope, resources, organisation and associated budget and time schedule for the project. Ensure that actions are taken for knowledge transfer from previous projects. An approved Project Charter is mandatory to be concluded during start up for all new projects/phases (except Business Development).
- **Process:** activities required to fulfil the objectives of the Project. The processes are subdivided into “swimming lanes” showing the sequence of activities for the following functional areas and coordination between them: Owner & Decision Maker; Reviewing & Controlling; Project Management; Legal, Contract, Licences and Concessions; Market, Finance, Finance Modelling and CDM; Technical Management; CSR, HSE and Integrity Management.
- **Internal review:** for quality assurance purposes. Includes review for each functional area and a qualitative and quantitative risk assessment at relevant

Decision Gates. The Project will be presented to and reviewed by the SN Power Executive Management Team (EMT) at important stages in the development, including before taking the Project to a Decision Gate. The EMT will also review prospects in respect of their strategic fit and suitability for SN Power before approving that the Project moves into Project Development.

- *Documents:* output from each phase of the project includes the following documents: Country Memo; Screening Report; Project Charter; Appraisal Report; Project Manual; Hand over and close out Report.
- *External review:* review by Investment Committee at relevant Decision Gates.
- *Decision Gate:* “Go or No Go” decision by SN Power Management or SN Power Board, dependent on project exposure and whether the project is within or outside the approved strategy. The basis for such decision is the result of preceding activities as documented in the Appraisal Report.
- *Evaluate process:* to ensure a thorough evaluation of the process as a mean for future improvement and to exchange experiences with other projects on “lessons learned”.

#### **4.2 Project phases and important topics**

The reminder of Part 2 is structured according to the four project phases pre-planning, planning, implementation, and operation (including decommissioning). These phases can be overlapping in time, but normally there is a decision point whether to proceed with the project or not between these phases. Table 4.1 gives an illustration of the different stages and key challenges in each of them. International Principles are most often of very general nature and their purpose is to provide overall orientation. They are expected to have been integrated either in national legislation (conventions), more specific sector guidelines or part of a company’s CSR management system and are therefore excluded in this table, alternatively they could be illustrated with a line following the whole project cycle.

**Table 4.1 Project stages and key challenges**

Project Management Phase <b>DECISION</b>	<i>Key challenges/objectives</i> <b>Related international reference documents</b>
<b>STRATEGIC ASSESSMENT / PRELIMINARY INVESTIGATIONS</b>	
Country / Regional Analysis( Investment risk screening)	<i>Is the potential project context sustainable enough for a major investment from a political, legal, regulatory, institutional, market, policy, geological hydrological, social and economic standpoint ?</i>  <b>IHA HSAP Early Stage section</b>
<b>Invest in further studies</b>	Outcome: Company internal report of confidential nature
<b>PROJECT PREPARATION</b>	
Prefeasibility Study	<i>Identify river reaches for potential project sites by using existing information</i>  <b>IHA HSAP Project preparation</b>  Outcome: Company internal report recommending or not to invest in further studies / if decision favorable, this report will accompany the proponent's notification of the government about its interest to consider project development
<b>detailed feasibility study application for financing</b>	<i>maybe Pre-consultation (scoping) for larger projects to streamline ToR</i>
Feasibility Study	<i>Study technical, environmental social, economic and financing project alternatives in details and recommend one</i>  <b>World Bank Safeguards, IFC Performance Standards, OECD</b>
<b>Public Hearing coordinated by the government where the proponent answers all written requests and has to demonstrate how the request is integrated into the finalization of the project design</b>	
Outcome: Public Summary report with multiple sector report used as support document in order to apply for a license (construction and operation) at the local government and to close financing with various financing agencies	
<b>PROJECT IMPLEMENTATION</b>	
Tendering Construction <b>Commissioning / transfer</b>	
<b>PROJECT OPERATION</b>	
Monitoring Follow-up Re-design/Decommissioning	

Many of the environmental and social concerns are important throughout most of the project phases, but in order to avoid repetitions we have chosen to discuss each topic/issue thoroughly in the most relevant project phase, with a more superficial discussion in other project phases. Table 4.2 is meant to give guidance on where the

most important topics are discussed, but also in which project phases these topics are relevant.

**Table 4.2 Environmental and social concern and their place in the project cycle**

Topic	Pre-planning	Planning	Implemen- tation	Operation
Country knowledge	Main			
Financing opportunities	Main			
Communication and consultation	X	Main	X	X
Plans (EIA, RAP, IP, BS etc)				
Preparation	X	Main		
Implementation and monitoring			Main	X
Project management	X	Main	X	X
Contract management		X	Main	X
HSE and working conditions		X	Main	X
Re-planning and decommissioning				Main



## 5. Pre-planning/Early stage

The pre-planning phase or early stage is when a proposed or possible project is being screened, in order to assess project risks and opportunities and to identify challenges before proceeding with a more detailed project investigation. This process should identify both conflicts and consensus relating to energy and water needs and opportunities in a sustainability context.

The key topics in the first stage are a review of existing needs, options and policies, an assessment of the country including political situation and institutional capacities, followed by an assessment of the social and environmental risks. The latter should of course also include an early assessment of economic and technical risks, but these are not subject in this compendium. Norconsult (2010) gives a thorough description and assessment of success factors and challenges for investments in clean energy in developing countries, and give useful guidance on several issues including financial considerations throughout the whole investment.

In this chapter the following topics are being discussed:

- Entry points: what constitute the early stage is partly dependent on when the developer enters the project cycle, i.e. how well developed the project plan is
- Country knowledge: especially when entering a new country it is important to perform a thorough assessment of potential risk factors in the country, including for instance political risk, legislation, and human right risk factors.
- Financing opportunities: what financing institutions are available, and what does these require concerning environmental and social performance
- Areas of concern: i.e. issues that it is important to assess as early as possible in order both to decide whether to proceed with the project/investment and to initiate proper management of these issues to avoid conflicts and possible delays of the project.
- Use of consultant: in this phase it is necessary to involve both international and national consultants.

### 5.1 Entry points

There are several entry points to a new project for a developer, and there is no “normal” trajectory that most projects follow. The main entry points will however be:

- Respond to an existing pre-feasibility or screening study, which can be financed by a donor organisations (Norad for instance).
- Participation in a bidding processes for an already partly developed project.

In the first case the developer often have the possibility to perform own studies and assessments in order to thoroughly assess if to proceed with the development. In the latter case the opportunity window is often strictly limited, and the option for own assessments are also limited. In such cases one has to rely on earlier assessments.

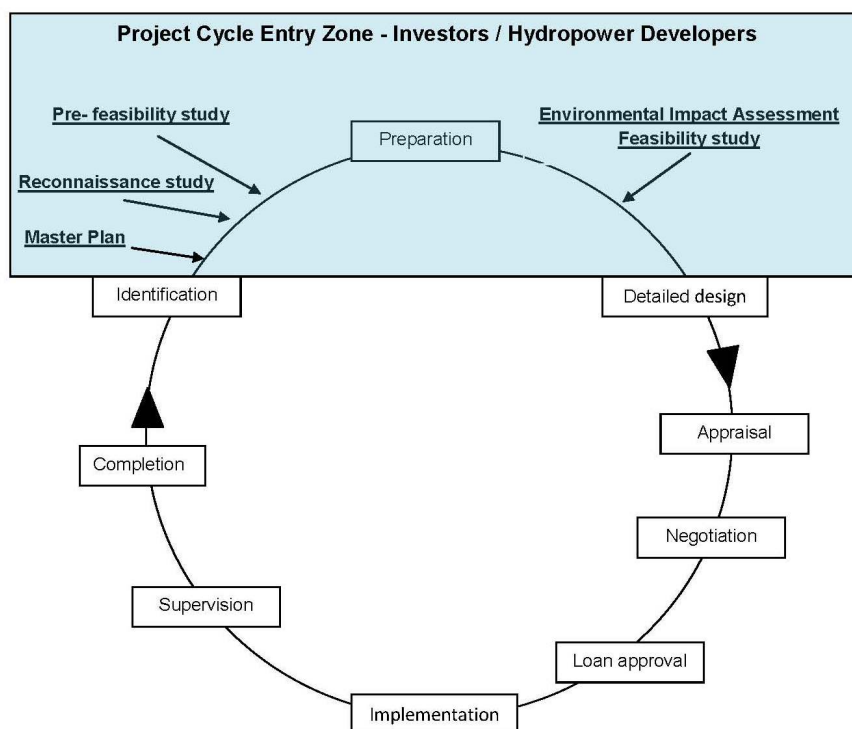
In most cases available investment opportunities will be based on an existing Project Identification Study or on a Master Plan /Hydropower Development Strategy that already has been prepared by the government.

The developer will normally acquire a project either through direct negotiations with the government resulting in an agreement or by competitive bidding for a concession. In some cases the government may have brought the studies up to feasibility level but normally the existing studies are at a lower level. A developer must therefore be prepared to start from the Identification Study or Master Plan level where the technical information in many cases are restricted to a sketchy project layout with dam and powerhouse locations, hydrological flow data and electricity generation potential. In these cases the developer may need to carry out an initial project confirmation study before proceeding with negotiations and further technical studies.

When a developer enters a project at an early development stage he may have to decide whether to first do a pre-feasibility study or to proceed directly to a full feasibility study. This decision will depend on the uncertainty and risk that is associated with the project. In some cases the uncertainty about the project's technical and economical feasibility will make it advisable to conduct the feasibility studies in two stages. Normally a pre-feasibility study will provide a developer with a cost accuracy of plus-minus 15-20 per cent while a feasibility study will predict development costs with an uncertainty range of plus-minus 10 per cent.

A developer may thus enter into a hydropower development project at different stages of planning, spanning from Identification/Master Plan study level and all the way up to Detailed Design. This is illustrated in the figure below showing the most common entry stages in relation to the project development cycle.

**Figure 5.1 Project cycle and possible entry points**



Since the scope of the early stage is very project dependent, varying from the early identification of a potential project to an existing pre-feasibility study it is not always relevant to address early stage and the preparation stage as two distinctly separate stages. Even though there is a clear decision point that separates them some processes

and plans will be more “continuous”, starting in the early stage and completed or continued in the following stage. When to start the different processes and plans will be project specific. In this compendium we leave the preparation of plans to next stage, and focuses on assessments that are of most importance early, like gaining knowledge about the country, possibilities of international funding and identification of areas of special concern.

## **5.2 Country knowledge**

Success in emerging markets requires in-depth knowledge of local business requirements, legal and regulatory frameworks and networks within the private and public sectors. It is therefore important to require early knowledge about the framework conditions both at the national level and at the regional level.

Issues that need to be addressed in this mapping include, but are not limited to:

- political risk
- legislation
- existing policies and plans
- institutional capacity
- human rights

### ***Political risk***

In many developing countries political risk is a major obstacle for sustainable investments. The risks are associated with changing policies, governments and administrations, that might result in unilateral withdrawal from investment projects and other obligations. Other risk factors include for instance government action preventing entry of goods, expropriation or confiscation, currency inconvertibility, politically motivated interference, government instability, or war. It is important to assess these risk factors as early as possible, in order to properly understand and manage political risks that can influence the development and management of a project.

In addition to a basic assessment of political risks, the assessment may try to achieve:

- a high level of confidence that the project will be able to manage a broad range of political risks, which can be of importance in order to ensure project funding; or
- opportunities for the project to contribute to or cooperate with measures that encourage reduction or mitigation of political risks.

In the case the project includes transboundary issues, i.e. include or influence several countries it is important to include an assessment of institutional arrangements upstream and downstream of the project and basin-wide sharing of resources.

Related to political risk are corruption and transparency, and many developing countries have a low score in Transparency International's Corruption Perception Index, meaning that the corruption level is high. According to Norconsult (2010) the construction and energy sectors are being perceived as the most corrupt sectors in many countries. High corruption is as such a large risk factor, threatening to delay and increase the costs of the project, and to be in conflict with requirements regarding

transparency and disclosure. Corrupt governments can also promote projects that are not in the best interest of the country, therefore it can be wise to have governmental master plans “verified” by independent bodies/organisations.

For the country analysis including risk assessment, international resources and consultants like Transparency International (<http://www.transparency.org/>), Economist Intelligence Unit (EIU, <http://www.eiu.com/public/>) and Global Insight (<http://www.ihsglobalinsight.com>) can give valuable insight. Transparency International has launched an international initiative aimed at preventing corruption in construction projects, and collected several business tools etc. that can be used to prevent corruption in such projects:

[www.transparency.org/tools/contracting/construction\\_projects](http://www.transparency.org/tools/contracting/construction_projects)

### **Legislation**

It is also important to early get an overview of relevant legislation in the country, and the enforcement level/practises. This assessment should cover:

- Laws and regulations pertaining to investment and establishment of companies or joint ventures;
- Energy laws and laws regulating the process of obtaining concessions/licences for building and operating of hydropower plants;
- Environmental laws and regulations governing the EIA/ESIA process and the process for obtaining an Environmental Release /Licence.
- Land and property laws that regulate ownership, use, sale and compensation of land and fixed assets.

With regard to the permitting process for hydropower development it is important to note the differences between the process in Norway and in other countries. In Norway the process of obtaining a hydropower development concession is combined with the environmental permitting process. In countries with investment opportunities in hydro-power sector a developer normally will have to go through two separate processes, one environmental licensing process and one process for obtaining permits and licences for building and operating a hydropower plant. Normally, an Environmental Licence from the environmental authorities/ ministry of environment has to be obtained before a developer can apply for a building and operating licence from the ministry responsible for hydropower development licences and permits.

In a situation where a developer needs guaranties and international funding the environmental and social studies have to be “bankable”, that is, compatible with the requirements of the international banks and funding organisations such as the IFC. In spite of the fact that many developing countries, thanks to bilateral and multilateral assistance, now have relatively modern and up to date EIA legislation, it may be necessary to do a comparative “gap” analysis between national and international EIA requirements. The objective of this analysis would be to ascertain that environmental and social studies and plans that shall be prepared are comprehensive enough and in line with international standards.

This analysis may be conducted during the scoping stage by the EIA consultant in order to secure that the ToR for the environmental and social studies addresses all topics and

issues demanded by international standards. The analysis is carried out through an in-depth reading and study of national laws, regulation and policies and holding these up against the specific requirements mentioned in international standards and policies.

One area where one often will find discrepancies is in the fields of social study and provisions for compensation and resettlement assistance. For instance, it is not uncommon that according to national laws and regulations people without any recognisable legal land rights or claims (“squatters”) are ineligible for compensation in the same manner as registered landholders. This conflicts with international standards, such as the World Bank Operational Policy 4.12 on Involuntary Resettlement, which clearly state that people without legal land rights shall be provided resettlement assistance instead of land compensation. The same might be relevant for indigenous peoples, i.e. that the country do not recognise these peoples as indigenous, whereas applying the provisions in the UNDRIP and ILO 169 certainly would identify them as indigenous. There are also other areas where there are potential conflicts between the national legislation and international standards, and the developer needs to address these gaps early, both in order to be able to manage them properly throughout the project, but also as an important input to the decision whether to proceed with the project or not.

### ***Existing policies and plans***

It is important to early get an overview over already existing plans and policies in the country or region. As hydropower includes both energy and water issues, it touches on a wide array of policies and planning instruments, for instance development, energy, water, biodiversity, climate, conservation, transboundary issues, land use, urban and regional infrastructure planning. These plans and policies constitute part of the national and/or regional context for hydropower project planning, implementation and operations. An early overview will contribute to better management of potential short-falls, gaps or complexities in national and regional policies and plans. The sustainability of hydropower development can be influenced by the quality of integrated planning for resource development, and if the planning context is weak it might be required compensation measures from the developer.

According to the World Commission on Dams (WCD) a decision to develop hydro resources should be based on a thoroughly option assessment (or upfront study), and such a procedure is also recommended in IHA/HSAP. Energy strategies and Master Plans have a rather long tradition in power planning, but the scope has not always been consistent with the option assessment requirements in WCD. In many cases the plans have had a too narrow focus on specific (hydro) power projects and has not addressed other viable options thoroughly enough. In the last decade Energy strategies/Master plans have been complemented with Environmental and Social Studies on the same generic level, so called Strategic Environmental Assessments, SEA, see box 5.1. A flora of guidelines for Strategic ESIs and Sectoral ESIs, etc. has been included in the planning systems of individual countries and international organisations, see for instance OECD (2006), ADB (2003), Naturvårdsverket (2009), and [www.sea-info.net](http://www.sea-info.net). The WCD highlights the importance of such studies and stresses the need for a comprehensive and integrated framework for decision making on the provision of water and energy services. The Commission provides a framework that emphasises a structured process for strategic studies incorporating the full range of social, environmental, technical,

economic and financial criteria and standards. The total planning process is defined in five key decision points of which two; “Need Assessment” and “Selecting Alternatives”, are supposed to be conducted “upstream” before a project is selected for further planning through Pre-feasibility, Feasibility and Detailed design studies.

Strategic Environmental Assessments, and similar plans, is the responsibility of the (regional) government, and several countries have legislation requiring such assessments before one can embark on a project specific EIA study. Regardless of the legislation such studies may be lacking, and this may present a developer with a dilemma on how to proceed. Formally, the developer has no obligations to prepare such studies but may, in order to clear this hurdle, have to reach a compromise with the environmental authorities to prepare some kind of limited study or SEA that addresses the more sector oriented and strategic issues for the hydropower sector or for the basin within which the project is located.

Upstream Studies address the decisions that should be taken on a governmental or regional level before it is decided to go ahead with a specific project and is consequently a political document. As such it should be prepared by or for the proper political or administrative body and the studies should be prepared and approved by the relevant political bodies well before project specific studies start. In an ideal situation the progress of certain projects should be based on the recommendations and priorities in the strategic studies. However, in many countries there are lacking or deficient planning frameworks relevant to certain critical hydropower issues, or dated, poor quality or even contradictory with other policies and plans. Existing policies and plans may provide insufficient guidance on regulatory requirements for project preparation, approvals, implementation and operation. There is a risk that the governmental level are not able to provide valid strategic studies, master plans, strategic ESIAs, etc. at the time when a developer has identified a potential development project and wants to start planning of a power plant. In some case the country authorities or international financing institutions will be insistent on the principle that such studies are mandatory and thus cause serious delays in project planning.

Any private developer should therefore make a check on the situation regarding “Upstream Studies” before investing too much in project preparation. The developer anyhow needs to be aware of the risks associated with lacking or deficient options assessment – there are at least two categories of risk: issues that are not identified already at an early stage can cause delays and high costs; and the potential judgemental (or reputational) costs. The questions the developer needs to address are: have energy strategies, master plans and strategic impact assessments been prepared and governmentally approved, or if not will the authorities and relevant financing institutions require that such studies are available before approving the project?

In countries with low governmental capacities it is however possible that actors like the World Bank, or donor organisations, for instance Norad, can finance such studies.

**Box 5.1 Strategic Environmental Assessment, SEA**

A strategic environmental assessment, SEA, is a tool to identify and assess significant positive and negative effects from policies, plans and programmes, preferably as early as possible in the decision making process. SEA can be viewed as an extension of the Environmental Impact Assessment, EIA, moving from individual projects to policies, plans and programmes. Policies include different kind of measures, for instance regulations and economic instruments. Typically, the SEA seeks to influence the development of a plan prior to its finalisation and approval. A SEA study therefore focuses on the social and environmental challenges and opportunities associated with implementing the plan, and strengthening institutional capacities for managing the identified social and environmental risks.

SEA has developed from being a single, more or less fixed approach towards an umbrella concept including a “continuum of approaches”. DAC OECD (2006) refers to SEA as a range of “*analytical and participatory approaches that aim to integrate environmental considerations into policies, plans, and programs and evaluate the interlinkages with economic and social considerations*”. At one end of the continuum of SEA one finds the impact centred SEA, which is technically oriented and focuses on assessing the impacts. At the other end one finds the institution centred SEA (also called policy based), focusing on political economy factors and institutional settings. Institution centred SEA is more process oriented than impact centred SEA and is also less standardised.

A high quality SEA has the following characteristics:

*Sustainability-led* and enable identification of available options and proposals for sustainable development.

*Focused* and concentrated on key issues, and provide information that is sufficient, reliable and useful for the purpose of the plan and for the decision making process. It should be tailor-made, but at the same time both cost- and time effective.

*Accountable*, i.e. performed based on a professional, accurate, responsible and transparent process. Different issues and interests should be reasonably balanced. The responsibility for the SEA should be with the authority responsible for the strategic decision.

*Participative*, informing and involving all stakeholders throughout the process.

*Iterative*, and performed in an iterative process that starts early in the planning process, in order to be able to influence the plan. Results from the different steps should be made available for the decision makers as early as possible.

*Integrated* so that all strategic decisions that influence sustainability are assessed in a consistent manner. It should assess biophysical, social and economic aspects in an integrated manner. It should consider policies in related sectors and regions, and if appropriate also environmental impact assessment of individual projects.

***Institutional capacities***

Since hydropower investment require close cooperation with local and national institutions it is important to address institutional capacity requirements and the existing capacity already in the early stage. The development of water and energy services in general, and of a hydropower project in particular, requires a comprehensive and balanced set of capacities amongst a range of stakeholders, namely governments/-regulators, developers, financial institutions, contractors, suppliers, labour force, civil society and affected people. If the necessary skills are lacking in any of these sectors, this may be mitigated by engaging externally available resources, and by developing local capacity throughout the project.

### ***Affected communities and groups***

For a developer it is also important to early get an overview which communities and groups that might be affected by the investment project. Proper involvement from these stakeholders, as well as other stakeholders, is vital for a successful execution of a project. As a general rule the stakeholder involvement should also start as early as possible. Ideally relevant stakeholders should have been consulted already during the option assessment or Master plan, but this is not always the case and the developer should make sure to address this issue in the assessment of existing plans. Involvement includes both access to timely and understandable information and consultation processes where stakeholders can express their interests. These processes are more thoroughly discussed in chapter 7.

How early the involvement should start is – obviously – a matter of timing, and will differ from project to project. At very early stages, where it still is highly uncertain whether it will be developed or not, involvement might create unrealistic expectations and for instance increase the problem of in-migrants (see chapter 7.2.3 for a discussion about in-migrants). This is also one reason why it in some cases is better to limit the analyses described here to desk studies at early stages. Actual field studies will to a much larger degree induce stakeholder involvement.

### ***Human rights risk assessment***

As discussed in part 1 the international laws on human rights are targeting governments, and it is their responsibility or duty to respect, protect, promote and fulfil these rights. The business sector also have responsibilities when it comes to human rights, but these are, at least in principle, limited to the duty to respect human rights, and hence no duty to protect, promote and fulfil the human rights. However, in many developing countries weak or corrupt governments may fail to adhere to the four duties mentioned above. The question is then whether companies operating in such countries should carry the responsibilities of protecting, promoting and fulfilling in addition to respecting human rights? This question can be answered both with a no and a yes. Yes, companies should bear these responsibilities in relation to: their workers; the products they sell; and people residing on its land. In cases where the government allows a company to take over a land area, de facto replacing the government, the company should bear the human rights responsibilities in this area. But otherwise private companies have no more duties regarding human rights than other individual, that is to respect human rights which implies not violating human rights. Companies can, however, due to concerns about public relations, ethical policies etc., voluntarily chose to go beyond that minimum.

The Danish Institute for Human Rights (DIHR, 2010) have developed a framework for companies planning to invest in countries with high risks concerning human rights, see [www.humanrights.dk](http://www.humanrights.dk). The purpose of this framework is to help companies decide whether or not to invest in such countries.

The two main questions in this decision tool are:

1. *Can a company contribute positively in a state with a poor record by maintaining good human rights practices, or does its very presence amount to complicity with, and tacit endorsement of, the host government?*



2. *If the company withdraws its operations, will this benefit human rights by demonstrating the limits of tolerance, or might it hurt the very population it intends to help by contributing to or perpetuating economic deprivation?*

The fundamental principle underlying these questions is that foreign companies should not participate in the repression of the population, or support an oppressive regime.

The structure of the decision tool is shown in figure 5.2, for more details see [www.humanrightsbusiness.org](http://www.humanrightsbusiness.org)

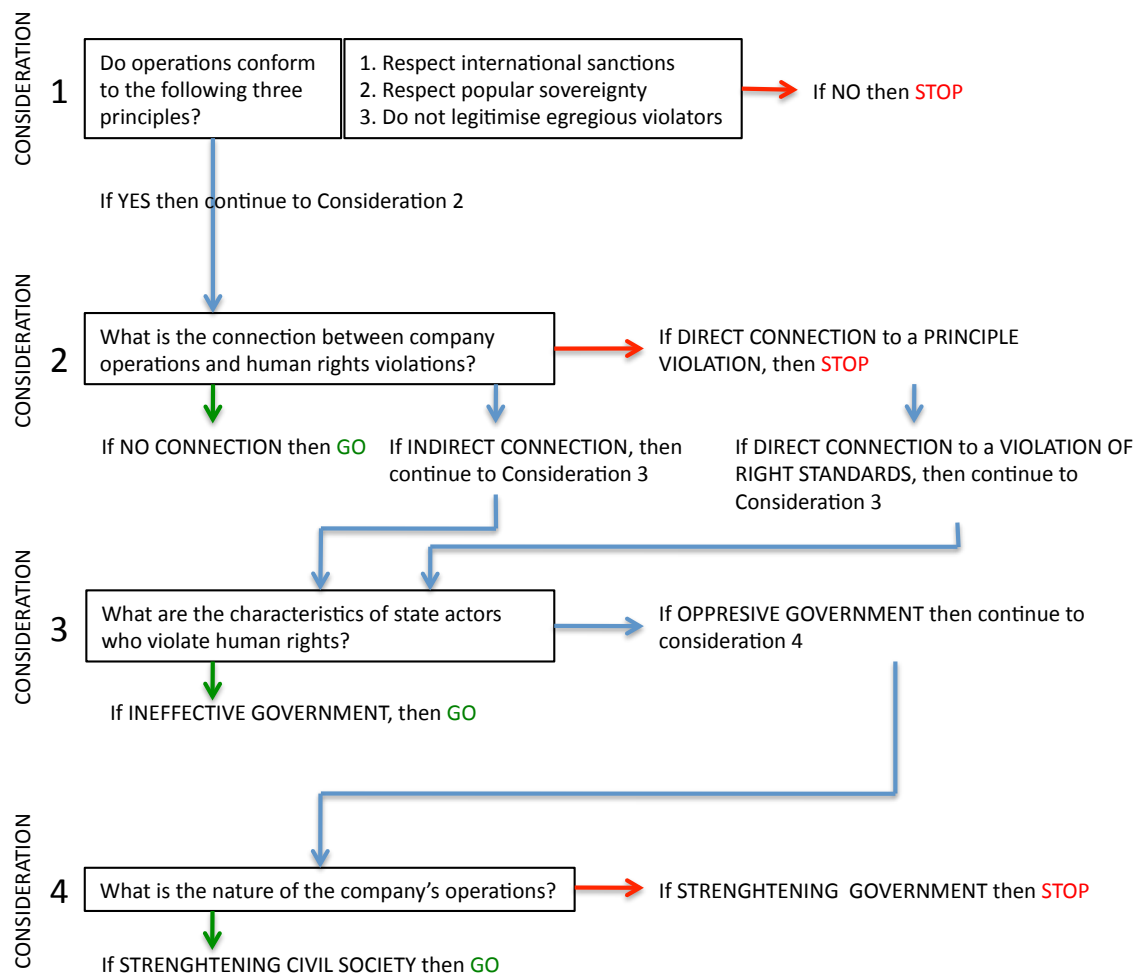
Another tool developed by DIHR is the Human Rights Compliance Assessment (HRCA), a diagnostic tool designed to help companies detect potential human rights violations caused by the effect of their operations on employees, local residents and all other stakeholders: [www.humanrightsbusiness.org/?f=home/news\\_story\\_3](http://www.humanrightsbusiness.org/?f=home/news_story_3)

DIHR has also developed a country risk portal, a free website that can help companies identify, assess and address human rights risks in their operations and supply chains. The Portal describes human rights risks, pinpoints their relevance to company operations and suggests prevention and mitigation efforts. The Portal addresses all internationally recognized human rights, including for instance: corruption, child labour, discrimination, environment, indigenous peoples, living standards, health and safety, and working conditions. The portal was launched in 2010, with an aim to cover over 100 countries within four years. The portal is accessible at [www.countryriskportal.org](http://www.countryriskportal.org).

IFC recently published an online guidebook for assessment of human rights targeting companies. This is a revision of a draft Guide to Human Rights Impact Assessment and Management (HRIAM) published in 2007. The aim of the revised Guide to HRIAM is to provide companies with guidance on how to assess and manage human rights risks and impacts of their business activities, see [www.guidetohriam.org](http://www.guidetohriam.org). The Guide to HRIAM provides guidance on the following; Identify any potential and/or existing human rights risks; Assess any potential and/or existing human rights impacts; and Integrate findings from the assessment into the company management system. The seven stage framework offers a comprehensive and systematic methodology for companies to follow and adapt to their needs: When developing their own human rights impact assessment, or When integrating human rights into other kinds of risk and/or impact assessments.

The Guide for Integrating Human Rights into Business Management is an online tool produced jointly by the Business Leaders Initiative on Human Rights (BLIHR), the UN Global Compact and the Office of the UN High Commissioner for Human Rights (OHCHR). The tool is available at: <http://www.integrating-humanrights.org>

**Figure 5.2 Process of deciding whether to engage in a region or country where human rights are supposed to be violated**



Source: Danish Institute for Human Rights

### 5.3 Financing opportunities

In the early stage it is also necessary to investigate the possibilities for financing and loans for the potential project. This mapping includes potential financing institutions and banks and what these institutions require in order to support the project. For a private investor different financing institutions are the relevant level, but since many projects also will have governmental part often financed through development banks it is important also to be aware of these. Development banks can also contribute to the financing of strategic plans etc. (see above).

#### Multilateral Development Banks

Multilateral Development Banks are institutions that provide financial support and professional advice for economic and social development activities in developing countries. The term Multilateral Development Banks (MDBs) typically refers to the World Bank Group and four Regional Development Banks:

- The African Development Bank ([www.afdb.org](http://www.afdb.org))
- The Asian Development Bank ([www.adb.org](http://www.adb.org))

- The European Bank for Reconstruction and Development ([www.ebrd.org](http://www.ebrd.org))
- The Inter-American Development Bank Group ([www.iadb.org](http://www.iadb.org))

MDBs provide financing for development through the following:

- Long-term loans, based on market interest. For funding these loans the MDBs borrow on the international capital markets and re-lend to borrowing governments in developing countries.
- Very long-term loans (credits), with interest well below market interest. These are funded through direct contributions for governments in donor countries.
- Grant financing is also offered by some MDBs, mostly for technical assistance, advisory services or project preparation.

The World Bank group typically follows the World Bank Safeguard Policies (see chapter 3.3), whereas the regional banks have their own safeguard policies. Whether these are less or more strict than the World Bank varies both between the banks and between different topics in the policies. For more information please visit the websites of the different banks.

### ***Multilateral Financial Institutions***

There are also other banks and funds that lend to developing countries, and these are often grouped together as other Multilateral Financial Institutions (MFIs). They differ from the MDBs in having a more narrow ownership/membership structure or in focusing on special sectors or activities. Among these are:

- The European Investment Bank, EIB ([www.eib.org](http://www.eib.org)),
- The Islamic Development Bank, IDB ([www.isdb.org](http://www.isdb.org)),
- The Nordic Development Fund, NDF ([www.ndf.fi](http://www.ndf.fi)), and
- The Nordic Investment Bank, NIB ([www.nibank.org](http://www.nibank.org))

A number of Sub-Regional Banks, established for development purposes, are also classified as multilateral banks, as they are owned by a group of countries. Examples of such banks include: Corporacion Andina de Fomento, CAF ([www.caf.com](http://www.caf.com)); Caribbean Development Bank, CDB ([www.caribank.org](http://www.caribank.org)); Central American Bank for Economic Integration, CABI ([www.bcie.org](http://www.bcie.org)); East African Development Bank, EADB ([www.eadb.org](http://www.eadb.org)); and West African Development Bank, BOAD ([www.boad.org/](http://www.boad.org/)).

### ***Development Financing institutions***

There is a wide range of financing institutions specialised in offering financial services to development projects. These Development Finance Institutions (DFIs) are government-controlled institutions, with the objectives of both promoting development in developing countries and remain financially viable. It is not possible to give a comprehensive overview of these banks, but many of them are organised in regional associations. On the websites of these associations member institutions and contact information is available:

- Association of Development Financing Institutions in Asia and the Pacific, ADFIAP ([www.adfiap.org](http://www.adfiap.org)),

- Association of African Development Financing Institutions, AIAFD/AADFI ([www.adfi-ci.org](http://www.adfi-ci.org))
- European Development Finance Institutions, EDFI ([www.edfi.be](http://www.edfi.be))
- Association of National Development Finance Institutions in Member Countries of the Islamic Development Bank, ADFIMI ([www.adfimi.org](http://www.adfimi.org))
- Latin-America Association of Development Financing Institutions, ALIDE ([www.alide.org.pe](http://www.alide.org.pe))
- World Federation of Development Financing Institutions, WFDFI ([www.wfdfi.org.ph](http://www.wfdfi.org.ph))

What safeguard policies or performance standards the individual banks are following must be assessed individually.

### ***Export guaranties***

Export Credit Agencies and Investment Insurance Agencies (ECA), are financial institutions or agencies that provide trade financing to domestic companies for their international activities. For Norwegian companies it is GIEK (Garanti-instituttet for eksportkreditt, <http://giek.no>) who is the relevant ECA. GIEKs policies and procedures for evaluating the environmental and social impacts of projects is based on the OECD Common Approaches. GIEK benchmarks against IFC PS as a minimum, which it applies to both social/environmental impacts of the project and to its associated facilities.

GIEK normally requires EIA or ESIA, Resettlement Action Plans, and Compensations Plans in all category A and some category B dam projects (see chapter 3.3.4 for an explanation of category A and B). With regard to social issues, the focus in these assessments shall be resettlement, community consultation, “livelihood restoration,” and social impacts from associated facilities, such as access roads and transmission lines. GIEK regularly requires covenants requiring action plans and monitoring schemes which must be systematically followed. Cooperation with loaning institutions is seen as essential in ensuring that covenants for follow up of environmental and social management plans, resettlement monitoring, grievance mechanism implementation, etc. are included in loan agreements and followed up. Failure to implement specific covenants could lead to an event of default on the loan.

For increased due diligence, GIEK has developed an environmental pre-screening questionnaire (applicable to all projects) as well as a social impact questionnaire which all potential companies providing deliveries to any energy projects are required to submit along with their application for financial coverage, see [www.giek.no/miljo\\_og\\_sosialt\\_ansvar/sporreskjemaer\\_om\\_miljo\\_og\\_sosiale\\_forhold/no](http://www.giek.no/miljo_og_sosialt_ansvar/sporreskjemaer_om_miljo_og_sosiale_forhold/no)

### ***Equator Principle Financing Institutions and Private investment banks***

In addition to the financing institutions mentioned above private/commercial banks, both international and local, are potential finance sources. Financing through these banks can be combined with both multilateral institutions and ECAs. The availability of local commercial banks differs from market to market. The competitiveness is often good and since they know the country and the markets very well, there is often less need for documentation, surveys, guarantees and currency hedging as these can fund in the national currency.

A rule of thumb when approaching private investment banks, at least international banks, can be to prefer banks that have officially adopted the Equator Principles, so called Equator Principle Financing Institutions (EPFI). An updated list of EPFIs are found at [www.equator-principles.com](http://www.equator-principles.com).

### **Carbon credits**

Hydropower projects can be implemented both under the Clean Development Mechanism (CDM) and Joint Implementation (JI) as defined in the Kyoto Protocol. For an overall description of the requirements for each of these carbon credit regimes see chapter 3.3.5, and the UNFCCC website (<http://cdm.unfccc.int>).

The CDM/JI Gold Standard is an independent standard and certification scheme for high-quality CDM and JI projects. It was designed to ensure the projects are real and verifiable and make measurable contributions to sustainable development (<http://www.cdmgoldstandard.org/>). Hydropower projects are eligible for Gold Standard registration. However, specific eligibility criteria apply to these projects, and in general the project should be in compliance with the latest WCD guidelines. Furthermore, as part of the sustainable assessment process, all hydropower projects must at a minimum discuss the relevance and implications of a list of items provided by the Gold Standard Foundation, see table 6.1 for a description of items.

The EU allows participants in the EU Emission Trading Scheme to use a certain amount of emission reductions from CDM and JI projects in order to cover their emission reduction requirements. The condition for the use of emission reductions from hydropower projects is that relevant international criteria and guidelines, including World Commission on Dams are respected during the development of the project.

To avoid uncertainty around the interpretation the EU has established a set of uniform guidelines and a template for hydropower projects guiding project proponents through the preparation of a compliance report. The EU Harmonised Guidelines and Template for Hydropower CDM projects (2009) aims to ensure that hydropower projects are developed along the options least damaging to the environment and addressing such issues as gaining public acceptance, and fair and equitable treatment of all affected stakeholders, including local and indigenous people. A Compliance Report, modelled based on WCD recommendations, is required, see Box 6.2 for a summarized list of key topics, whereas the detailed matrix and requirements can be found at the EU ETS website: [http://ec.europa.eu/clima/policies/ets/linking\\_ji-cdm\\_en.htm](http://ec.europa.eu/clima/policies/ets/linking_ji-cdm_en.htm).

**Box 5.2            Key topics in the “EU ETS Compliance report assessing application of article 11b (6) to hydroelectric project activities exceeding 20 MW”**

Section 1: Description of the project

- 1.1.    Project area
- 1.2    Project related activities
- 1.3    Project components: Water-flow: structures and changes

Section 2: Assessment of compliance with the WCD criteria

- 1.      Gaining Public Acceptance
  - 1.1    Stakeholder consultation
  - 1.2    Transparency.
- 2.      Comprehensive Options Assessment
  - 2.1    Needs
  - 2.2.   Alternatives
- 3.      Addressing Existing Dams/hydroelectric projects
- 4.      Sustaining Rivers and Livelihoods
  - 4.1    Water use ratio
  - 4.2    Impact Assessment
  - 4.3    Cumulative Impacts
- 5.      Recognising Entitlements and Sharing Benefits
- 6.      Ensuring Compliance
  - 6.1. Compliance measures
  - 6.2. Monitoring and evaluation during crediting period
- 7.      Sharing rivers for peace, development and security.

Source: EU ETS

**Table 5.1 List of items for Gold Standard sustainability assessment**

Items	Basic requirements
<b>Management domain</b>	Minimum Flow Goal: dynamic flow regime, qualitatively simulating natural hydrological regime
	Minimum flow guaranteeing habitat quality, preventing critical oxygen and chemical concentrations
	No disconnection of lateral rivers
	Minimum water depth for fish migration during critical periods
	Lateral and vertical connectivity (flood plains, groundwater) not substantially disturbed
	Provides sufficient transport capacity for sediments
	Landscape compartments shall not be destroyed
	Flood plain ecosystems shall not be endangered
<b>Hydro-peaking</b>	Conservation of locally adapted species and ecosystems
	Rate of change of water level should not impair fish and benthic populations
	Reduction in water level should not lead to drying of the water course.
	Protective measures if flood plain ecosystems are impaired.
	No isolation of fish and benthic organisms when water level decreases
<b>Reservoir management</b>	No impairment of spawning habitat for fish
	Are there feasible alternatives to reservoir flushing?
	Changes in reservoir levels should not impair lateral ecosystems (flood plains, river shores, ...)
	Connectivity with lateral rivers should not be impaired
	Sediment accumulation areas should be used as valuable habitats, where feasible.
<b>Sediment management</b>	Special protection of flood plain ecosystems if they are impaired
	Sediments have to pass through the power plant.
	No erosion and no accumulation in the river bed below storage dams and water intakes because of a deficit in sediments.
	Sediment transport should sustain morphological structures, typical for the river.
	No accumulation of sediments below dams
<b>Power plant design</b>	Riverine habitats have to be established
	Free fish migration upwards and downwards (as far as technologically feasible)
	Protection of animals against injury and death stemming from power plant operations (turbines, canals, water intakes, ...)
<b>Social impacts</b>	Cultural landscapes
	Human heritage (including protection of special ethnic groups)
	Preservation of lifestyles
	Empowerment of local stakeholders in the decision-making process (about mitigation and compensation of social impacts)
	Resettlement of local population under similar or better living conditions (than prior to the project)
	Build additional social infrastructure, sufficient to cope with population increase (due to migration induced by the project)
	Water quality and fishing losses affecting downstream riverside population

Source: The Gold Standard

**Standards used by financing institutions**

Most financing institutions uses standards based on IFC Performance Standards, but with some deviations. In table 5.2 we have listed the most relevant institutions and the standard they apply when assessing investment projects.

**Table 5.2 Financing institutions and standards**

Financing institution	Financing instrument			
	Project finance	Export credit guarantees	State sponsored projects	Corporate loans
ECAs	IFC PS + EHS Guidelines	WBSP + EHS guidelines (minimum), IFC PS (where appropriate)	WBSP + EHS guidelines (minimum), IFC PS (where appropriate)	WBSP + EHS guidelines (minimum), IFC PS (where appropriate)
GIEK	IFC PS + EHS	IFC PS + EHS	IFC PS + EHS	IFC PS+ EHS
EPFI	IFC PS	N/A	N/A	No standards (some may require IFC PS)
IFC	IFC PS+ EHS	N/A	IFC PS + EHS	IFC PS+ EHS
Norfund	IFC PS	N/A	N/A	IFC PS
Norad	IFC PS	N/A	IFC PS	N/A
Private banks (non-EPFI)	Based on own internal policy	N/A	Based on own internal policy	Based on own internal policy
World Bank	N/A	N/A	WBSP	N/A

N/A: not applicable

**5.4 Areas of concern**

In addition to a country and risk analysis, and a mapping of potential financing institutions and their requirements regarding environmental and social conduct there are several other issues that should be addressed already at the early stage. The purpose of this early assessment, or screening, is partly to be able to make an informed decision whether or not to proceed with the proposed project and partly to prepare for a thorough management of these issues through the whole life cycle of the project. These issues are often intertwined, but for the purpose of an easy structure we have divided them into two main categories: social and environmental issues. For a project developer it is also important to assess technical and financial issues at this stage, but these issues is not included in this guidance.

**5.4.1 Social concerns**

Development of hydropower, and especially dam construction, usually takes place in upland areas where ethnic minority groups, indigenous peoples and otherwise marginalised groups reside. So even if such projects can bring social benefits to the country as such, and especially downstream populations and cities, there will often be groups that will be negatively affected if not compensated and given possibilities to improve their livelihoods. An early mapping of social issues and risk will reduce the risk of encountering unexpected problems at later stages in the development of a project, where it normally will be much more costly to handle.



Social issues and risks might relate to, for example: potential land and water use conflicts, project affected community composition, indigenous peoples, socio-economic status and livelihoods, likelihood of resettlement requirements, labour and workforce capacity, community safety, public health, cultural heritage, likelihood of community acceptance, communication and consultation needs and issues, legacy issues, cumulative impacts, social unrest, labour rights and working conditions, management of sub-contractors, etc.

In order to be able to assess potential social risks, one must collect enough information about the potential project. In the case where there exist a governmental option assessment or Master plan these issues should, at least ideally, have been mapped. But if not, the developer has to assess this. At this stage it can take the form of a desk-top analysis based on input from international and national experts, international and local NGOs and representatives for potentially affected communities and groups.

### ***Indigenous peoples***

Even though there are rather few projects that will include indigenous peoples as one of the stakeholders, the risks connected with these projects are so large that the topic deserves extra attention.

There are two main concerns regarding indigenous peoples during the pre-planning phase:

- Risk assessment, based on an analysis of the strategic environment in a given country regarding the recognition and respect for indigenous peoples' rights as well as the particular situation of indigenous peoples in the suggested locality
- Early assessment of compatibility between the proposed intervention and indigenous peoples' aspirations for development, through dialogue with these peoples' representative institutions.

Early stage action should include an initial dialogue with indigenous peoples' representative institutions and an assessment of the strategic environment, including (Feiring, 2010):

- Identification of indigenous peoples, based on the concept of self-identification;
- Overview of the diversity of indigenous peoples, demographic data and overall development situation. There might be huge differences between the situations of different indigenous peoples within a country. Special attention should be paid to particularly vulnerable groups, e.g. indigenous peoples living in voluntary isolation or initial contact;
- Legal framework; international commitments (e.g. ratification of C169) and formal recognition of indigenous peoples' rights in the legislation. Pay particular attention to the recognition of rights to land and natural resources;
- Identify gaps in the implementation of international commitments and national legislation. Possible sources of information are comments of the ILO supervisory bodies, reports of the UN Special Rapporteur, international, regional and national human rights bodies, reports of recent conflicts and protests;

- Existence of institutionalized mechanisms for consultation and participation of indigenous peoples at various levels, e.g. participation in establishment of development priorities and elaboration of national development strategies and plans; participation in local governance and decentralized development funds. Pay particular attention to the existence of mechanisms for consultation prior to the granting of concessions and licenses affecting indigenous peoples' lands.
- Official recognition and provisions for indigenous peoples' participation in environmental and social assessment mechanisms.
- Overview of indigenous peoples' aspirations and main obstacles for development; assessment of potential for partnerships;
- Experiences of other actors operating on indigenous lands the given country, including assessment of reputational risks;

This approach of early action and assessment (due diligence) is in line with the guidance of the IFC information note on "ILO Convention No. 169 and the private sector", which states that:

*In order to minimize risk, companies would be advised to satisfy themselves that the government has fulfilled its responsibilities. Specifically, companies should look into whether:*

- *the process used for identifying indigenous and tribal peoples' lands is consistent with the requirements of Convention 169*
- *legal or other procedures for resolving indigenous peoples' land claims and disputes are acceptable and have been subject to consultation*
- *if title to land has derived originally from indigenous peoples, this title was obtained properly, in*
- *accordance with the law, and without taking advantage of lack of understanding of laws in order to secure possession*
- *the relevant government authorities have recognized the indigenous peoples' rights to natural resources*
- *appropriate consultation takes place prior to the granting of exploration and exploitation licenses*
- *mechanisms are in place to enable the communities concerned to participate in the benefits of the project and to compensate them fairly.*

If acceptance from indigenous peoples is to be achieved, it is crucial that dialogue is initiated at the earliest stage and not only as part of the environmental and social impact assessments.

### **5.4.2 Environmental issues**

As a hydropower facility can have large environmental impacts it is essential to gain an overview over potential impacts at an early stage. It is especially important to assess impacts on biodiversity, habitats and water quality, since these matters should be included in the decision whether to proceed with the proposed project or not.

### ***Biodiversity and habitats***

Many of the impacts resulting from power development cannot be evaluated against specific quantifiable standards (i.e. how much negative impact can be accepted for a project of a certain size) or judged on an objective manner based on the principle of a positive benefit – cost ratio. There will always be strong elements of value judgements or “political preference” in weighing the negative impacts against the benefits of the proposed project.

One area of impacts where this is particularly prominent is when it comes to biodiversity interests and values, including vulnerable habitats. The importance of protecting biodiversity and natural values are stressed in the safeguard principles and guidelines from the international financings institutions and in many national EIA regulations. Criteria of what can be accepted in terms of loss or damage are, however, in most cases totally lacking.

The result is that the interpretation of the biodiversity safeguard principles and policies is to a great extent up to the priorities of the parties participating in the review and approval process.

One element of conflict is that scientists and NGO's put much more value on the biodiversity aspects than the administrators and the general public. A more complex situation commonly seen is, however, when the national competent authorities under-value the biodiversity aspects compared to the requirements from International Financing Institutions (IFI). It happens that development plans that are in conflict with biodiversity values are supported by national authorities, only to be stopped when financing by IFI's is sought. The result will be lengthy detailed biodiversity studies and surveys, expensive mitigation or compensation measures or a total rejection of the planned development.

This situation calls for an early assessment of the risk of facing biodiversity “show-stoppers” (impacts on national reserves, serious impacts on unique or endangered species, etc). But it has to be taken into account that this is often a challenging task in most developing countries where the existing biodiversity knowledge base is weak and fragmented. Environmental NGOs can assist in identifying this kind of risk factors.

### ***Water quality***

Changes in water quality are likely to occur within and downstream of the project site. The residence time of water within a reservoir is a major influence on the scale of these changes, along with bathymetry, climate and catchment activities. Major issues include reduced oxygenation, temperature, stratification potential, pollutant inflow, propensity for disease proliferation, nutrient capture, algal bloom potential and the release of toxicants from inundated sediments. Issues concerning water quality are also a critical area that can cause major obstacles at later project stages, and this issue should therefore be thoroughly assessed as early as possible. It should however be noted that many water quality problems relate to activities beyond the control of the developer.

### ***Protected areas and objects***

The WB Safeguard Principles advises against development projects that are in conflict with areas of Nature or Cultural Heritage conservation status. Any conflict between the

development and the values of a legally protected area is also likely to raise protests from national and even international interest groups and be a problem with respect to international reputation (judgemental risk)

It is important to notice however, that the definition and protection regime for different categories of protected areas differs from country to country. The protection regime and management criteria for a National Park in Norway are for instance much stricter than for National Parks in most African and Asian countries. It is therefore of importance to clarify the legal status and limitations for impacting on a Protected Area or Protected Object before starting detailed planning.

### **5.5 *Use of consultants at this stage***

In the early stages a developer often has to rely on consultants for information collection and analyses, depending on what is already available of the studies and analysis mentioned above and preparation of the required documentation/reports necessary to get the relevant permissions. Use of local/national consultants is normal practise and sometime a requirement. Local experts are most frequently used in collection of baseline information on specialised professional issues. Local consultants will also provide useful local knowledge and valuable logistic support. Experience shows, however, that the local experts often have a rather narrow professional perspective and it is difficult to find the skill necessary to compile the multidisciplinary documents required by the Financing Institutions. For a developer it is often necessary to use experienced international consultants for such tasks. These international consultants will on the other hand normally cooperate with local consultants.

For assessment of country risk factors a country analysis should be performed, this being a typical work for international consultants.

For the overview of national legislation and regulatory system, like permits, framework conditions, tax system, it is useful to use local lawyers.

### **5.6 *Summing up***

The early stage is an important stage, and a comprehensive analysis of potential risk factors is necessary in order to make an informed decision on further investigations/-preparation and, in case one decides to proceed with the project, in order to manage potential risks and impacts in a proper manner. Resources used at this stage will most likely result in resources (i.e. costs) saved in later stages. But at the same time there is still a trade off between additional resources used and expected gains later. The more information about the potential project that is readily available already before the developer enters the project the better. This is especially the case for an inexperienced developer.

Regardless of when the developer enters the project the following issues should be given extra attention at this stage:

- Country analysis, including assessment of political risk.
- Existing plans and policies: are there an Energy Master Plan or Option Assessment? If not, do you as a developer run a risk of becoming responsible for such a study?

- Legal requirements for Environmental and Social Impacts Assessments, and a comparison/gap analysis with applicable international standards.
- Social impacts and risks.
- Environmental impacts and risks.

When it comes to the decision whether to continue with the project development or not the following issues are the most critical:

- human rights at risk: earlier performance of government,
- unstable policies and regulatory framework,
- large resettlement or livelihood restoration required,
- indigenous peoples or other vulnerable groups, and
- possible loss of valuable biodiversity and habitats.

If one or several of these issues are present for the proposed project it is of outmost importance to be aware of, and have systems to handle, the risk associated with continuing with the project.

## **6. Planning phase/preparation**

If the assessments performed in the early stage lead to a decision to continue with the project plans the next stage is planning and preparation of the project. In this stage communication and dialogue with affected stakeholders must begin, at the latest – in many cases this should have been initiated already at the early stage. The same holds for several of the plans that are discussed below, these will build on the assessments and studies performed at the early stage, and some of the plans should already be in progress when entering this stage.

In this chapter the following issues are being discussed:

1. Communication and consultation: general guidelines for the consultation process, identification of stakeholders and tools that can be used in the process.
2. Plans: preparation of (pre)feasibility studies, environmental and social impact assessment and belonging plans. Issues regarding sharing of benefits with affected stakeholders, resettlement, and indigenous peoples are included in this section.
3. Project management systems: the importance of using well integrated management systems, that can either be tailor-made for the project and/or company or standard management systems.

UNEP (2007), Dams and development, discusses several environmental and social issues in connection with dam projects, including: identification of options; stakeholder participation; social impact assessment; compensation policies and benefit sharing; environmental management plans; compliance; and policies for shared rivers. The recommendations in UNEP are built on WCD (2000), and illustrated by several case studies, where the latter can give useful guidance on how to successfully implement a hydropower project.

### **6.1 *Establishing communication and consultation processes***

All standards emphasise the need to establish and maintain a good communication and consultation process with all relevant stakeholders, and that this process should start as early as possible. Community acceptance of a project will greatly assist in the successful implementation of the project.

In IFC PS it is stressed that community engagement should be an on-going process including disclosure of information. Local communities that may be affected by risks or adverse impacts from a project should be consulted. The purpose of community engagement is to build and maintain a constructive relationship with these communities. Community engagement shall be free of external manipulation, interference, or coercion, and intimidation, and conducted on the basis of timely, relevant, understandable and accessible information. For the consultation process to be effective it should:

- be based on the prior disclosure of relevant and adequate information, including draft documents and plans;
- begin early in the Social and Environmental Assessment process;

- focus on the social and environmental risks and adverse impacts, and the proposed measures and actions to address these;
- be carried out on an ongoing basis as risks and impacts arise; and
- be undertaken in a manner that is inclusive and culturally appropriate.

The developer shall tailor the consultation process to the language preferences of the affected communities, their decision-making process, and the needs of disadvantaged or vulnerable groups.

If the projects are supposed to have significant adverse impacts on affected communities, for instance possible resettlement, the consultation process shall ensure their free, prior and informed consent and facilitate their informed participation. The latter involves organized and iterative consultation. The developer shall incorporate the views of affected communities into the decision-making process. The developer shall also document the process, in particular the measures taken to avoid or minimize risks to and adverse impacts on the affected communities.

IHA sustainability guidelines recommend that adequate consultation is undertaken, with relevant local, regional and national agencies. Impacts on the community, stakeholders and the environment should be identified and stakeholders should be informed about the project and the implications for them, as well as being regularly consulted throughout the planning and implementation phases. Stakeholders who may be affected by the project should be given the opportunity to be represented during the different phases of project development. A negotiated and agreed outcome should be the aim of the consultation process wherever possible.

In HSAP communication and consultation is a topic in the three stages preparation, implementation and operation. In the preparation phase this topic addresses the identification and engagement with project stakeholders, within the company and between the company and external stakeholders. The latter includes for instance affected communities, governments, key institutions, partners, contractors, catchment residents. The intent is that stakeholders are identified and engaged in the issues of interest to them. In order to score 3 on this topic communications and consultation plans and processes, including an appropriate grievance mechanism, should have been developed at an early stage, outlining communication and consultation needs and approaches for various stakeholder groups and topics. In the preparation stage appropriately timed communications and engagement with directly affected stakeholders on topics of interest and relevance to them should have been performed. This engagement should be undertaken in good faith, i.e. undertaken with an honest intent to reach a mutually satisfactory understanding on the issues of concern. For a score of 5 the communication and consultation plans and processes should show a high level of sensitivity to communication and consultation needs and approaches for various stakeholder groups and topics, the engagement with directly affected stakeholders should have been inclusive and participatory, and negotiations undertaken in good faith.

According to WCD public acceptance of key decisions is essential for equitable and sustainable water and energy resources development. This includes recognizing rights, addressing risks, and safeguarding the entitlements of all groups of affected people. Decision-making processes and mechanisms should enable informed participation by all groups of people, and result in the demonstrable acceptance of key decisions. If the

project affects indigenous and tribal peoples, the consultation processes should be guided by their free, prior and informed consent, FPIC.

The World Bank Safeguard principles require that the borrower consult all affected groups and local NGOs in the EA process for category A and B projects (see chapter 3.3.1). The views of these consulted should be taken into account. The consultations should be initiated as early as possible. For Category A projects these groups should be consulted at least twice: shortly after environmental screening and before the terms of reference for the EA are finalized; and when the draft EA report is prepared.

### ***Stakeholder Analysis***

The consultation process must begin with a mapping of all relevant stakeholders. If this is not already included in the preparatory studies from the early stage it must be performed in the beginning of the planning phase.

Stakeholders are those who are interested in, involved in or affected by the hydropower project and associated activities. Directly affected stakeholders have substantial rights, risks and responsibilities in relation to the issue. These may be inside the project-affected area (like project affected communities) or outside the project-affected area (for instance government regulators, finance institution representatives, or investment partners). A stakeholder mapping or analysis refers to identification and grouping of stakeholders in a meaningful way, for example based on stakeholder rights, risks and responsibilities. In addition to identifying stakeholders the analysis should also seek to understand and address potential factors that may hinder their involvement. The analytic approach can involve stakeholder workshops, community-level surveys, key informant surveys, and literature review.

The WCD Guideline 1 deal with the stakeholder analysis, and important elements include:

- Recognition of existing rights and those who hold them. Major right holders, and following core stakeholders, include groups whose livelihoods, human rights and property and resource rights may be affected by the project. Those at risk should be identified through vulnerability or risk analysis. Special attention should be given to indigenous and tribal peoples, women and other vulnerable groups. In the case of a dam, the analysis should include groups up-stream, downstream and in the proposed reservoir area.
- Identifying constraints to establishing a level playing field for stakeholder involvement, and how to overcome these barriers. The latter includes capacity building, institutional strengthening, quota systems to ensure proper representation of vulnerable groups, and support mechanisms (e.g. independent facilitators to correct any imbalance of influence).
- The responsibility for initiating the stakeholder analysis lies with the government planning body who is sponsoring the planned intervention.

Of special concern is the identification of other particularly vulnerable groups, including indigenous peoples. As mentioned in part 1 there is no common definition of what constitute indigenous peoples, and it differs to what degree individual countries actually



define indigenous and tribal peoples. WCD proposed an alternative approach for identifying them, see box 6.1.

### **Box 6.1 Identification of indigenous and tribal peoples**

Groups that satisfy the following criterias:

- Historical continuity with pre-colonial societies, which is determined on the basis of the following criteria, regardless of whether they are formally recognised as indigenous or tribal peoples or not:
  - Subsistence oriented and natural resource based production systems
  - Presence of customary social and political institutions
  - An indigenous language, often different from the national language
- An experience of subjugation, exclusion or discrimination, whether or not these conditions persist.
- Vulnerability to being disadvantaged in the development process.
- Close attachment to ancestral territories and to natural resources in such areas.
- Self-identification as distinct from the dominant group or groups in societies, and identification by others as members of a distinct group.

Source: WCD (2000)

### **Consultation tools**

When it comes to the actual consultation process the different standards deviate slightly. IFC PS recognise that consultation is important, and have some general guidelines of how the process should be undertaken (see above), but the PS give no specific guidance on how to perform these. IFC have, however, published a handbook with good practices for stakeholder engagement, see

[http://www.ifc.org/ifcext/sustainability.nsf/Content/Publications\\_Handbook\\_StakeholderEngagement](http://www.ifc.org/ifcext/sustainability.nsf/Content/Publications_Handbook_StakeholderEngagement)

In the revised PS1 IFC has some guidance on responsibilities for private actor when it is the host government who has the overall responsibility for the Stakeholder Engagement. According to IFC the developer shall collaborate with the responsible government agency. In case the government agency has limited capacity is limited, the developer is supposed to play an active role during planning, implementation, and monitoring of the stakeholder process. And in case the process conducted by the government is not satisfactory in relation to the requirement in PS1, the developer shall conduct a complementary process and if needed prepare a supplemental Stakeholder Engagement Plan.

WCD, IHA and HSAP uses the expression “good faith negotiations”, and according to HSAP such negotiations involve:

- willingness to engage in a process;
- provision of information necessary for informed negotiation;
- exploration of key areas of importance;
- mutually acceptable procedures for negotiation;
- willingness to modify position;

- provision of sufficient time to both parties for decision-making;
- agreements on proposed compensation framework, mitigation measures, and development interventions.

A Stakeholder Forum, or a similar construction, that constitute the representative body for stakeholders ought to be established, partly to facilitate the consultation and negotiation processes. WCD stresses that such a forum should be a dynamic construct, capable of meeting changing needs through the planning and project cycles. The composition of the stakeholder forum, including representation of various interests, and how it will be used will most likely change from stage to stage. The status of the forum, and the selection of its representatives, should ensure effective participation for all relevant stakeholders and accommodate changes over time.

The Forum should have timely access to information and different kind of support to make the members capable of engaging in effective consultations.

How the actual consultation and negotiation process are designed and performed will depend on the type of project, the political and cultural settings, and other constraints such as the likelihood of negative impacts. A process that is too complex can lead to delayed decisions and be too resource demanding, and actually diminish the potential benefits of the project. The goal should therefore be to establish a process that *“gives all key stakeholders a voice and a full opportunity to participate in decision-making, seeks the broadest reasonable consensus, and is transparent in the criteria used for reaching a decision”* (WCD, 2000).

There are several techniques and tools that can be used in the communication and consultation process. The selection of what to use should be based on the objective of the involvement, stakeholders preferences, language and culture, available resources and the size and complexity of the project. It is important that the techniques and tools are adapted to the process, and do not become drivers by themselves. Table 6.1 gives some examples of techniques and tools that can be used in order to facilitate stakeholder involvement (UNEP, 2007).

**Table 6.1      Techniques and tools for stakeholder involvement**

Information	Data collection	Interaction
Media advertising	Surveys	Workshops
Newsletters	Comment forms	Discussion groups
Open house displays	Interviews	Public meetings
Websites	Focus groups	Ongoing stakeholder
Briefings	Public hearings	committees
Public exhibitions	Review panel	

Source: UNEP

### **Disclosure**

An important part of communication is disclosure of relevant project information, both targeted towards relevant stakeholders, and for the public as such.

For instance, IFC requires that documents from the Social and Environmental Assessment should be publicly disclosed. Communities that might be affected by risks or adverse impacts from the project, should be provided with access to information on the

purpose, nature and scale of the project, the duration of proposed project activities, and any risks to and potential impacts on such communities. For projects with adverse social or environmental impacts, disclosure should occur early in the Social and Environmental Assessment process and in any event before the project construction stage, and on an ongoing basis.

## **6.2 Preparation of plans**

As mentioned in chapter 2 there has over time evolved a continuum of plans assessing environmental and social issues. The number and types of plans depends on the size of the project, its complexity and potential effects. Below we discuss several plans, but for smaller projects the different topics can be dealt with in one plan, the Environmental and Social Impact Assessment and plan.

### **6.2.1 (Pre)feasibility study**

Ideally a pre-feasibility study of the proposed project should have been performed at the early stage, as one important aim of such a study is to identify the main challenges that should be in focus in the Feasibility study. A feasibility study aims to objectively and rationally uncover the strengths and weaknesses of the project, as well as opportunities and threats, the resources required to carry through, and ultimately the prospects for success. A well-designed feasibility study should provide a historical background of the project, description of the project, accounting statements, details of the operations and management, financial data, legal requirements and tax obligations. The feasibility study will make up the basis for the detailed design of the project.

The feasibility study generally focuses on technical (including siting and design options) and economic issues, but it can also include environmental and social concerns. In smaller projects, where there are limited requirements for environmental and social assessments it might be enough to include these issues in the feasibility study. In most hydropower projects it is, however, likely that these issues are best dealt with in separate (but still integrated) assessments. The World Bank and the IFC normally requires that the technical feasibility studies and the EIA should be carried out by different consultants. For the pre-feasibility level technical and environmental studies can be carried out by the same consultant.

The international standards and guidelines are rather vague when it comes to requirements for the feasibility study, except that such studies should consider environmental and social issues and that the outcome should be both environmentally and socially acceptable. Affected communities should also be consulted in the development of the feasibility study.

### **6.2.2 Environmental and Social Impact Assessment**

A full formal Environmental Impact Assessment in accordance with the legal environmental requirements of a country is normally done in parallel with the Feasibility Study. However, environmental considerations are often done at earlier planning stages in order to identify environmental and social issues that may stop the project from being approved and granted the necessary licences (see chapter 5).

Environmental Impact Assessment requirements may vary from country to country but will normally include the following steps:

- A Project Registration or Brief prepared by the developer containing a description of the project and a brief indication of the social and environmental impacts that the project may cause.
- Screening by the environmental authorities to determine whether an Environmental Impact Assessment (EIA) will be needed or if the project can be approved with less comprehensive studies and plans – for instance an Environmental Management Plan to address impacts that are limited and certain to occur (medium sized and large hydropower project normally requires a Full EIA).
- The first step in the EIA process is Scoping. This undertaken to identify more accurately potential impacts and to prepare a study program or a Terms of Reference (ToR) for the EIA studies. The Scoping Report with the proposed ToR is submitted to the authorities for approval.
- A full EIA study normally comprises a number of thematic/component studies that should be carried out by the developer. The final products of an EIA process normally include a main EIA Report and several thematic/component reports, plus a Resettlement Action Plan (RAP) if the project involves relocation of people. The EIA Report may have different designations as for instance ESIA (Environmental and Social Impact Assessment) Report or Environmental Impact Statement (EIS).
- The EIA Report, and mandatory accompanying reports (for instance RAP) is submitted to the environmental authorities or the designated responsible authority in the country. After the contents and quality of the EIA Report have been checked and found to be satisfactory the EIA Report will go through a review process which also may include a public hearing.
- Based on the EIA Report, including other plans as relevant (see below) and received comments during the review process, the responsible authority prepares a report giving their recommends on whether to approve the project or not. In general the final decision on project approval and environmental licence is taken at ministry level.

All international standards require Environmental Assessments (EA), but differ slightly in the details regarding processes and stakeholder engagement in the performance of this assessment. In some cases, with negligible social impacts, the EA can focus on the environmental issues. SN Power have developed a series of questions to be used in order to decide whether to perform a full social impact assessment as well as an environmental assessment, see box 6.2.

**Box 6.2      Questions to assess if a social impact assessment should be performed**

In order to establish whether to perform a social impacts assessment SN Power asks the following questions:

- Is the proposal (project) likely to give rise to a significant increase or reduction in the number of persons visiting, living or working at the site and in the affected area?
- Is the project likely to disadvantage or benefit any particular social group?
- Is the project likely to give rise to an increase or decrease in employment opportunities locally?
- Is the project likely to have an impact upon existing community offer in terms of health, education, water, and other infrastructural needs?
- Is the project likely to give rise to increased tension and conflict in the affected community or adversely impact upon community identity?
- Is the project likely to enhance or detract from the cultural life of the community?
- Will the project create areas of risk for occupants (traffic, dangerous work sites, etc)?
- Is the project likely to give rise to increased community concern regarding public safety?

If the answer is yes or possibly to any of these questions a social impact assessment will be performed.

Source: SN Power

IFC requires that the developer conducts an integrated Social and Environmental Assessment (SEA). The Assessment should be based on current information, including an accurate project description, and appropriate social and environmental baseline data. In projects with significant adverse impacts or where technically complex issues are involved, it might be required to consult external experts. As described above (chapter 6.1) there should be at least two instances of disclosure during the process; early in the process and before the project construction commence.

IFC further requires that a Management Program is established, with the aim to manage mitigation and performance improvement measures and actions that address the identified social and environmental risks and impacts (the management program). This program should be based on the social and environmental assessment and the consultation process. The program should consist of a combination of operational policies, procedures and practices. Avoidance and prevention of impacts should be preferred over minimization, mitigation, or compensation, wherever technically and financially feasible. The management plan is further discussed in chapter 7.

IHA's policy position is that EAs should be conducted for all hydro-electric projects that have the potential for significant impacts on the environment. EAs should be based on good science and factual information; be relevant to the scale and nature of the project in question; take into account already existing information; and include appropriate procedures or codes of practice regarding stakeholder participation and environmental protection. Figure 6.1 gives a schematic overview of the stages of an EA as recognised by IHA.

**Figure 6.1 Steps in an Environmental Assessment**

<p><b>Initial Screening</b></p> <p>Aim: to establish the types and scale of project risk and opportunity, and ensure consistency with environmental and other relevant policies.</p>
<p><b>Scoping</b></p> <p>Aim: to determine the type, level and guidelines for environmental assessment based on regulatory requirements and community input. The guidelines should define key project level environmental issues to be addressed. These in turn should be relevant to the project and appropriate to the scale and type of risk involved.</p>
<p><b>Conduct Environmental Studies</b></p> <p>Aim: to address the key issues outlined in the guidelines supplied by regulatory agencies, and to present the decision making authority with the relevant environmental information covering project, construction, commissioning and management.</p>
<p><b>Appraisal</b></p> <p>Aim: for the decision-making authority to consider the quality of information supplied by the proponent and determine conditions of development approval/license.</p>
<p><b>Implementation (construction and operation)</b></p> <p>Aim: to manage environmental issues during construction and operation in accordance with agreed conditions.</p>
<p><b>Monitoring</b></p> <p>Aim: to measure predicted impacts and the effectiveness of mitigation measures through adherence to commitments in specified management plans, licence conditions, and voluntary agreements.</p>

Source: IHA

In HSAP the score 3 is given when an assessment of environmental and social impacts have been undertaken for project implementation and operation, including for instance evaluation of associated facilities, and scoping of cumulative impacts. In the assessment appropriate expertise should have been consulted, and a baseline should have been established and well-documented for the pre-project condition against which post-project changes can be compared. The assessment and planning process should involve appropriately timed engagement with directly affected stakeholders. In order to score 5 plans should be embedded within an internationally recognised environmental management system which is third party verified, such as ISO 14001; and independent review mechanisms should be utilised.

WCD recommends a two-stage impact assessment, including a scoping phase, identifying key issues and defining the terms of reference for the second assessment. There should be a total integration of technical, environmental and social studies during the design stage, and include an Environmental Impact Assessment, a Social Impact Assessment, a Health Impact Assessment, and a Cultural Heritage Impact Assessment. The assessments should comply with international professional standards and be guided by the precautionary approach. The assessments should be sufficiently detailed to provide a baseline against which monitoring results can be compared. The studies should run concurrently and interactively with regular exchange of information between all study groups. IAs should be carried out independently of the interests of the project developer and financing mechanisms should reflect this independence. An independent panel of

experts should be appointed to assist the government and the developer in reaching sustainable social and environmental outcomes. The different impact assessments should be public documents, posted on relevant websites, and disseminated in appropriate languages.

### ***Environmental management and monitoring plan***

An Environmental management and monitoring plan (EMAP) is a component of the Environmental and Social Impact Assessment. It includes potential environmental impacts to occur during construction and operational phases and the mitigation measures to be taken for prevention or minimization of these impacts. The EMAP also includes the principles for public consultation meetings with the local people, who may be affected from the project, and the representatives of local non-governmental and governmental organizations. Box 6.3 gives an example of issues typically addressed in the EMAP, whereas box 6.4 shows the structure of the EMAP for the Bygoye Hydro-power project in Uganda.

One outcome from the Environmental and Social Assessment should be a monitoring plan. Monitoring is one of the important elements of environmental management and serves a number of functions including:

- Providing a check on the implementation of proposed mitigation measures and early indications of progress, or lack thereof, in the achievements of results; and
- Identifying corrective measures or the redesign of mitigation measures, if the originally planned mitigation measures are not sufficiently effective.

#### **Box 6.3      Issues typically addressed in an environmental management plan**

- Impact summary, from the environmental impact assessment report;
- Description of mitigation measures, linked to the impact each measure relates to and the conditions under which it is required, and referenced to technical details such as methods, equipment and operating procedures;
- Public participation, including access to information and disclosure of project documentation;
- Institutional arrangements and responsibilities for implementation of each measure, including monitoring and supervision, the legal framework and capacity-building required for effective environmental management plan implementation;
- Monitoring programme;
- Reporting procedures, including mechanisms for evaluation and feedback;
- Timing of implementation schedule;
- Costs, including sources of funds.

Source: UNEP

**Box 6.4      Environmental Action Plan for Bugoye Hydropower Project, Uganda**

Implementation of mitigation measures for construction activity environment, health and safety impacts is the responsibility of the Contractor. The Contractor will submit an Environmental Management Plan (EMP) and Occupational Health and Safety Plan (OHS Plan) according to requirements in the agreement with the developer. The Contractor will prepare detailed procedures to mitigate the following identified construction activity impacts:

- Dust and noise increase
- Blasting
- Waste production
- Pollution control
- Sedimentation and erosion control
- Spoil/ rock disposal
- Site restoration
- Environmental emergency response
- Chance findings
- Local employment
- Health and safety for workers
- Public health impacts from workers
- Traffic accident increase

The Contractor's EMP will be based on ISO 14004:2004 requirements, and ensure compliance with the Ugandan National Environment Act, Cap 153.

The Contractor's OHS Plan will be based on the OSHAS 18001:2007 requirements, and ensure compliance with the Uganda Occupational Health and Safety Act, 2006, and the Ugandan Employment Act, 2006. The Contractor will in addition comply with international best practices, including IFC Performance Standard 2 on Labour and Working Conditions.

Implementation of mitigation measures directed at affected households and communities is the responsibility of the developer. The recommended mitigation measures aim at restoring pre- construction standards of living and provide benefits to the local communities. To avoid that the project creates increased gender imbalance in the local communities as a result of its activities, and rather contributes to strengthen the woman's role, particular attention has been given to the specific needs of girls and women in the proposed mitigation measures. A community programme and a catchment protection programme have been described, and the following mitigation measures are recommended:

- Restoration of water supply as a consequence of reduced water flow in the river
- Livelihood restoration in form of agricultural support for the households resettled or given replacement land
- Local health care services through infrastructure, staff, drug and equipment support to the Bugoye Health Centre III
- Three-year HIV/Aids and STDs prevention programme implemented in close collaboration with local resources
- Three-year malaria programme focusing on prevention, testing and treatment
- Provision of scholarship for tertiary education for local women during 25 years
- Long-term support to the local health and education sector through earmarking some of the operation phase royalties to be paid by the developer
- Initial preparation of a catchment protection programme for the upstream Rwenzori national park

Source : Trønder Power /Norplan



In addition to continuous recording of information to track and control performance, inspections and audits should be used to verify compliance and progress. Monitoring is essential to identify undesirable trends, which also means that high quality and, where possible, quantified baseline information is needed. It is only when a proper baseline is established that changes can be identified through monitoring. Baseline data will typically be collected during the EIA/ RAP studies, and during socio-economic baseline surveys.

The total time frame of the monitoring period shall not be time bound, but last until the project impacts are mitigated (performance targets achieved) or compensated as described in the Resettlement Action Plan (RAP).

### **6.2.3 Social Development plan**

If necessary one outcome of the integrated Social and Economic Assessment can be a separate Social Development Plan, including elements such as benefit sharing and entitlements. Whether this should be integrated in the Environmental Management Plan or a plan on its own must be assessed case-by-case. What is important is that these issues are being dealt with, not

An important basis for this plan is the stakeholder analysis, which identifies stakeholders that will be negatively affected and thus are entitled to compensation. The general principle for compensation, endorsed by most standards, are that affected individuals and communities should at least be able to uphold their livelihood and living conditions, but preferably be able to increase it. The latter means that they are able to take part of the benefits generated by the project. It is however important to be aware that there might be national laws or regulations that restrict the compensation, especially for local communities and individuals, and that departing from these rules might cause conflicts with regional and national governments.

Another important element is that also individuals that have no legal right to land or other assets in the project affected area should be compensated, and part of the benefit sharing. A related issue are in-migrants, i.e. people who move in to the project area after the project development has commenced. Some of this migration is intended, for instance needed labour force, but some can also be opportunistic, i.e. migrating in the hope to reap some of the benefits from the project. In-migrants can have large social and environmental impacts. IFC has published a handbook on how to manage project-induced in-migrants (IFC, 2009b).

#### ***Benefit Sharing***

Adversely affected people are entitled to share project benefits, but the nature of agreed benefits can take many different forms. The benefits can for instance be (WCD, 2000):

- *Project Revenues-Related:* A percentage share of project revenues/royalties, the construction budget and other profits. Different forms of joint enterprises where affected people have a share of equity.
- *Project Benefit-Related:* Provision of irrigated land or an opportunity to purchase irrigated land, access to irrigation water, provision of electricity supply, domestic water supply, right to reservoir fisheries, cultivation in the draw-down area of the reservoir, and contract to manage recreational/water transport facilities.

- *Project Construction and Operation-Related*: Employment in construction, plant operation, and service sector of the project. Financial and training support for self-employment contract to provide goods and services.
- *Resource-Related*: access to catchment resources for defined exploitation and management purposes, catchment development such as planting fruit trees or reforestation, access to pumped irrigation from the reservoir, and benefits from managed flows and floods.
- *Community Services-Related*: Provision of services including health, education, roads and public transport, and drainage; income support for vulnerable or needy households; agricultural support services; community forests and grazing areas; market and meeting spaces.
- *Household-Related*: Skills training and interim family support; interest-free loans for economic activities, housing improvements, provision of start-up livestock; access to public works or work for wages; access to preferential electricity rates, tax rates, water and service charges.

It is important to stress the benefit sharing comes in addition to compensation for lost livelihoods etc., and that it should be more than a one-time compensation payment or resettlement support.

WCD define beneficiaries to include all people in the reservoir, upstream, downstream, and in catchment areas whose properties, livelihoods, and non-material resources are affected; and also those affected by dam-related infrastructure such as canals, transmission lines, resettlement, and other factors. WCD also recommend that the level of benefits are assessed and agreed upon by all parties involved (i.e. affected people, government, and developer/financier) and included in the performance contract.

IHAs guidelines state that communities and groups that are impacted by a project should be the first to benefit, and that these groups should participate in the identification, planning and distribution of benefits.

IFC performance standards do not include benefit sharing, except in connection with indigenous peoples.

An important part of the benefits will in most countries be distributed through the tax system, including royalties etc. These use of tax revenues are typically governed by central administration, laws and regulations. A private developer will have few or none possibilities to ensure that the tax revenues are channelled back to the affected local communities. The developer should anyway signal to central government that it is advantageous if some of the revenues are used to develop the local communities. The developer can also use parts of the project profits net of taxes to finance benefit sharing, preferably through an agreement with the local community. It is however important to be aware that central government can oppose to too large benefits for local communities, as this might cause increased differences that might give rise to internal conflicts, and also set a precedence for other development projects that can be difficult to follow.

UNEP (2007) discusses Benefit Sharing issues in dam development, and includes a database with examples of relevant frameworks and examples, that can give valuable input when designing a Benefit Sharing program.

#### **6.2.4 Resettlement Plan**

Resettlement has clear implications for cultural and agrarian landscapes, as people usually cannot maintain their traditional livelihood activities. Resettlement does not consist simply of moving people from one place to another, but is a complex process, which requires the contributions and participation of many people and organisations from local to national levels. Involuntary displacements raise major ethical questions, because they reflect an inequitable distribution of development benefits and losses. The term 'in situ displacement' refers to the form of displacement experienced by people while staying in place but losing benefits or other entitlements. Resettlement and displacement includes a situation in which people become marginalised from participation in decisions affecting resource access and management. Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition that results in displacement. This occurs in cases of lawful expropriation or restrictions on land use based on expropriation rights, and in negotiated settlements where the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail.

Unless properly managed, involuntary resettlement may result in long-term hardship and impoverishment for affected persons and communities, as well as environmental damage and social stress in areas to which they have been displaced. Therefore involuntary resettlement should be avoided or at least minimized. However, if unavoidable, appropriate measures to mitigate adverse impacts on displaced persons and host communities should be planned and implemented. Direct involvement of the developer in resettlement activities can result in cost-effective, efficient, and timely implementation of those activities. Negotiated settlements help avoid expropriation and eliminate the need to use governmental authority to remove people forcibly. Negotiated settlements can usually be achieved by providing fair and appropriate compensation and other incentives or benefits to affected persons or communities.

If the project involves displacement of a certain number of people most international standards require a Resettlement Action Plan (RAP). The World Bank has earlier required a RAP if more than 200 people are displaced. A RAP would typically include identification of those being resettled; the socio-economic baseline for the persons being resettled; the measures to be implemented as part of the resettlement process including those relating to resettlement assistance and livelihood support; the legal and compensation frameworks; organisational roles and responsibilities; budget allocation and financial management; the timeframe, objectives and targets; grievance mechanisms; monitoring, reporting and review provisions; and understandings around consultation, participation and information exchange.

IFC Performance standard 5 (Land Acquisition and Involuntary Resettlement) requires that the client consider feasible alternative project designs to avoid or at least minimize physical or economic displacement. When displacement cannot be avoided, the client shall offer displaced persons and communities compensation for loss of assets at full replacement cost and other assistance to help them improve or at least restore their standards of living or livelihoods. Standards for compensation should be transparent and consistent within the project. If the livelihoods of displaced persons are land-based, or land is collectively owned, land-based compensation should be offered, where

feasible. The client shall provide opportunities to displaced persons and communities to derive appropriate development benefits from the project.

In the case of acquisition of land rights through expropriation or other legal procedures (Type I transactions) involving physical or economic displacement, and negotiated settlements (Type II transactions) involving physical displacement, the client must prepare a plan (or a framework) that addresses the relevant requirements in Performance Standard 5. This plan might include:

- a description of the entitlements of displaced persons provided under applicable laws and regulations;
- the measures proposed to bridge any gaps between such entitlements and the requirements of PS5; and
- the financial and implementation responsibilities of the government agency and/or the client.

#### ***Planning of livelihood restoration***

The IFC Performance Standard 5 on Land Acquisition and Involuntary Resettlement requires that in those cases where livelihoods of displaced persons are land-based, land-for-land compensation shall be offered where feasible. Many hydropower project development projects are located in mountainous and hilly areas where the population and agricultural land resources are concentrated on the river plains. It may therefore prove difficult to find sufficient and adequate resettlement land for the displaced persons if a dam is constructed across the valley to establish a reservoir. A developer may thus face a number of dilemmas and challenges in connection with resettlement and livelihood development if deciding to get involved in the project. Some of these potential dilemmas are:

- Due to the lack of nearby resettlement land affected people may have to resettle far away from their home area in an environment that is unfamiliar to them both in terms of culture and ecological and climatic conditions.
- Resettlement far from the home area at different resettlement sites may break up the social network and fabric of the resettled communities.
- The lack of suitable resettlement land may compel the developer to consider more use of non-land based and monetary compensation and thereby increase the risk for impoverishment of the displaced persons and result in long term dependency on assistance.
- Because of the lack of suitable resettlement land the developer may have to face the choice of buying up already developed and existing residential and agricultural land in the project area, thus causing a sort of voluntary displacement.

#### ***Private sector responsibility in absence of a clear governmental policy***

In the absence of appropriate national legislation and policies a developer may be faced with the challenge of determining the appropriate and reasonable compensation and benefits for directly and indirectly affected local communities. In this case the developer may choose to develop his own resettlement policy for the project, based on discussions with the government and the outcomes from consultations with affected communities.

The resettlement policy should guide the development of the Resettlement Action Plan and Social Development Plan, and take into consideration benefits and entitlements for directly and indirectly affected persons. Identified entitlements could then in some detail be taken into the final concession agreement with the government. The developer needs to make sure that accorded compensation and benefits fulfils the requirements of banks and international funding organisations such as the IFC and the World Bank. The developer may also have to create and fund an organisational framework for decision making and resettlement plan implementation in cooperation with the government. The highest level in the organisational framework would then be charged with making detailed policy decisions on issues that arise during the resettlement while the lower levels would be charged with implementation.

### **6.2.5 Indigenous Peoples Development Plan**

If the project affects indigenous peoples a separate Indigenous Peoples Development Plan could be elaborated, but it could also be included in the more general Social Development Plan.

IFC Performance Standard 7, HSAP P-15 (and I-11 and O-11) and WCD addresses issues concerning indigenous peoples. These are based on ILO 169, and partly on UNDRIP. The main difference between the standards or recommendations is the treatment of FPIC (see also chapter 3.1), and presently HSAP do not fully endorse FPIC (the same holds for present IFC PS (2007), but in the revised version FPIC is included). In HSAP consent is defined as signed agreement with authorised representatives from the affected community through an independent and self-determined decision-making process undertaken with sufficient time and in accordance with cultural traditions, customs and practices. However, this is an unresolved issue in the development of HSAP, as Indigenous Peoples *“was a topic of non-consensus in development of the Protocol, relating to the focus of support and consent given by indigenous peoples (whether for management plans or for the project itself). With respect to the Stakeholder Support criterion, it is the belief of IHA that the level 5 language does not represent proven best practice. There is a consensus within the Forum that this issue requires priority focus and attention in the further development and testing of the Protocol.”*

### **6.3 HSE and working conditions**

Management and routines for HSE issues and working conditions should be prepared in the planning phase. This can include an assessment of human resource and labour management requirements for the project, including project occupational health and safety (OH&S) issues, risks, and management measures. This should cover all labour management planning components, including those of contractors, subcontractors, and intermediaries.

HSAP recommends establishment of a Labour management plan that include human resources policies, staff and workforce planning, occupational health and safety, equal opportunity, staff development and training, grievance mechanisms, and (where appropriate) collective bargaining mechanisms.

HSE issues and other worker conditions issues are further discussed in chapter 7.

## **6.4 Project management**

Integrated project management is a way to ensure that the developer manages to coordinate and manage all project components (for instance design, construction, environmental, social, resettlement, finance, communications and procurement) taking into account project construction and future operation activities at all project-affected areas. The intent is that the project meets milestones across all components, delays in any component can be managed, and one component does not progress at the expense of another.

In chapter 4 we introduced PROMAS, SN Powers project management system, which could prove as an example of a tailor-made management system. There are also standard project management systems that can be used, at least for smaller and not too complex projects.

A part of the project management is to establish and operate a local organisation and to manage and follow up contractors. These issues are dealt with in the following chapter.

### ***Environmental Management System***

In addition to a project management system a formal environmental management system (EMS) can be useful in order to guide operational practices and lead to a continuous improvement of these practices. IFC requires that the client establishes and maintains a Social and Environmental Management System, adapted to the nature and scale of the project with respect to identified social and environmental risks and impacts. This system should incorporate:

- Social and Environmental Assessment;
- management program;
- organizational capacity;
- training;
- community engagement;
- monitoring; and
- reporting.

In order to integrate environmental and social issues in technical and economic management a management system that consider all these issues could be useful.

Furthermore, IFC requires, at a minimum, that a management system that meets the requirements of Performance Standard 1 should be in place at the level of the client's organization in which the funds from IFC's investment will be utilized. In project financing the system structure should address the social and environmental issues arising from the project being financed. In the case of corporate investments without specific project activities to be financed, this will often mean establishing, building on or maintaining a corporate level management framework.

IFC accept several international frameworks for quality and environmental management systems, for instance ISO 14001 ([www.iso.org](http://www.iso.org), see also box 7.2), EMAS

([http://ec.europa.eu/environment/emas/index\\_en.htm](http://ec.europa.eu/environment/emas/index_en.htm)), OHSAS 18001 ([www.ohsas-18001-occupational-health-and-safety.com/](http://www.ohsas-18001-occupational-health-and-safety.com/)) and SA8000 ([www.sa-intl.org](http://www.sa-intl.org)).

IHA recommends that hydropower operators adopts internationally recognised environmental management systems, such as ISO 14001. Hydropower operators should also consider incorporating their EMS as part of a broader sustainability management and public reporting program.

**Box 6.5      ISO 14001**

ISO 14001:2004 specifies requirements for an environmental management system to enable an organization to develop and implement a policy and objectives which take into account legal requirements and other requirements to which the organization subscribes, and information about significant environmental aspects. It applies to those environmental aspects that the organization identifies as those which it can control and those which it can influence. It does not itself state specific environmental performance criteria.

ISO 14001:2004 is applicable to any organization that wishes to establish, implement, maintain and improve an environmental management system, to assure itself of conformity with its stated environmental policy, and to demonstrate conformity with ISO 14001:2004 by

- a) making a self-determination and self-declaration, or
- b) seeking confirmation of its conformance by parties having an interest in the organization, such as customers, or
- c) seeking confirmation of its self-declaration by a party external to the organization, or
- d) seeking certification/registration of its environmental management system by an external organization.

All the requirements in ISO 14001:2004 are intended to be incorporated into any environmental management system. The extent of the application will depend on factors such as the environmental policy of the organization, the nature of its activities, products and services and the location where and the conditions in which it functions.

Source: ISO ([www.iso.org](http://www.iso.org))

## **6.5      *Use of consultants***

External consultants are often used to carry out the Environmental and Social Assessments Plans, as well as the other plans described above. Using a team of both international and local consultants will often prove useful. An international consultant company can secure access to solid knowledge of international standards and requirements, so that the plans are prepared in order satisfying these standards. To secure that local conditions and knowledge are taken into account, local consultants and a local project team are essential.

As mentioned above several standards, including IFC and the World Bank, requires that different consultants are being used for the feasibility study and the environmental and social impact assessment.

## **6.6 *Summing up***

In the planning phase the following elements are important:

- Establish procedures for communication and consultation with affected stakeholders if not already existing. This should be based on an identification and assessment of stakeholders.
- Engage in stakeholder consultations and negotiations, based on good faith and informed participation for all directly affected stakeholders
- Perform a feasibility study that takes into account environmental and social concerns, in order to ensure a sustainable outcome
- Perform an Environmental Impact Assessment, preferably integrating social issues
- Develop plans for management of environmental and social issues through the following stages. This can include Environmental Management Plan and System, Social Development Plan, Resettlement Action Plan and Indigenous Peoples Plan.
- Design mechanisms for Benefit Sharing that preferably are compatible with national legislation and regulations, but at the same time ensures benefits for the local communities most affected by the project. The purpose of Benefit sharing is to make sure that affected stakeholders are better off than before the project (i.e. it should not be just a compensation for possible losses).
- If not already existing an integrated project management system should be established for the project.



## **7. Implementation/construction**

At this stage the decision to proceed with the project and start the construction has been taken. Providing that environmental and social issues have been properly dealt with in the planning phase, the challenges in this phase is the implementation of the provisions in the environmental and social plans, including monitoring and reporting. Other important issues are connected to the construction work, like setting up a local organisation, managing HSE issues and contractors. These issues should, however already have been prepared in the planning phase.

In this chapter the following issues are being discussed:

- Setting up a local organisation
- Management of environmental and social issues during the implementation phase, including setting up a grievance mechanism, governing a resettlement process, and running monitoring and reporting
- HSE and working conditions
- Management of contractors, with focus on designing agreements securing that contractors follows the environmental and social plans and provisions.

### **7.1 Local organisation**

Setting up a local organisation is, at least for larger projects, a necessity. According to Norconsult (2010) this should be done as early as possible, and be manned with a mix of expatriates and local employees. Even though such an organisation ideally should be established in the planning phase, it may be too costly to set up a local organisation before the project has been secured. At the planning stage an alternative could be to rely on a good local partner, but all such partnering should be preceded by a thorough reputational due diligence.

In new countries, where the developer has no previous experience, trustworthy local partners are needed – be it either local companies or other Norwegian/international companies that already are present in the country or have experience from it. It should also be noted that most countries demand that a locally registered company (but with international owners) is the responsible/executing organisation.

The local organisation should be manned both by expatriates and local employees. In most cases it is natural that the responsibility for the local organisation should be with the Norwegian expatriates, at least in the construction phase and the initial operational phase. Investing in the local employees, and for instance provide possibilities for skills development, can be essential in order to retain talented professionals – and secure that the responsibility can be transferred to the local part after commissioning. Knowledge transfer is one form for skills development, and this can take place both locally and through study tours to Norway.

In this phase the use of external consultants can be phased out, but there might still be need for further investigations, measurements or follow-up surveys. In addition the finance institutions often require reviews, and it is often necessary (or even mandatory) to engage consultants or expert panels to do these.

IFC requires that an organizational structure with clearly defined roles, responsibilities, and authority to implement the environmental and social management program is established, and maintained. Specific personnel, including management representative(s), with clear lines of responsibility and authority should be designated. Key social and environmental responsibilities should be well defined and communicated to the relevant personnel and to the rest of the organization. Employees should be trained in order for them to gain necessary knowledge and skills to perform their work, including current knowledge of the host country's regulatory requirements and the applicable requirements of the Performance Standards.

## **7.2 Environmental and social management**

One important part of the plans developed in the previous phase should be to establish programs that will secure that the environmental and social objectives are achieved, both in construction and operation. As mentioned above the implementation and execution of the plans should be supported by an adequate management system. The program should for instance include measures and actions to be taken in order to mitigate negative impacts, and to improve performance.

### ***Management program***

A management program can consist of a combination of operational policies, procedures and practices, and it may apply broadly across the total organization, to the specific project, or to certain activities.

An Environmental management systems will facilitate systematic management of activities and tasks by project owner/developer, builders and operators. These systems are probably most effective where these actors already use an environmental management system framework for their day-to-day business. Box 8.1 gives an example of typical components in an environmental management system .

As mentioned in chapter 6 IFC requires that the measures and actions favour the avoidance and prevention of impacts over minimisation, mitigation, or compensation, wherever technically and financially feasible. If risks and impacts cannot be avoided or prevented, the developer has to identify mitigation measures and actions to secure that the project operates in compliance with applicable laws and regulations, and meets the requirements of Performance Standards 1 - 8. The level of detail and complexity of the program and the priority of the identified measures and actions should be adjusted in accordance with the project's risks and impacts.

It is also advisable that desired outcomes from the program are measurable, to the extent possible. These can take the form of performance indicators, targets, or acceptance criteria that can be tracked over defined time periods. The program should also preferably include estimates of the resources needed for measurement and responsibilities. Since the project implementation is a dynamic process the program should be flexible so that changes in project circumstances, unforeseen events, and the results of monitoring are able to influence the implementation over time.

### **Box 7.1      Typical components of an environmental management system**

- Management commitment;
- Environmental policy
- Environmental aspects and impacts
- Objectives and targets
- Roles and responsibilities
- Planning and programmes
- Regulatory compliance
- Document control
- Operational and emergency procedures
- Training
- Monitoring and measuring
- Review (including environmental audits) and improvement.

Source: IHA 2004.

IFC requires that if specific mitigation measures and actions necessary for the project to comply with applicable laws and regulations and to meet the requirements of all Performance Standards, have been identified the developer has to prepare an Action Plan. This plan may range from a brief description of routine mitigation measures to a series of specific plans. The Action Plan shall:

- describe the actions necessary to implement the various sets of mitigation measures or corrective actions to be undertaken;
- prioritise these actions;
- include the time-line for their implementation;
- be disclosed to the affected communities ; and
- describe the schedule and mechanism for external reporting on the client's implementation of the Action Plan.

A level 3 score in HSAP require that processes are in place to ensure management of identified environmental and social issues, and to meet any environmental and social commitments. The management plans should be publicly disclosed. For the management of environmental and social issues the developer shall utilise relevant expertise, both internal and external. In addition processes, objectives and commitments stated in the management plans have been and are on track, i.e. there should be no risk of a major non-compliances or non-conformance.

A level 5 score requires that the monitoring of environmental and social issues during project implementation take into account inter-relationships amongst issues, and both risks and opportunities that become evident during implementation. Processes to anticipate and respond to emerging risks and opportunities should be in place; and plans and processes should be embedded within an internationally recognised environmental management system, such as ISO 14001.

### ***Communication with local communities***

Community engagement is important in managing social and environmental impacts and risks. This process normally involves disclosure of information, consultation with affected communities, and the establishment of a grievance mechanism (see below). Most standards clearly states that community engagement is the responsibility of the developer/owner.

Community engagement is an on-going process involving the client's disclosure of information. The purpose of this engagement is to build and maintain a constructive relationship with affected communities throughout the whole project. The nature and frequency of community engagement should reflect the project's risks to and adverse impacts on the affected communities. Community engagement shall be free of external manipulation, interference, or coercion, and intimidation, and conducted on the basis of timely, relevant, understandable and accessible information.

Disclosure of relevant project information is an important part of the communication process. The purpose of disclosure is to accommodate the communities understanding of the risks, impacts and opportunities of the project. Disclosure might contain information on the purpose, nature and scale of the project, the duration of proposed project activities, and any risks to and potential impacts for the affected communities.

It can be recommended to appoint a designated consultation officer and to set up on-going committees or working groups, which facilitate the exchange of views and helps build relationships and trust. It is important to use appropriate language and interpreters for the ongoing communication.

### ***Grievance mechanism***

For the developer it is important to understand community concerns and complaints and address them. A locally based grievance mechanism can provide a reliable structure and set of approaches where the affected communities and people and the developer can find effective solutions together. This mechanism should provide local people with a trusted channel to voice and resolve concerns linked to the project, and the developer with an effective way to address community concerns. A well-functioning grievance mechanism:

- Provides a predictable, transparent, and credible process, resulting in outcomes that are seen as fair, effective, and lasting
- Builds trust as an integral component
- Enables systematic identification of emerging issues and trends, facilitating corrective action

IFC requires that the developer establish a grievance mechanism to receive and facilitate resolution of the affected communities' concerns and grievances about environmental and social performance of the project, in the ongoing risks to or adverse impacts on affected communities are anticipated. This mechanism should be scaled to the risks and adverse impacts of the project. Concerns should be addressed promptly, in an understandable and transparent process that is culturally appropriate and readily accessible to all groups of the affected communities. The mechanism should have no cost and no risk of retribution for the affected community, and the mechanism should not impede

access to judicial or administrative remedies. The affected communities should be informed about the mechanism during the community engagement process.

IFC (2009c) suggest the following five principles as a guidance for grievance mechanisms:

- *Proportional*: Scaled to risk and adverse impact on affected communities
- *Culturally Appropriate*: Designed taking into account culturally appropriate ways of handling community concerns
- *Accessible*: Clear and understandable mechanism that is accessible to all segments of the affected communities at no cost
- *Transparent and Accountable*: To all stakeholders
- *Appropriate Protection*: A mechanism that prevents retribution and does not impede access to other remedies.

The World Bank Compliance Advisor (Ombudsman) (CAO, 2008) offers a set of "value-based" principles to take into consideration when designing a grievance mechanism:

- Commitment to fairness in both process and outcomes
- Freedom from reprisal for all involved parties—within the company and in the community
- Dedication to building broad internal support for the grievance mechanism across project lines
- Mainstreaming responsibility for addressing grievances throughout the project, rather than isolating it within a single department
- Willingness by senior management to visibly and sincerely champion the grievance system.

### ***Resettlement processes***

In the construction phase the resettlement action plan established during planning should be implemented. The standards reviewed focuses on the planning process, and give little guidance on how to actually implement the plan. Most of them, however, recognise the importance of a well monitored process, communication during the process, establishment of grievance mechanisms and on-going evaluation of the process.

IFC requires that the resettlement process is properly monitored and evaluated and that corrective action is taken as necessary. The resettlement is considered complete when the adverse impacts of resettlement have been addressed in a manner that is consistent with the objectives stated in the resettlement plan as well as the objectives of Performance Standard 5.

For type II transactions (negotiated settlements) involving economic (but not physical) displacement of people, the implementation is considered complete when affected persons or communities have received compensation and other assistance according to the requirements of Performance Standard 5.

When land acquisition and resettlement are the responsibility of the host government, the developer shall collaborate with the responsible government agency, to the extent permitted by the agency, to achieve outcomes that are consistent with the objectives of Performance Standard 5. If government capacity is limited, it is expected that the developer play an active role during resettlement planning, implementation and monitoring

### ***Monitoring and reporting***

A key process during implementation of the plans established in the planning phase is monitoring and evaluation. Monitoring relates to a check that the measures described in the plan are being undertaken in the right place, at the right time, to the prescribed standard, and that the measures are effective. In addition, an effective monitoring and evaluation system can identify and respond to the unexpected issues and impacts that for certainty will arise during project implementation.

IFC requires that procedures for monitoring and measuring the performance of the management program are being established. In addition to recording information to track performance and establishing relevant operational controls, dynamic mechanisms, such as inspections and audits, should be used where relevant. For projects with significant impacts that are diverse, irreversible, or unprecedented, qualified and experienced external experts are needed in order to verify the monitoring information. The extent of monitoring should be commensurate with the risks and impacts, and with the compliance requirements. The monitoring system should also be flexible in the sense that it can be adjusted according to performance experience and feedback. Monitoring results should be documented, including necessary corrective and preventive actions that have or will be implemented.

IFC requires both internal and external reporting. There should be a periodic internal reporting to senior management level, covering issues related to the effectiveness of the management program, and based on systematic data collection and analysis. The scope and frequency of these reports depend upon the nature and scope of the activities identified.

Externally the developer should report on Action Plans, i.e. disclose the Action Plan to the affected communities. In addition provide periodic reports that describe progress with implementation of the plan, focusing on issues that involve ongoing risk to or impacts on affected communities, and on issues that the consultation process or grievance mechanism has identified as of concern to those communities. The reports should be in a format that is accessible for the affected communities. The frequency of these reports will be proportionate to the concerns of affected communities but not less than annually.

The developer also have to report to IFC in accordance with IFC disclosure policy (ref). For each proposed investment IFC issues a brief summary of its review findings and recommendations: the Environmental and Social Review Summary (ESRS). The ESRS includes the rationale for IFC's categorization (see chapter 3) of a project, a description of the main social and environmental risks and impacts of the project, and the key measures identified to mitigate those risks and impacts. In addition IFC makes available electronic copies of, and where available, Web links to, any relevant social and environ-

mental impact assessment documents prepared by or on behalf of the developer, including the Action Plan.

IFC carries out the following actions to monitor projects they have invested in:

- Require the project to submit periodic Monitoring Reports on its social and environmental performance as agreed with IFC
- Conduct site visits of certain projects with social and environmental risks and impacts
- Review project performance on the basis of the commitments in the Action Plan, as reported in the Monitoring Reports, and, where relevant, review with the developer any performance improvement opportunities
- If changed project circumstances would result in adverse social or environmental impacts, work with the developer to address them
- If the developer fails to comply with its social and environmental commitments, as expressed in the Action Plan or legal agreement with IFC, work with the developer to bring it back into compliance to the extent feasible, and if the developer fails to reestablish compliance, exercise remedies when appropriate
- Encourage the developer to report publicly on its social, environmental and other non-financial aspects of performance, in addition to reporting on the Action Plan as required by Performance Standard 1.
- Encourage the developer to continue to meet the Performance Standards after IFC's exit from the project

HSAP has no own topic for monitoring and reporting, but it is a prerequisite in many of the other topics that performance is monitored and reported on a regular basis. External reporting toward affected communities are included in the Communication & consultation topic.

WCD recommends external review processes, by use of an Independent Review Panel, in order to ensure trust and confidence that the developer monitor and comply with obligations throughout the life of the project. Another mechanism recommended by WCD is independent certification using an international standards for practices and procedures through regular monitoring and review by an accredited external body, for instance ISO 14001.

### **7.3 HSE and working conditions**

The objective for health, safety and environment (HSE) work is to ensure a safe working environment for workers and employees. Activities and routines on HSE are well established among Norwegian companies, and are an integrated part of daily routines. To the extent possible it is anticipated that the Norwegian practices are being followed also in developing countries. But at the same time the understanding of HSE among the local government and the local workers can be a major challenge that it is important to address. Norconsult (2010) shows that a good track record on HSE is a result of a strong focus on good routines and follow ups on HSE.

Many countries in the developing world have not yet developed legislation and a proactive attitude towards HSE issues, but it is still possible to achieve good,

international HSE standards in such countries. Successful strategies include clear contractual requirements with the contractors, use of carrot and stick, and management leading by example (Norconsult, 2010).

Internationally recognised labour rights are documented in places such as the IFC Performance Standard 2, the International Labour Organisation standards, and the Human Rights Council 2008 Report of John Ruggie “Protect, Respect and Remedy: a Framework for Business and Human Rights”, see also chapter 3. The rights include freedom of association, right to equal pay for equal work, right to organize and participate in collective bargaining, right to equality at work, right to non-discrimination, right to just and favourable remuneration, abolition of slavery and forced labour, right to a safe work environment, abolition of child labour, right to rest and leisure, right to work, right to family life.

IFC Performance Standard 2 regulates the requirements regarding labour and working conditions in projects. Performance standard 2 covers the following topics:

- *Human Resources Policy* should be established and adopted. The client shall provide employees with information regarding their rights under national labour and employment law, including their rights related to wages and benefits. The policy should be clear and understandable to employees, and presented to each employee upon taking employment. The employee should also be informed if he or she is covered by a collective bargaining agreement. The scope and complexity of the policy ought to be tailored to the size and nature of the workforce.
- *Working conditions and terms of employment* should be documented and communicated to all employees and workers directly contracted by the developer, including entitlement to wages and any benefits.
- The developer must respect *collective bargaining agreement* with a workers' organization. If such agreements do not exist, or do not address working conditions and terms of employment the developer shall provide reasonable working conditions and terms of employment that, at a minimum, comply with national law.
- If the national law recognizes workers' rights to form and to join *workers' organizations* and to bargain collectively, the developer shall comply with national law. If national law substantially restricts workers' organizations, the developer shall enable alternative means for workers to express their grievances and protect their rights regarding working conditions and terms of employment.
- Employment decisions should be based on *non-discrimination and equal opportunity*, and not be taken on the basis of personal characteristics unrelated to inherent job requirements. The principle of equal opportunity and fair treatment should be adopted.
- A plan to mitigate the adverse impacts of *retrenchment* on employees, should be developed if the elimination of a significant number of jobs or a layoff of a significant number of employees is anticipated. The plan should be based on the principle of non-discrimination and reflect consultation with employees, their organizations and, where appropriate, the government.



- A *Grievance Mechanism* for workers (and their organizations) to raise reasonable workplace concerns should be established. This mechanism should be easily accessible. It should involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides feedback to those concerned, without any retribution.
- *Children* should not be employed in a manner that is economically exploitative, is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Children below the age of 18 years should not be employed in dangerous work.
- *Forced Labour* should not be employed, with forced labour consisting of any work or service not voluntarily performed that is exacted under threat of force or penalty.
- Workers should be provided with a *safe and healthy work environment*, taking into account inherent risks and specific classes of hazards. The risk of work related accidents, injuries, and diseases should be minimised as far as practicable. Potential hazards to workers should be identified, particularly those that may be life-threatening, and prevented. In addition workers should be trained in health and safety issues.
- *Non-Employee Workers*, i.e. workers who are: (i) directly contracted by the developer, or contracted through contractors or other intermediaries; and (ii) performing work directly related to core functions essential to products or services for a substantial duration. These workers should be granted the same rights as other workers regarding issues like minimum wage, hours of work, overtime payment, and HSE conditions.
- The adverse impacts associated with *supply chains* should be considered where low labour cost is a factor in the competitiveness of the item supplied. The developer should inquire about and address child labor and forced labor in its supply chain.

IFC have issued Environmental, Health and Safety (EHS) Guidelines, technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). These include performance levels and measures that are normally acceptable to IFC and are generally considered to be achievable in new facilities at reasonable costs by existing technology. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. The General EHS Guidelines covers issues related to Environment; Occupational Health and Safety; Community Health and Safety; Construction and Decommissioning. There also exist Industry Sector Guidelines, where the Power Industry guidelines cover wind energy, geothermal power generation, electric power transmission and distribution, and thermal power, whereas hydropower is not included.

In order to achieve score 3 in HSAP human resources and labour management requirements should have been identified through an assessment process, including occupational health and safety issues and risks. Processes should be in place to identify any emerging or ongoing issues, and to monitor if management measures are effective. Employees and contractors should have access to processes where they can raise human resources and labour management issues and get feedback.

A score of 5 requires that the assessment take broad considerations into account, and both risks and opportunities, that processes are in place to anticipate and respond to emerging risks and opportunities, and that employees and contractors receive feedback on how issues raised have been taken into consideration in a thorough and timely manner. The Labour management planning should include: human resources policies; staff and workforce planning; occupational health and safety; equal opportunity; staff development and training; grievance mechanisms; and (where appropriate) collective bargaining mechanisms.

### **Box 7.2            Safety Policy Statement for Bugoye HPP**

It is the prime concern of TPL at Bugoye HPP that safety must be given high priority in the execution the works. A high standard of safety and health shall be maintained for all persons, including protection of the general public. Anyone who may be affected by the operations shall be protected according to the TPL's general regulations and safety rules.

The management, staff, subcontractors, suppliers and workers have the shared responsibility to ensure a safe and healthy working environment at the company construction sites.

It is the aim of the company to prevent all accidents and to prevent personal injury, harm to health, property damage, and other loss incidents involving production delay, fire, theft, plant, equipment, materials and supplies.

The ESWE Manager is held accountable for the overall implementation of the safety policy. He shall set performance targets, which will be adjusted from time to time to ensure progressive improvement in standards for all risk areas. The ESWE Manager will delegate the daily monitoring of safety works to the Contractor Safety Officers. The Safety Officers will participate in regular site safety activities and report regularly planning, monitoring and reviewing health and safety performance of TPL.

Source: Tronder Power

**Box 7.3      Safety training program for Bugoye HPP**

Training Topic	Duration	Frequency*
Introduction to New Employees	30 Minutes	New Employment
Site Specific Safety Training	1 Hour	When Required
Safety Tool Box Talk	15 Minutes	Weekly

Site Specific Safety Training shall consist of training of the rescue team members, fire fighting training, breathing appliance training, etc.

The content of the safety tool box talk will generally cover the following topics and any other subject according to actual site operation being carried out.

- Safety Policy
- General Duties - Employees/Proprietors
- Excavation
- Hand/Power Tools
- Electricity
- Personal Protective Equipment
- Housekeeping
- Accident Reporting
- Manual Handling
- Working at Height
- Fire Prevention
- Abrasive Wheel
- Welding and Cutting

Source: Tronder Power

## 7.4      *Management of contractors*

For the developer it is necessary to ensure that the contractor accurately follows up the provisions in the environmental plan and management system, and adheres to the HSE regulations. It is also necessary to ensure that the contractor demands that their suppliers and sub-consultants also adhere to these plans and regulations. These issues should be clearly addressed in the contract with the contractor. In all circumstances it is the developer who is responsible for these issues, both with regards to national laws, requirements from funding organisations and towards the public. IFC and HSAP do not discuss contract management as such, but the IFC requirements for the developer also applies to the contractor and scoring high in HSAP imply a thorough management of contractors.

It is important to assess the requirements on the contractors early, and include these provisions in the bidding process. Normally a good deal of these requirements can be extracted from the Environmental Management Plan. Box x gives an example on questions to be included in the tender documents in order to secure proper handling of environmental and social issues.

**Box 7.4      Example of provisions in the bid for contractors**

The Bid Data Sheet should include a request for:

- evidence of management systems certifications and other social and labor standards compliance (e.g. ISO, SA, etc.)
- social and community engagement policy
- numbers of suitably qualified managers and staff in the following areas:
  - local procurement management,
  - community liaison,
  - competency training/apprenticeships, and
  - local business support
- employee training and community relations record, and
- on large projects, a Community Relations Manager

A questionnaire designed to capture the capacity of the contractor to manage stakeholder engagement during the construction work should be included in the bid package. This questionnaire can include for example:

- how they would go about implementing the types of environmental and social impact mitigation measures that will become conditions of the contract (concentrating on the high-risk impacts)
- practices for managing engagement with affected communities
- practices for recruitment (including rotation cycles), worker camp management, local procurement, and human resource development and training
- specific experience in enhancing the employment and local procurement opportunities for communities adversely affected by construction activities (experience should relate to communities with similar skill levels and livelihood vulnerability to those in the project area)
- extent of past efforts by the contractor to develop the capacity of regional sub-contractors and local level suppliers

Source: Shell international, "Social Performance during Construction, Management Social Performance" Guidance Note.

***Contractors and stakeholder engagement***

During construction, it is typically the contractors and sub-contractors who have day-to-day contact with local stakeholders. The quality of their interaction with the affected communities, government authorities and other stakeholders will reflect directly on the project and can have reputational consequences for the developer. Developing pre-qualification appraisal criteria and related questionnaires that assess the capability of the main contract bidders to meet minimum standards for stakeholder engagement and social performance can help in the selection process (see also box 7.4). For large or complex projects, it is good practice for the main contractor to have their own Community Relations Manager and grievance resolution mechanism.

***Environmental management***

According to WCD social and environmental mitigation measures should be defined in the tender in similar detail to construction elements. The tender should clearly identify responsibilities of the contractor, the developer, and the government in relation to:

- the environmental management plan;

- measures to mitigate adverse social impacts, including development opportunities for affected communities;
- access to and management of new resources in the reservoir;
- the construction method and schedule, and the construction camp;
- impact monitoring and reporting during the operations stage; and
- compliance instruments.

If the responsibility for the implementation of any environmental and social impact mitigation measures have been assigned to contractors, the risks of the contractor failing to deliver must be assessed. If risks are identified, and/or the capacity of the contractor is found to be lacking, it is advisable to retain management oversight within the developers company for implementation, monitoring and follow-up on these commitments.

Contractor shall establish a schedule for obtaining all required authority permits under Contractor's responsibility and report in monthly progress report.

### ***HSE requirement for Contractors***

The contracts with the construction companies and subcontractors should contain clear clauses relating to HSE, with the full HSE policies included in the contract. Furthermore the contracts should contain clauses entitling the right to audit and do inspections. Such clauses should preferably also be included in the shareholders agreement, especially when the Norwegian partner is a minority shareholder.

The project need a dedicated HSE manager who can develop HSE procedures and guide managers in implementing them, but the line organisation should be held responsible.

Below we present the requirements SN Power use regarding the health, safety, environmental and social management system for their contractors. The objective is to ensure that adequate precautions are taken to avoid accidents, occupational illness, and harmful effects on the environment and on local communities during Contractor work. Other elements include satisfactory emergency planning, and securing contract objects.

SN Power base their specification on the following standards:

- Code of Practice for Safety in Tunnelling in the Construction Industry. BS 6164, British Standards Institution, London
- Project specific Environmental and Social Impact Assessment and Environmental Management and Action Plan, Monitoring program, Authority Permits as applicable.
- The UN Global Compact
- OHSAS 18001:2007 (occupational health and safety).
- Environmental management systems: ISO 14001:2004.
- Policy on Social & Environmental Sustainability, IFC 2006.
- IFC (2007) Performance Standards on Social & Environmental Sustainability.
- Safe working in tunnelling, ITA Guidelines (International Tunnelling Association).

- Threshold Limit Values (TLV) and Biological Exposure Indices (BEI) based on American Conference on Governmental Industrial Hygienists (ACGIH).
- Code of Conduct, SN Power (see box 4.1).

The specification applies to all contractor's personnel, i.e. including all personnel performing field activities (the main/principal contractor's, subcontractor's and/or vendor's personnel).

The specification document states the responsibilities for different personnel:

- *Contractor*: The activities carried out by contractor shall fully comply with statutory, contractual obligations and the contractor's own requirements related to avoidance of losses of human life and health, economic assets, the environment or contract objects. The contractor shall systematically work for HSES in accordance with established principles of quality assurance. Contractor's organisation shall reflect the implementation of HSES matters as a line management responsibility at all levels. Contractor shall comply with the legislation in the country where the site is located, and ensure that each Subcontractor working on the contract complies with the legislation. Contractor shall ensure that each Subcontractor plans, organises, performs and documents its HSES management system so that its own and other employers' personnel, the environment and property is protected in accordance with Contractor's HSES program. The Subcontractors' plans shall be approved by Contractor and submitted to Employer.
- *Employer's personnel*: Employer's personnel shall comply with the HSES requirements at the site.

The Contractor shall ensure that work methods, sequence and schedule are adequate in order to achieve a satisfactory HSES standard during construction. Contractor shall ensure that critical operations, which could lead to accidents with major loss, are systematically identified, analysed, evaluated and documented at the planning stage. For this the contractor shall use a recognised risk assessment method, for instance a Job Safety Analysis, and also adapt adequate control measures.

The specification regulates several issues, for instance including:

- HSES management program covering a wide range of items, see also annex 1. The Contractor shall have an accepted HSES program before start of construction at the Site. The program should be reviewed and updated regularly. Relevant parts of the Environmental and Social Impact Assessment, the Environmental Management and Action Plan and the Monitoring program should be assessed and implemented the HSE program and activity planning.
- Personal HSES handbook should be issued in English and the local language. Visual aids shall be used as required to communicate with illiterate workers. The handbook shall provide information on health, safety, environmental and emergency procedures and rules of interaction with local communities that all personnel working on the site are required to know. It should be distributed and its content introduced to all personnel working at the site. Visitors to the site shall be given adequate information on HSES requirements applicable to the site.

- HSES induction and training should be established for all personnel that are going to work within the Site including Employer, Engineer and other contractor personnel. The course shall cover specific hazards at the site, health, safety and environmental and emergency preparedness procedures, incident reporting routines and rules of interaction with local communities. Principal Contractor shall establish and operate a register of all personnel and visitors that have passed this induction or briefing, and issue designated identification cards that shall be required for access to the Site.
- Incidents occurring both during and outside work hours should be reported by use of a documented procedure. Included in this procedure should be: notification, investigation, documentation and reporting of incidents; development and implementation of actions to prevent recurrence and to improve the HSES management system; definition of types of incidents to be documented and reported; form to be used by contractor and subcontractors in the documentation of individual incidents; responsibility. A template form for reporting of incident is presented in table 7.1.
- Contractor's should regularly perform HSE inspections, in order to ensure safe working conditions in accordance with Contract and Contractor's HSES program and in compliance with rules and regulations. Weekly inspections are recommended. Other inspection frequencies may be chosen when appropriate. Employer has the right to participate in the inspections.
- Personal protective equipment and clothing, PPE, shall meet international (e.g. ANSI / EU) standards in order to give adequate protection. Contractor shall provide PPE for all own personnel. The Principal Contractor shall, in addition, provide PPE to the Engineer, the Employer's staff and representatives and any authorized visitors to the Site, for a total number of 30 persons.
- Transportation safety should be defined in a Transportation safety management plan for all transportation inside the site, also covering personnel and materials transportation between the site and the main national highway system as agreed with Employer.
- The Contractor shall interact with local communities and their representatives in a manner that maintains and promotes a good relationship. The Contractor must assign a person in charge of coordination and cooperation between the project and the local communities. The program for local contributions shall deliver measurable impact in the areas of sustainable development and local capacity building and address core needs of the community.
- The Contractor is required to develop a local employment program, to ensure that preference of employment is given to people from the area of influence of the project and from the district provided adequate qualifications. The program shall include information and skills training plans.
- The emergency preparedness organisation and resources shall be based on an emergency preparedness analysis. Based on this analysis, the following shall be specified: Notification and communication system; Escape and evacuation; Ambulance service; First aid and medical services; Fire fighting equipment.

Other issues included in the specification includes housekeeping, meaning that the site and the workplaces shall be kept in good order at all times, and control of Hazardous chemicals and materials.

SN Power requires that the contractor monthly report on HSES issues. The report shall include:

- Total number of reported incidents last month, categorised as fatality, lost-time injury, restricted work case, medical treatment case, first-aid injury, environmental damage, material damage, or near miss;
- Total number of man hours last month;
- Total number of personnel, split on personnel from the project's area of influence, the District and others.
- Total Recordable Injuries (TRI-rate) in construction activities last month and accumulated since start of construction work;
- Tolerated limit for TRI-rate for construction activities;
- Recordable Unwanted Occurrences (RUO-rate) in construction activities last month and accumulated since start of construction work;
- Goal for RUO-rate for construction activities;
- A short description of the fatalities, total recordable injuries, medium and major near misses, material accidents, fires, accidental emissions to the environment last month;
- Environmental discharge reporting in accordance with the Project's Environmental Management and Action Plan and Monitoring program.
- A short description of Regulation & Permit breaches last month;
- Summary of health, safety and environmental activities last month and status in relationship to Contractor's HSES program and activity plans;
- Summary of community relation activities last month and status according to Contractor's HSES program and activity plans;
- Authority permit schedule, actual and planned.



**Table 7.1 Example of an incident report**

Type of incident	<input type="checkbox"/> Personal injury <input type="checkbox"/> Work related illness <input type="checkbox"/> Material damage <input type="checkbox"/> Security breach <input type="checkbox"/> Accidental pollution <input type="checkbox"/> Motor vehicle accidents <input type="checkbox"/> Fire/explosion <input type="checkbox"/> Community relations incident <input type="checkbox"/> Near miss <input type="checkbox"/> Other			
Time and place	Location			
	Date	Time	<input type="checkbox"/> During working hours <input type="checkbox"/> During business travelling <input type="checkbox"/> During leisure time	Organisational unit
Employee info	Employee no.		Name	
	Date of birth		Occupation/position	
	Company / Department / Employer			
Description of incident / events / illness	Main activity at the time of the event?			
	How did the incident occur?			
	Machinery, tools, chemicals or materials involved?			
Injury or damage info	Describe injury / damage / type of illness		<input type="checkbox"/> Lost-time injury <input type="checkbox"/> Restricted work case injury <input type="checkbox"/> Medical treatment injury	<input type="checkbox"/> Other incl. first aid injury <input type="checkbox"/> Emergency preparedness organisation mobilised
	<input type="checkbox"/> Eyes <input type="checkbox"/> Head, face <input type="checkbox"/> Back <input type="checkbox"/> Trunk <input type="checkbox"/> Arm	<input type="checkbox"/> Hand, wrist <input type="checkbox"/> Leg <input type="checkbox"/> Feet, ankles <input type="checkbox"/> Internal <input type="checkbox"/> Other	<input type="checkbox"/> Amputation <input type="checkbox"/> Burn, scald <input type="checkbox"/> Concussion <input type="checkbox"/> Crushing <input type="checkbox"/> Cut, puncture	<input type="checkbox"/> Fracture <input type="checkbox"/> Hernia <input type="checkbox"/> Bruise <input type="checkbox"/> Sprain, strain <input type="checkbox"/> Other
Deviation	Describe deviations from regulations, procedures, instruction, common practise			
Casual analysis	What were the causes?			
Actions taken	Immediate actions?			
	Actions to prevent recurrence		Responsible	Due date
Signatures	Date	Employee	Date	Supervisor

Source: SN Power

## **7.5 Compliance**

Full compliance with technical, environmental and social measures must be achieved before the project is commissioned and enters full operation. This includes the broad commitments of the developer as laid down in the project licence, compliance plan, and related agreements, as well as the commitments of the contractor acting as agent of the developer.

## **7.6 Summing up**

In the implementation phase the important issues are:

- Follow up the environmental and social plan(s), including monitoring and internal and external reporting
- Continuous communication with affected local communities, with disclosure of information in a manner that is accessible.
- Establish a grievance mechanism, where community concerns and complaints can be properly handled
- If not already existing establish HSE routines and sustainable working conditions, building on or instance ILO. IFC EHS Guidelines can provide valuable guidance.
- Manage contractors with an objective to ensure that they follow the same standards and apply the same environmental, social and HSE policy as the developer.
- Ensuring that all technical, environmental and social issues are in line with plans before commissioning.

## 8. Operational phase

This stage includes continuing management of environmental and social issues that are prevailing during the operational phase. This include for instance ongoing communication and consultation with affected communities, project management and possible phasing out of the involvement from the developer. Of special concern at this stage is Benefit Sharing, since it is in this phase that the benefits from the project are starting to accrue. The design of a Benefit Sharing mechanism is discussed in chapter 6, and will not be further discussed in this chapter.

In WCD it is pointed to the importance of adaptive management, to continuously assess and adjust operational decisions within the changing context of environmental, social, physical and market conditions. This requires a close relationship between the local community, other stakeholders and owners and operators in order to minimise problems and quickly resolve any that do and will arise.

In this chapter we discuss the following topics:

- Operating agreements and licences: what to include
- Evaluation of environmental and social performance
- Re-planning of existing plants, and eventual decommissioning.

### 8.1 *Operating agreements and licences*

Agreements on operating conditions should reflect commitments to social and environmental objectives in addition to the commercial interests. All operating agreements should be available to stakeholder groups. The safety and well being of the people affected must be guaranteed throughout the project cycle.

Procedural requirements for monitoring and evaluation, safety inspection, contingency planning and information disclosure should be specified in relevant licences. This could also include specification of transparent processes for stakeholder participation. It is the regulatory authority or responsible government line agency that should ensure compliance with provisions of the licence. Non-commercial aspects of the licence should be made public.

It is advisable that the operating licence covers the following issues (WCD):

- environmental flow releases to the downstream river,
- minimum technical releases to the downstream river (for navigation, water supply, downstream irrigation and so on);
- maximum ramp rates for downstream releases (to avoid problems with navigation and damage to the river banks);
- water allocations during normal operation;
- operation during normal and exceptional floods;
- warning of people potentially affected and rules for evacuation of people and animals;

- opening of spillway gates;
- periodic safety inspection by independent parties;
- drawdown procedure if dam safety is in doubt;
- monitoring of relevant operation data and dissemination of data to stakeholders; and
- periodic review of operating rules.

## **8.2 Regular evaluations**

WCD also requires (recommend) that a comprehensive project evaluation is performed three to five years after commissioning and at regular intervals thereafter (every five to ten years is suggested). The evaluation should be undertaken by the dam operator but should be a stakeholder-driven process. The evaluations ought to be:

- comprehensive across all environmental, social, economic, and institutional impacts;
- integrated to cover the interactions between impacts;
- long-term to consider impacts over several decades; and
- cumulative to reflect impacts of other structural and non-structural measures in the basin.

The purpose of evaluations should be to document performance up to date, and to allow for adjustments of plans and operational practices. The latter is needed if the evaluation identifies problems and/or poor performance.

In order to be legitimate it is probably best to use external consultants for the evaluation.

## **8.3 Re-planning and Decommissioning**

The regular monitoring and evaluation, as well as other external factors, can result in a need to either re-design or decommission the power plant. In the case of re-design a “new” project cycle has to start, at least from the planning phase.

Decommissioning is a major stage in the project cycle, but at present is seldom considered during the planning stage of energy projects. One reason is that is little advantage in developing a decommissioning plan half a century, least, before the event will happen.

As decommissioning can have large environmental and social impacts it is necessary to perform impact assessments also for this. What to include in this impact assessment is dependent on specific features of the plant, but important subjects can for instance be sediment management and water quality issues.

HSAP/IHA do not have specific sections to address decommissioning and relicensing. At [www.hydropower.org](http://www.hydropower.org) it is recommended that major project decisions relating to project or network re-optimisation, project life extension or decommissioning ideally should “return” to the Strategic Assessment level (pre-planning). Project decisions relating to

refurbishment could go back to Project Preparation, whereas re-licensing which would be assessing existing operations, Project Operation should be appropriate.

Decommissioning will create new jobs for workers during decommissioning activities. Indirect impacts would occur from associated economic development and would include things such as jobs at businesses that support the decommissioning workforce or that provide project materials. In the long term, however, the loss of jobs and revenue after decommissioning is completed could adversely impact the local and regional economies. This needs to be taken into account when deciding on decommissioning.

***Potential impacts from decommissioning***

Restoring a decommissioned site to pre-project conditions would entail for instance recontouring, grading, seeding and planting, and, perhaps, stabilizing disturbed surfaces. Newly disturbed soils and land previously occupied by an impoundment can create visual contrasts that will persist several seasons before revegetation would begin to disguise past activity. Restoration to pre-project conditions may take much longer.

Typical activities during hydropower decommissioning and site reclamation include facility removal; breaking up of concrete pads, foundations, intake and tailrace structures, and dams; removal of access roads that are not maintained for other uses; recontouring the land surface; and revegetation. Potential impacts from these activities are ([www.teeic.anl.gov](http://www.teeic.anl.gov)):

- **Acoustics (Noise):** Sources of noise during decommissioning would be similar to those during construction, and would include equipment (rollers, bulldozers, and diesel engines); breaking up of concrete pads, foundations, intake and tailrace structures, and dams; and vehicular traffic. Noise levels can exceed national or otherwise applicable thresholds, but would be intermittent and occur for a limited time.
- **Air Quality (including Global Climate Change and Carbon Footprint):** Emissions from decommissioning activities include vehicle tailpipe emissions; diesel emissions from technical equipment; and dust from sources such as land clearing, structure removal, backfilling, dumping, restoration of disturbed areas, and truck and equipment traffic.
- **Ecological Resources:** Impacts to biological resources from decommissioning activities would be similar in nature to impacts from construction, but of a reduced magnitude. There would be temporary increases in noise and visual disturbance associated with the removal of the project facilities and site reclamation. Negligible to no reduction in wildlife habitat can be expected, and injury and mortality rates of vegetation and wildlife would be much lower than they would be during construction. Removal of the project components would eliminate impacts associated with wildlife interactions with facility structures and from habitat fragmentation. Following site reclamation, the ecological resources at the project site could eventually return to pre-project conditions, depending on the end use selected for the project area. Grasses and alike may initially be more plentiful during early years of reclamation than existed prior to project development. Reclamation of forest or sagebrush habitats could take decades or longer. Invasive species may colonize newly and recently reclaimed areas.

- **Hazardous Materials and Waste Management:** Substantial amounts of solid and industrial waste will be generated during the decommissioning and dismantling of the facility. Much of the solid material (e.g., concrete and masonry, steel, power cable, pipelines) could be recycled and sold as scrap or used in road building or bank restabilisation projects; the remaining nonhazardous waste should be sent to permitted disposal facilities.
- **Human Health and Safety:** Potential impacts to worker and public health and safety during the decommissioning would be similar to those from any construction-type project with earthmoving, crushing, large equipment use, and transportation of overweight and oversized materials.
- **Land Use:** Upon decommissioning, land use impacts resulting from construction and operation of a hydropower facility would be largely reversed. No permanent land use impacts would occur during this phase. If the head pond or impoundment is left in place upon decommissioning, it could provide a new water source for livestock or a new recreation facility.
- **Soils and Geologic Resources:** Activities during the decommissioning phase that would impact soils and geologic resources include removal of access and on-site roads, buildings, and other structures; and heavy vehicle traffic. Surface disturbance, heavy equipment traffic, and changes to surface runoff patterns can cause soil erosion. Upon completion of decommissioning, disturbed areas can be contoured and revegetated to minimize the potential for soil erosion.
- **Water Quality:** Water quality could be affected by activities that cause soil erosion, weathering of newly exposed soils leading to leaching and oxidation that could release chemicals into the water, discharges of waste or sanitary water, presence of dissolved salts from untreated groundwater used to control fugitive dust, and pesticide applications.
- **Flow Alteration:** The river system would be returned to the natural state that existed before construction of the hydropower facility unless an impoundment is maintained. Surface and groundwater flow systems would be little affected by withdrawals made for water use, wastewater and stormwater discharges, and the diversion of surface water flow for access road reclamation.

#### **8.4 *Summing up***

- As in the implementation phase follow up of environmental and social management, to ensure a sustainable operation of the power plant is the most important in the operational phase. Given that an integrated and adaptive management system was established in earlier phases, this phase mainly about maintaining these systems and making sure that new actors/stakeholders (including employees) are given proper education and training in environmental and social issues.
- A part of the maintenance of the management systems are regular evaluations, that both monitors performance and can be used to make needed adjustment. How often such evaluations should be undertaken should be based on the complexity of the project, and also on earlier identified problems and issues. WCD recommends regular evaluations every 5 to 10 years.

- Eventually a hydropower plant needs a larger re-design and to be decommissioned. In the case of re-design a “new” project cycle has to start, at least from the planning phase. Decommissioning can have large environmental and social impacts should therefore be preceded by a comprehensive impact assessments. What to include in this impact assessment is dependent on specific features of the plant, but important subjects can for instance be sediment management and water quality issues.

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## Link library

Below is a collection of useful internet links. The list is up to date March 2011.

### **Human Rights**

The Office of the United Nations High Commissioner for Human Rights (OHCHR):  
[www.ohchr.org](http://www.ohchr.org)

The Universal Declaration of Human Rights: [www.un.org/en/documents/udhr/](http://www.un.org/en/documents/udhr/)

A guide to each of the rights in the ICCPR and ICECCR using practical examples:  
[www.unglobalcompact.org/Issues/human\\_rights/Tools\\_and\\_Guidance\\_Materials.html](http://www.unglobalcompact.org/Issues/human_rights/Tools_and_Guidance_Materials.html)

UN Secretary-General Special Representative on business & human rights, John Ruggie:  
<http://www.business-humanrights.org/SpecialRepPortal/Home>

The Danish Institute for Human Rights, DIHR:  
[www.humanrights.dk](http://www.humanrights.dk), [www.humanrightsbusiness.org](http://www.humanrightsbusiness.org)

DIHR country risk portal: [www.countryriskportal.org](http://www.countryriskportal.org).

The Human Rights Compliance Assessment (HRCA):  
[www.humanrightsbusiness.org/?f=home/news\\_story\\_3](http://www.humanrightsbusiness.org/?f=home/news_story_3)

Guide to Human Rights Impact Assessment and Management (HRIAM):  
[www.guidetohriam.org](http://www.guidetohriam.org).

The Guide for Integrating Human Rights into Business Management:  
[www.integrating-humanrights.org](http://www.integrating-humanrights.org)

Human Rights Legal perspectives, International Bar Association:  
[www.ibanet.org/Default.aspx](http://www.ibanet.org/Default.aspx)

Country Reports on Human Rights Practices submitted annually by the U.S. Department of State to the U.S. Congress: [www.state.gov/g/drl/rls/hrrpt](http://www.state.gov/g/drl/rls/hrrpt)

CommDev, an overview of human rights related documents and guidance notes relevant to the extractive industries: [http://commdev.org/section/topics/human\\_rights](http://commdev.org/section/topics/human_rights)

Voluntary Principles on Security and Human Rights, [www.voluntaryprinciples.org](http://www.voluntaryprinciples.org)

Human Rights Watch: [www.hrw.org/en/home](http://www.hrw.org/en/home)

### **Environmental conventions**

Convention on International Trade in Endangered Species (CITES): [www.cites.org](http://www.cites.org)

Ramsar Convention (Convention on Wetlands of International Importance especially as Waterfowl Habitat): [www.ramsar.org](http://www.ramsar.org)

Agenda 21 – Program for Development of Ecological Actions:  
[www.un.org/esa/dsd/agenda21/](http://www.un.org/esa/dsd/agenda21/)

Framework Convention on Climate Change: [www.unfccc.int](http://www.unfccc.int).

Convention on Biological Diversity: [www.cbd.int](http://www.cbd.int)

Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention): <http://whc.unesco.org/>

Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention): [www.cms.int](http://www.cms.int)

Convention on the Protection and Use of Transboundary Watercourses and International Lakes: [www.unece.org/env/water](http://www.unece.org/env/water)

### ***LABOUR Rights***

International labour organisation, ILO: [www.ilo.org](http://www.ilo.org)

Committee of Experts on the Application of Conventions and Recommendations, CEACR: [www.ilo.org/global/standards/applying-and-promoting-international-labour-standards/committee-of-experts-on-the-application-of-conventions-and-recommendations/lang--en/index.htm](http://www.ilo.org/global/standards/applying-and-promoting-international-labour-standards/committee-of-experts-on-the-application-of-conventions-and-recommendations/lang--en/index.htm)

The International Trade Union Confederation (ITUC): [www.ituc-csi.org](http://www.ituc-csi.org)

### ***Indigenous Peoples***

ILO Convention No. 169: [www.ilo.org/ilolex/english/convdisp1.htm](http://www.ilo.org/ilolex/english/convdisp1.htm)

UNDRIP: [www.un.org/esa/socdev/unpfii/en/drip.html](http://www.un.org/esa/socdev/unpfii/en/drip.html)

UNPFII - United Nations Permanent Forum on Indigenous Issues: [www.un.org/esa/socdev/unpfii/en/declaration.html](http://www.un.org/esa/socdev/unpfii/en/declaration.html)

The Tribal Energy and Environmental Information Clearinghouse, TEEIC: <http://teeic.anl.gov/index.cfm>

Indigenous Climate Portal: [www.indigenousclimate.org/index.php?option=com\\_content&view=article&id=56&Itemid=57&lang=en](http://www.indigenousclimate.org/index.php?option=com_content&view=article&id=56&Itemid=57&lang=en)

Pro169: <http://pro169.org/>

### ***CSR Initiatives and guidelines***

Global Compact: [www.unglobalcompact.org/index.html](http://www.unglobalcompact.org/index.html).

OECD Guidelines for Multinational Enterprises: [www.oecd.org/daf/investment/guidelines](http://www.oecd.org/daf/investment/guidelines),

[www.oecd.org/document/33/0,3343,en\\_2649\\_34889\\_44086753\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/33/0,3343,en_2649_34889_44086753_1_1_1_1,00.html)

The Norwegian National Contact Point, NCP: [www.regjeringen.no/nn/dep/ud/Tema/norgesfremme-og-kultursamarbeid/norges-omdomme/ncp.html?id=557899](http://www.regjeringen.no/nn/dep/ud/Tema/norgesfremme-og-kultursamarbeid/norges-omdomme/ncp.html?id=557899)

OECD Development Assistance Committee Guidelines on Helping Prevent Violent Conflict: [www.oecd.org/dac/conflict/preventionguidelines](http://www.oecd.org/dac/conflict/preventionguidelines)

OECD Risk Awareness tool: [www.oecd.org/dataoecd/26/21/36885821.pdf](http://www.oecd.org/dataoecd/26/21/36885821.pdf)

OECDWatch: [oecdwatch.org](http://oecdwatch.org)

The Global Reporting Initiative (GRI): [www.globalreporting.org](http://www.globalreporting.org)

Transparency International's Business Principles for Countering Bribery (BPCB): [www.transparency.org/global\\_priorities/private\\_sector/business\\_principles](http://www.transparency.org/global_priorities/private_sector/business_principles)

Transparency International overview over business tools to prevent corruption: [www.transparency.org/tools/contracting/construction\\_projects](http://www.transparency.org/tools/contracting/construction_projects)

FAFO Red Flag Project – Companies Operating in High-Risk and Conflict Zones:  
[www.redflags.info/](http://www.redflags.info/)

International Alert, Extractive Industries: Conflict – Sensitive Business Practice:  
[www.international-alert.org/our\\_work/themes/extractive\\_industries.php](http://www.international-alert.org/our_work/themes/extractive_industries.php)

The Business of Peace (IA/CEP/IBLF):  
[www.international-alert.org/publications/pub.php?p=237](http://www.international-alert.org/publications/pub.php?p=237)

### ***Hydropower organisations etc***

World Commission on Dams: [www.dams.org](http://www.dams.org)

The International Hydropower Association, IHA: [www.hydropower.org](http://www.hydropower.org)

Hydropower Sustainability Assessment Protocol, HSAP:  
[www.hydropower.org/sustainable\\_hydropower/HSAF\\_Hydropower\\_Sustainability\\_Assessment\\_Protocol.html](http://www.hydropower.org/sustainable_hydropower/HSAF_Hydropower_Sustainability_Assessment_Protocol.html)

UNEP Dam and Development Program: [www.unep.org/dams/](http://www.unep.org/dams/)

### ***The World Bank Group***

The World Bank: [www.worldbank.org](http://www.worldbank.org)

Safeguard Policies: [go.worldbank.org/L0WZ82PW60](http://go.worldbank.org/L0WZ82PW60)

Operational Manual [go.worldbank.org/DZDZ9038D0](http://go.worldbank.org/DZDZ9038D0).

World Bank Conflict Prevention and Reconstruction Unit: [www.worldbank.org/conflict](http://www.worldbank.org/conflict)

Independent Evaluator group IEG: [www.worldbank.org/ieg/](http://www.worldbank.org/ieg/).

The International Finance Corporation (IFC): [www.ifc.org](http://www.ifc.org)

IFC's Performance Standards:  
[www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards](http://www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards).

A web-based learning course:  
[www.ifc.org/ifcext/sustainability.nsf/Content/RiskManagement\\_Training](http://www.ifc.org/ifcext/sustainability.nsf/Content/RiskManagement_Training).

IFC handbook for stakeholder engagement:  
[www.ifc.org/ifcext/sustainability.nsf/Content/Publications\\_Handbook\\_StakeholderEngagement](http://www.ifc.org/ifcext/sustainability.nsf/Content/Publications_Handbook_StakeholderEngagement)

IFC handbook on project-induced in-migrants:  
[www.ifc.org/ifcext/sustainability.nsf/Content/Publications\\_Handbook\\_Inmigration](http://www.ifc.org/ifcext/sustainability.nsf/Content/Publications_Handbook_Inmigration)

### ***Financing institutions***

Equator Principles: [www.equator-principles.com](http://www.equator-principles.com)

[www.equator-principles.com/bestpractices.shtml](http://www.equator-principles.com/bestpractices.shtml)

The Norwegian ECAs, GIEK: <http://giek.no>

[www.giek.no/miljo\\_og\\_sosialt\\_ansvar/sporreskjemaer\\_om\\_miljo\\_og\\_sosiale\\_forhold/no](http://www.giek.no/miljo_og_sosialt_ansvar/sporreskjemaer_om_miljo_og_sosiale_forhold/no)

OECD Common approaches:  
[www.oecd.org/document/4/0,3746,en\\_2649\\_34181\\_38752004\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/4/0,3746,en_2649_34181_38752004_1_1_1_1,00.html)

Multilateral Development Banks

- The African Development Bank: [www.afdb.org](http://www.afdb.org)
- The Asian Development Bank: [www.adb.org](http://www.adb.org)
- The European Bank for Reconstruction and Development: [www.ebrd.org](http://www.ebrd.org)
- The Inter-American Development Bank Group: [www.iadb.org](http://www.iadb.org)

#### Multilateral Financial Institutions

- The European Investment Bank ,EIB: [www.eib.org](http://www.eib.org)
- The Islamic Development Bank, IDB: [www.isdb.org](http://www.isdb.org)
- The Nordic Development Fund, NDF: [www.ndf.fi](http://www.ndf.fi)
- The Nordic Investment Bank, NIB: [www.nibank.org](http://www.nibank.org)
- Corporacion Andina de Fomento, CAF: [www.caf.com](http://www.caf.com)
- Caribbean Development Bank, CDB: [www.caribank.org](http://www.caribank.org)
- Central American Bank for Economic Integration, CABEL: [www.bcie.org](http://www.bcie.org)
- East African Development Bank, EADB: [www.eadb.org](http://www.eadb.org)
- West African Development Bank, BOAD: [www.boad.org/](http://www.boad.org/)

#### Development Financing institutions

- Association of Development Financing Institutions in Asia and the Pacific, ADFIAP: [www.adfiap.org](http://www.adfiap.org),
- Association of African Development Financing Institutions, AIAFD/AADFI: [www.adfi-ci.org](http://www.adfi-ci.org)
- European Development Finance Institutions, EDFI: [www.edfi.be](http://www.edfi.be)
- Association of National Development Finance Institutions in Member Countries of the Islamic Development Bank, ADFIMI: [www.adfimi.org](http://www.adfimi.org)
- Latin-America Association of Development Financing Institutions, ALIDE: [www.alide.org.pe](http://www.alide.org.pe)
- World Federation of Development Financing Institutions, WFDFI: [www.wfdfi.org.ph](http://www.wfdfi.org.ph)

#### ***Carbon markets/Climate Change***

United Nations Framework Convention on Climate Change, UNFCCC: <http://unfccc.int>, <http://cdm.unfccc.int>, <http://ji.unfccc.int>

Gold Standards: <http://www.cdmgoldstandard.org/>

EU ETS website: [http://ec.europa.eu/clima/policies/ets/linking\\_ji-cdm\\_en.htm](http://ec.europa.eu/clima/policies/ets/linking_ji-cdm_en.htm).

#### ***Environmental Impact Assessment and Management Systems***

SEA Information Service: [www.sea-info.net](http://www.sea-info.net).

International Association for Impact Assessment, IAIA: [www.iaia.org](http://www.iaia.org)

ADB Handbook for EIA etc: [www.adb.org/Environment/policy.asp#guidelines](http://www.adb.org/Environment/policy.asp#guidelines)

ISO 14001: [www.iso.org](http://www.iso.org)

EMAS: [http://ec.europa.eu/environment/emas/index\\_en.htm](http://ec.europa.eu/environment/emas/index_en.htm)

OHSAS 18001: [www.ohsas-18001-occupational-health-and-safety.com/](http://www.ohsas-18001-occupational-health-and-safety.com/)

SA8000: [www.sa-intl.org](http://www.sa-intl.org)

**NGOs and other resources**

AFROL, News Agency specifically focusing on Africa: [www.afrol.com/](http://www.afrol.com/)

Amnesty International: [www.amnesty.org](http://www.amnesty.org)

BankTrack, a global network of civil society organisations and individuals tracking the operations of the private financial sector: [www.banktrack.org](http://www.banktrack.org)

CIDSE, International alliance of Catholic development agencies: [www.cidse.org](http://www.cidse.org)

Economist Intelligence Unit (EIU): [www.eiu.com/public/](http://www.eiu.com/public/)

ESCR-Net, International network for economic, social and cultural rights: [www.escr-net.org](http://www.escr-net.org)

FIDH, International Federation for Human rights: [www.fidh.org/-english-](http://www.fidh.org/-english-)

FIVAS, Foreningen for internasjonale vannstudier (Association for international water studies): [www.fivas.org](http://www.fivas.org)

Forum for Development and Environment: [www.forumfor.no/English/index.html](http://www.forumfor.no/English/index.html)

Freedom House UK: [www.freedomhouse.org/template.cfm?page=1](http://www.freedomhouse.org/template.cfm?page=1)

Friends of the earth international: [www.foei.org](http://www.foei.org)

Global Insight: [www.ihsglobalinsight.com](http://www.ihsglobalinsight.com)

Greenpeace: [www.greenpeace.org](http://www.greenpeace.org)

HREA, Human Rights Education Associates: [www.hrea.org/index.php?doc\\_id=1](http://www.hrea.org/index.php?doc_id=1)

Human Rights Watch: [www.hrw.org/en/home](http://www.hrw.org/en/home)

IIED, International Institute for Environment and Development: [www.iied.org](http://www.iied.org)

International Crisis Group: [www.crisisgroup.org/home/index.cfm?](http://www.crisisgroup.org/home/index.cfm?)

Nature Conservancy: [www.nature.org](http://www.nature.org)

Norwegian Church Aid: [www.kirkensnodhjelp.no/en/](http://www.kirkensnodhjelp.no/en/)

OECDWatch: [www.oecdwatch.org](http://www.oecdwatch.org)

Oxfam: [www.oxfam.org](http://www.oxfam.org)

Regnskogfondet/Rainforest Foundation Norway: [www.regnskog.no /](http://www.regnskog.no/)  
[www.rainforest.no](http://www.rainforest.no)

TransAfrica Forum: [www.transafrica.org](http://www.transafrica.org)

Transparency International: [www.transparency.org/](http://www.transparency.org/)

WWF, World Wildlife Found: [www.wwf.org](http://www.wwf.org)

**Land information from Norwegian embassies**

Norway's official website abroad: [www.norway.info/](http://www.norway.info/)

Angola: [www.noruega.ao/Norsk/Naringsliv/samfunnsansvar/](http://www.noruega.ao/Norsk/Naringsliv/samfunnsansvar/)

Tanzania: [www.norway.go.tz/PageFiles/364144/Tanzania\\_-\\_Country\\_Paper\\_on\\_CSR.pdf](http://www.norway.go.tz/PageFiles/364144/Tanzania_-_Country_Paper_on_CSR.pdf)

Uganda: [www.norway.go.ug/Embassy/Development/privatesectordevelopment/CSR-Uganda-Country-Note/](http://www.norway.go.ug/Embassy/Development/privatesectordevelopment/CSR-Uganda-Country-Note/)

China:

[www.norway.cn/Global/SiteFolders/webbeij/Landnotat\\_om\\_naeringslivets\\_samfunnsansvar.pdf](http://www.norway.cn/Global/SiteFolders/webbeij/Landnotat_om_naeringslivets_samfunnsansvar.pdf)

Brasil: [www.noruega.org.br/Norsk/Land--og-reiseinformasjon/fakta/Naringsliv/](http://www.noruega.org.br/Norsk/Land--og-reiseinformasjon/fakta/Naringsliv/)

Russia: [www.norvegia.ru/Norsk/russland/Informasjon-for-naringsliv/Landnotat-om-samfunnsansvar/](http://www.norvegia.ru/Norsk/russland/Informasjon-for-naringsliv/Landnotat-om-samfunnsansvar/)

## Glossary

Accountability	Obligation of an individual, firm, or institution to account for its activities, accept responsibility for them, and to disclose the results in a transparent manner.
Agreement	A recorded understanding between individuals, groups or entities to follow a specific course of conduct or action. It may be incorporated into, for example, a memorandum of understanding, minutes of a meeting, a letter of intent, a joint statement of principles, a contract, an operating licence, etc.
Appropriate	Suitable for a particular person, condition, occasion, or place; fitting; meeting identified needs or requirements.
Baseline	A set of measurements, statistics, or conditions used as a basis for later comparison. The baseline refers to the pre-project conditions, prior to the initiation of the project, against which post-project changes can be compared.
Community Groups	Groups of people with common characteristics or interests living together within the larger society. These may include, by way of example, urban dwellers, rural dwellers, indigenous peoples, ethnic minorities, people of a common profession or religion, disabled, elderly, illiterate, women, men, children, etc.
Compliance	Adherence to legal requirements, policies and public commitments.
Consent	Signed agreements with representative and authorised leaders or bodies/organisations.
Convention	An official written agreement that ratifying states use to legally bind themselves. Also called a treaty.
Corruption	Lack of integrity or honesty (especially susceptibility to bribery); use of a position of trust for dishonest gain.
Covenant	A type of contract in which the covenantor makes a promise to a covenantee to perform or not perform a certain action.
Cultural Heritage	The legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.
Cumulative Impacts	Cumulative impacts are those that result from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions.
Declaration	Non-binding international agreements



Developer	The lead entity or consortium of entities investing in the development of a project.
Directly Affected Stakeholder	Those stakeholders with substantial rights, risks and responsibilities in relation to the issue. These may be inside the project affected area (e.g. project affected communities) or outside the project-affected area (e.g. government regulators, finance institution representatives, or investment partners).
Disclosure	Made publicly available
Economic Displacement	Loss of assets, access to assets, or income sources or means of livelihoods. Economic displacement applies regardless of whether the losses and restrictions are full or partial, and permanent or temporary.
Equitable	Fair, just or impartial
Governance	The combination of processes and structures that inform, direct, manage and monitor the activities of the project toward the achievement of its objectives.
Grievance Mechanisms	The processes by which stakeholders are able to raise concerns, grievances and legitimate complaints, as well as the project procedures to track and respond to any grievances.
Human Rights	The basic rights and freedoms to which all humans are entitled, encompassing civil, political, economic, social, and cultural rights, and enshrined in international declarations such as the Universal Declaration on Human Rights 1948.
Impact	Effect or consequence of an action or event; the degree to which an impact is interpreted as negative or positive depends on context and perspective.
Independent Review	Expert review by someone not employed by the project and with no financial interest in profits made by the project.
Indigenous Peoples	A distinct social and cultural group possessing the following characteristics in varying degrees: self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories; customary cultural, economic, social or political institutions that are separate from those of the dominant society or culture; an indigenous language, often different from the official language of the country or region.

Intermediaries	Workers engaged through third parties who are either performing work directly related to the functions essential for the project for a substantial duration, or who are geographically working at the project location.
Invasive Species	A species that does not naturally occur in a specific area and whose introduction does or is likely to cause economic or environmental harm or harm to human health.
Livelihood	The capabilities, assets (stores, resources, claims and access) and activities required for a means of living.
Living Standards	The level of material comfort as measured by the goods, services, and luxuries available to an individual, group, or nation; indicators of household well-being; examples include consumption, income, savings, employment, health, education, nutrition, housing, and access to electricity, clean water, sanitation, health services, educational services, transport, etc.
Management Plan	A management plan is a tool used as a reference for managing a particular project issue, and establishes the why, what, how, who, how much, and when for that issue.
Management System	The framework of processes and procedures used to ensure that an organisation can fulfill all tasks required to achieve its objectives.
Mitigation	Moderation, alleviation, and/or relief of a negative impact.
Non-Compliance	Not meeting legal, licence, contractual or permit obligations.
Non-Conformance	Not meeting targets and objectives in the management plans; these may or may not be publicly stated commitments, but they are not legally binding and violation can not incur legal action.
Occupational Health and Safety	Protecting the safety, health and welfare of people engaged in work or employment, for example through preventing disease or injury that might arise as a direct result of the workplace activities.
Procurement	The acquisition of goods and/or services at the best possible cost, in the right quality and quantity, at the right time, in the right place and from the right source for the direct benefit or use of the hydropower project or operating facility, generally via a contract.
Project-Affected Area	The catchment, reservoir, and downstream of the project site and associated dams, and the area affected by any associated developments (e.g. roads, transmissions lines, quarries, construction villages, relocation areas, etc).

Project Affected Communities	The interacting population of various kinds of individuals in the project affected area who are affected either positively or negatively by the project preparation, implementation and/or operation.
Project Catchment	The portion of the river basin that drains into a hydropower project reservoirs, either to pass ultimately through the generation turbines or to spill over the dams into the downstream rivers.
Project Components	Components of the overall development programme, including design, construction, environmental, social, resettlement, finance, communications and procurement.
Project Lands	The land that is owned, utilised and/or affected by the project.
Protocol	In international law and international relations, a protocol is generally a treaty or international agreement that supplements a previous treaty or international agreement. A protocol can amend the previous treaty, or add additional provisions. Parties to the earlier agreement are not required to adopt the protocol; sometimes this is made clearer by calling it an "optional protocol", especially where many parties to the first agreement do not support the protocol.
Publicly Disclosed	The public is informed that the agreement, commitment, assessment, management plan or significant report has been made or completed, and it is made publicly available either voluntarily (e.g. posted on a website) or on request in a timely manner.
Refurbishment	The state of being restored to its former good condition.
Remuneration	Wages or salary, typically money that is paid for services rendered as an employee.
Reservoir Area	The area that is inundated when the reservoir is at its maximum expected level and the dry buffer zone above this level.
Resettlement	The process of moving people to a different place to live, because due to the project they are no longer allowed to stay in the area where they used to live.
Resettlees	Those people who are required to be resettled, including those who have formal legal rights, customary or traditional rights, as well as those who have no recognizable rights to the land.
River Basin	The area drained by a river and all its tributaries

Sensitivity Analysis	Investigation into how projected performance varies along with changes in the key assumptions on which the projections are based
Stakeholder	One who is interested in, involved in or affected by the project and associated activities.
Strategic Fit	The compatibility of the project with local, national and regional needs identified through the priorities and objectives put forth in options assessments and other relevant local, national and regional and multi-national policies and plans.
Transboundary Agreements	Agreements made amongst riparian states about how shared water resources will be utilized by the parties involved, and the processes that will be followed to sustain these understandings.
Transparent / Transparency	Open to public scrutiny, publicly available, and/or able to be viewed or disclosed to the public on request.
Vulnerable Social Groups	Social groups who are marginalised or impoverished with very low capacity and means to absorb change.

## **Appendix 1: Typical table of contents of Contractor's HSES program**

Example taken from SN Power

1. Policy and goals related to HSES
  - a. HSES Policy statement
  - b. HSES goals
2. Statutory and other governing requirements
3. Organisation and responsibilities for implementation and follow-up of HSES policy, goals, procedures, requirements and action plans
  - a. Contractor's site organisation with HSES functions
  - b. Responsibility as Principal Contractor
  - c. Responsibilities in Contractor's organisation, including line responsibility for HSES
  - d. Responsibilities of Subcontractors, Vendors and visitors
  - e. Qualification requirements to HSES personnel
  - f. Independent audit function
4. HSES activity plan for the Works
  - a. Risk assessments incl. use of Job safety Analysis
  - b. HSES meetings
  - c. Training and exercises
  - d. Regular toolbox meetings with all personnel
  - e. HSES inspections, equipment control
  - f. Audit plan
  - g. Incident and illness investigation and reporting
  - h. HSES performance monitoring and reporting, environmental compliance reporting
  - i. Authority permitting schedule
5. HSES management procedures
  - a. Reporting, investigation and follow up of incidents
  - b. Risk assessments
  - c. Follow-up of sub-contractors
  - d. Inspections and audits
  - e. Coordination of HSES work on site
  - f. Employee involvement, grievance process
  - g. Disciplinary reactions in case of breaches of HSES regulations

6. Safety procedures and requirements
  - a. Personal protective equipment
  - b. Physical qualifications of personnel, health check at mobilisation
  - c. Prohibition against intoxicating beverages and narcotics
  - d. Signs, signals and barricades
  - e. Fire prevention and protection
  - f. Work permit (Lock out / Tag out) and entering confined space permits
  - g. Material handling, storage, and disposal
  - h. House keeping
  - i. Handling, storage , use and disposal of toxic, flammable and combustible chemicals, material data sheets
  - j. Access, work at height, scaffolding
  - k. Transportation safety
  - l. Lifting operations, qualifications of operators, certification and testing of cranes and lifting appliances
  - m. Machinery safety
  - n. Compressed air and gas cylinders
  - o. Welding and cutting
  - p. Electrical safety
  - q. Radioactive materials
  - r. Excavation
  - s. Tunnels, galleries and shafts, underground works (ref. BS 6164)
  - t. Blasting, handling and storage of explosives
  - u. Concrete, masonry construction and form work
  - v. Transmission and distribution line construction
  - w. Hypothermia, heat stress management
7. Working environment, health and hygiene procedures and requirements
  - a. Ventilation, air quality
  - b. Noise
  - c. Illumination
  - d. Drinking water
  - e. Toilet facilities, sanitation
  - f. Camp facilities (eating, sleeping, washing), fire safety and hygiene standard, safety against natural hazards (slides, avalanches, rock fall, flooding)

- g. Garbage handling
  - h. Standby equipment for critical services
  - i. Monitoring of the working environment (air quality, noise, illumination)
  - j. Awareness program to avoid HIV/AIDS and other sexually transmitted diseases
8. Environmental protection and management
- a. Mitigation measures based on the ESIA and Environmental Management and Monitoring Plan
  - b. Public consultation
  - c. Erosion protection, slope stability, forest protection, fuel wood
  - d. Prevention of air pollution /dust control, noise, water pollution, soil pollution
  - e. Waste management
  - f. Protection of local livelihood
  - g. Protection of sites of archaeological, religious or cultural value
  - h. Environmental monitoring, ref. Monitoring program
  - i. Reinstatement of site
9. Medical facilities
- a. First aid, stretchers
  - b. Ambulance service
  - c. Clinic
  - d. Health monitoring
10. Security provisions
- a. Site guarding
  - b. Access control (entries, exits), fencing off
  - c. Signs for general public
  - d. Traffic, parking
  - e. Visitors
11. Emergency preparedness
- a. Emergency organisation
  - b. Emergency equipment
  - c. Communication systems
  - d. Training, drills
12. Disciplinary reactions.

13. Attachments

- a. Emergency preparedness plan
  - i. Notification, communication plan
  - ii. Action plans
  - iii. Organisation
  - iv. External resources
- b. Safety plot plans