MEKONG SAFEGUARDS
Tutorial

MOVING TO SUSTAINABLE INFRASTRUCTURE IN THE MEKONG

How to Navigate Environmental & Social Considerations in Project Development & Financing

USAID FROM THE AMERICAN PEOPLE

Australian Government
Department of Foreign Affairs and Trade

The Asia Foundation

1 INTRODUCTION

With the objective to help "demystify" the importance of environmental and social (E&S) considerations, and their integration into the project development process and financing timeline of infrastructure projects in the Mekong subregion, this Tutorial is a simple and accessible guide that aims to familiarize stakeholders of varying backgrounds with supporting sustainable infrastructure development. This is especially relevant for the Mekong subregion with infrastructure playing a central role in economic, social and environmental development. To facilitate an understanding of terms used in this document, there is a glossary at the end to provide further context.

In the following sections, key E&S issues are described in the context of infrastructure development projects and with reference to the Mekong subregion. In this Tutorial, infrastructure covers the following types of (non-exhaustive) developments: (i) power generation and transmission; (ii) transport (including railroad, ports, and airports); (iii) water and sanitation (including water treatment, wastewater treatment and pipelines, storm water management, and flood defenses); and (iv) communications (including fiber optic cables and data centers).

A key objective of this Tutorial is to illustrate why and how E&S considerations should be incorporated at different stages of project development in parallel with the timeline of financing infrastructure. Common challenges and lessons learned are highlighted and illustrated through case studies. The Tutorial also describes existing standards and frameworks, introduces emerging "labels", and concludes with important issues for consideration.

2 WHAT ARE ENVIRONMENTAL & SOCIAL CONCERNS?

E&S issues can manifest in different ways and are important to consider throughout project development, as they can negatively impact the effectiveness of a project and adversely contribute to, rather than help, wider sustainability issues in the area where they're developed. In turn, when not assessed, understood, and managed properly, these issues may result in negative perceptions of a development (including negative media and civil society attention), community resistance, delays, and cost increases and problems in accessing finance. Thematically, overarching E&S topics of concern may include the following:

Environmental or "E"

- Loss of biodiversity and ecosystem services and fragmentation of habitats
- Air emissions
- Climate change, including greenhouse gas (GHG) emissions, overall climate change adaptation
- Wastewater
- Waste, including any hazardous waste
- Water pollution
- Land contamination

Social or "S"

- Community health and safety (including emergency preparedness, preventing spread of diseases, security arrangements, human trafficking)
- Worker occupational health and safety
- Labor and working conditions (including forced labour/modern slavery, migrant labour, contractor/supplier management, equal pay, gender-based violence, sexual exploitation, abuse and harassment)
- Involuntary land acquisition and resettlement, and equitable land compensation
- Stakeholder engagement and grievance management
- Cultural heritage (e.g. artifacts, customs, sites)
- Impacts on vulnerable and marginalized peoples (including indigenous peoples)
- Gender equalities and human rights
- Safe and accessible workplace

*This list is not exhaustive.

Often, environmental issues are easier to understand, define and measure, while social aspects are more nuanced and difficult to assess and manage. In practice this means that social aspects often receive comparatively little attention in project development, financing, and implementation in the Mekong subregion.

Assessing and managing E&S concerns is undertaken with varying levels of rigor, often the selection of the location and/or routing for infrastructure projects is the most important decision to address E&S concerns.

3 WHY E&S CONCERNS ARE IMPORTANT

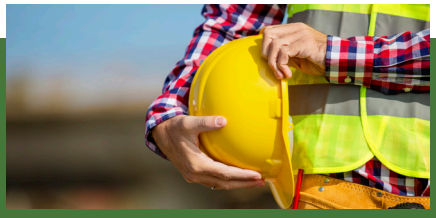
There may typically only be a focus on regulatory compliance and "process" as a driver for managing E&S issues, including through local permits. Typically, some E&S considerations are incorporated for infrastructure projects through a local Environmental Impact Assessment (EIA) process which is governed by varying host country E&S regulations and EIA procedures across the Mekong subregion. However, there are increasingly clear drivers for looking "beyond compliance" and fully integrating E&S considerations into the infrastructure development lifecycle to minimize risks and maximize benefits. These can also often be driven by requirements of those entities which are financing projects, wherein the financing source of the projects may determine if any additional requirements beyond host-country E&S laws and regulations will need to be incorporated.

Labor and Working Conditions

A construction workforce is often large for infrastructure developments. Upholding good labor standards, ensuring equal pay and fair recruitment for women and men, and establishing a safe and accessible working environment can help avoid high turnover, low productivity, poor quality output, or worker protests, thereby minimizing costs and supporting effective development and implementation.

Land Acquisition

Infrastructure developments tend to require land rights which affect the livelihoods of existing land users, including homes. In linear infrastructure, it can also divide land which increases challenges for farmers and other users. Compensation without gender consideration can create more vulnerability for women who may have limited access to land rights. Where possible, involuntary resettlement should be avoided or conducted and managed effectively.



Health and Safety

Businesses rarely operate in isolation and can have far-reaching impacts on surrounding communities and their own workforce. Accidents, sexual harassment, or complaints and protests against poor management can cause operational disruptions and attract negative media attention, in addition to incurring fines or penalties from local regulators.

Biodiversity

Habitat loss and fragmentation is a significant threat to biodiversity associated with infrastructure. Protecting and conserving biodiversity is fundamental to sustainable development and is particularly important for activities that rely on goods and services provided by biodiversity. Often impacts are not well assessed or managed, and there may be direct and indirect impacts (such as opening up areas that were formerly inaccessible to poachers, loggers, etc.).

Pollution Prevention

While there may be some local pollution prevention standards (e.g., air emissions, wastewater quality, hazardous materials/ waste management), they may not be suitable to manage those related to infrastructure or be poorly enforced. Non-compliance can result in fines and other penalties, or even garner outside attention, particularly if there are associated impacts to local communities or to biodiversity or lead to longer term negative impacts.

Climate Change

By design, infrastructure projects are not only vulnerable to immediate climate risks, but also long-term climate change impacts and changes in regulations that occur during its operational lifetime. Extreme weather events can damage assets, make them uninsurable, and disrupt supply chains. Carbon pricing may also affect the input costs of some types of infrastructure.

With an integrated way of thinking about E&S concerns from the outset of project development and an integrated approach to assessing, understanding, and managing this clearly supports a robust and longer-term approach. This is particularly relevant for infrastructure given its typical scale of development and resource-intensive nature and the decades for which it is typically in operations. It is often impossible to turn back the clock on poorly informed decisions, which may then lock countries, communities, and operators into infrastructure developments that miss opportunities, create additional costs, lack acceptance, create hardship, are poorly executed, and do not contribute to long-term sustainability. There is also a strong economic case to do so, as well as enhancing sustainability outcomes and resilience in these capital-intensive developments.

Infrastructure assets typically have a design life of several decades, meaning the impacts can be long-lasting and have the potential to lock countries into unsustainable development pathways, for instance due to higher rates of GHG emissions and insufficient resilience to impacts of climate change and other catastrophic events.

4 INFRASTRUCTURE DEVELOPMENT AND E&S CONCERNS

Infrastructure development has varying levels of E&S impacts depending on the nature and context of each project, including linear developments (e.g., highways, and rail); projects with a potentially large non-linear footprint (e.g., hydropower dam); and/or investments with project-specific implications (e.g., port developments with land and marine impacts or upland wind turbines). The process of site or alignment selection is often the single largest contributor to E&S impacts, and this selection is often undertaken based on factors without including E&S concerns in an integrated way or not early enough, diminishing the ability to anticipate, avoid, manage, or mitigate these risks.

This is particularly evident for social and gender issues. High priority is rarely given to assess and integrate needs and concerns of vulnerable groups into infrastructure projects. Social and gender analysis is often overlooked in project design and implementation due to the common misconception of equating the social aspect of E&S as merely community interest. A project is incorrectly considered socially compliant when it addresses the concerns of a majority, in most cases predominantly able-bodied men, without analyzing specific needs of women and people with disabilities, for instance, who have different vulnerabilities and access to resources. There is generally a lack of awareness and understanding from financiers, engineers, and policymakers on different risks and benefits infrastructure has for women, men, and other vulnerable groups.

Many infrastructure project E&S impacts, including social and gender, can be identified, assessed, and mitigated at the project design stage by identifying elements that may be especially impacted by the development (i.e., sensitive receptors) and avoiding or mitigating adverse impacts and risks through careful design. Sensitive receptors include areas of biodiversity value; land users such as farmers, towns, and villages; rivers and lakes; socially vulnerable groups (e.g., women, children, people with disabilities, elderly, poor households, ethnic minorities/indigenous peoples); and temples, tombs, and cultural heritage sites. Given that infrastructure developments tend to have a large footprint and impacts that extend into an area of influence, it is crucial that E&S considerations are incorporated early in the project development lifecycle to assess the different vulnerabilities of, and impacts on, different groups. Any E&S issues and concerns identified can then be addressed with appropriate mitigations and adequate resources.

Construction (and decommissioning) of infrastructure projects is typically labor and resource intensive. A large workforce combined with the need to transport materials and equipment to and from the project site presents various E&S concerns (as described in Section 2). During operation, E&S issues remain a key focus and can include air emissions, noise generation, wastewater discharge, waste management, stakeholder engagement, labor rights, non-discriminatory access to infrastructure services, and grievance management. An influx of labor in a typical infrastructure project can also lead to increased human trafficking, HIV/AIDS transmission, and gender-based violence; sexual exploitation; abuse; and harassment that poses risks for workers and surrounding communities.

While recognizing the challenges, the infrastructure sector also has significant opportunities to enhance efficiency, save costs, and generate wider benefits for surrounding areas. When impact assessment is integrated into the project development lifecycle, E&S concerns can be identified early, and then negative impacts avoided or mitigated to the greatest extent possible. Recognizing that consideration of E&S risks in infrastructure projects is largely guided by the regulatory process, the following section provides an overview of the E&S requirements across the Mekong subregion while highlighting gaps in comparison to international standards.

PROJECT DEVELOPMENT TIMELINE

Strategic Planning, Prioritization and Project Planning

Explore project development concepts, including site selection, possible impacted communities, project technology

Concept Design, Procurement and Detailed Design

Carry out detailed project design, derive design specifications, and agree on a budget and timeline

Construction and Commissioning

Implement the project execution plan, including any management or monitoring programs during construction

Operation

Ensure safe and efficient operations, in line with the project execution plan and planned project activities

Decommissioning

Facilitate the closure of project activities and extraction of project facilities and personnel from the project site

FINANCING TIMELINE

Identify Financing Needs

Engage financial advisor, prepare information memorandum

Mandate Lead Arranger(s)

Prepare terms of reference, carry out due diligence process

Financial Close

Determine Condition Precedent (CP) and Condition Subsequent (CS), typically in an action plan

First Disbursement

Achieve CPs

Further Disbursement(s)

Achieve CSs

Compliance Monitoring

Monitoring of loan conditions (lender requirements) throughout the life of the loan

INCORPORATION OF E&S CONSIDERATIONS

Screening / Feasibility Study

Identify E&S risks and sensitive receptors early on to avoid E&S impacts where possible

E&S Impact Assessment

Carry out baseline studies and assess Project impacts with reference to national requirements and international best practice, noting if any specialised assessments are needed (e.g. critical habitat assessment)

E&S Due Diligence

Assess the Project's E&S performance against the lender(s)' requirements and identify any gaps to be addressed in an action plan. This would include developing social gender action plan to address specific gender gaps.

Implement E&S Management Plan throughout the Project lifetime

Implement the mitigation measures identified within the management plan, and review the management plan periodically to assess its relevance to up-to-date Project conditions at each Project phase

Monitor E&S Impacts throughout the Project lifetime

Carry out monitoring programs prescribed as part of the impact assessment, noting any reporting requirements under local regulations and lender agreement

Permitting

Secure key permits and Project approvals required at each Project phase

5 OVERVIEW OF E&S REQUIREMENTS IN THE MEKONG SUBREGION

Recognizing that many gaps remain in the E&S regulations of Mekong subregion countries, international institutions often have their own E&S requirements, which typically go above and beyond requirements of local laws and regulations. For example, local environmental impact assessments (EIA) may not require biodiversity assessments to take account of seasonality when collecting information or may not cover all relevant social aspects such as involuntary land acquisition, community health and safety, and social-gender considerations. This usually results in gaps between what is required under an EIA governed by local regulatory requirements versus that of an environmental and social impact assessment (ESIA) that may be driven by international standards. It is therefore essential to identify the applicable E&S requirements (both local and international) and incorporate relevant E&S assessments upstream of project development. The figure on the right highlights the typical key differences in E&S topics between under an EIA and ESIA that should be considered.

Environmental and Social Impact Assessment (ESIA)*

Topics or details to be assessed also often include:

- Stakeholder engagement (including project disclosures and consultations with equal representation of women and vulnerable groups.)
- Socio economic baseline study and gender assessment
- Involuntary resettlement, i.e. understanding any loss of land, structures, assets, livelihood, access to existing infrastructure/services for different vulnerable groups
- Safe and accessible workplace; good standard labor and working conditions
- Health, safety and security, including traffic and transport management, and gender based violence, sexual exploitation abuse, and harassment (GBV-SEAH).
- Cultural and natural heritage
- Indigenous people
- Seasonal biodiversity baseline, including identifying any critical habitats and whether there is a need for biodiversity offsets)

Environmental Impact Assessment (EIA)*

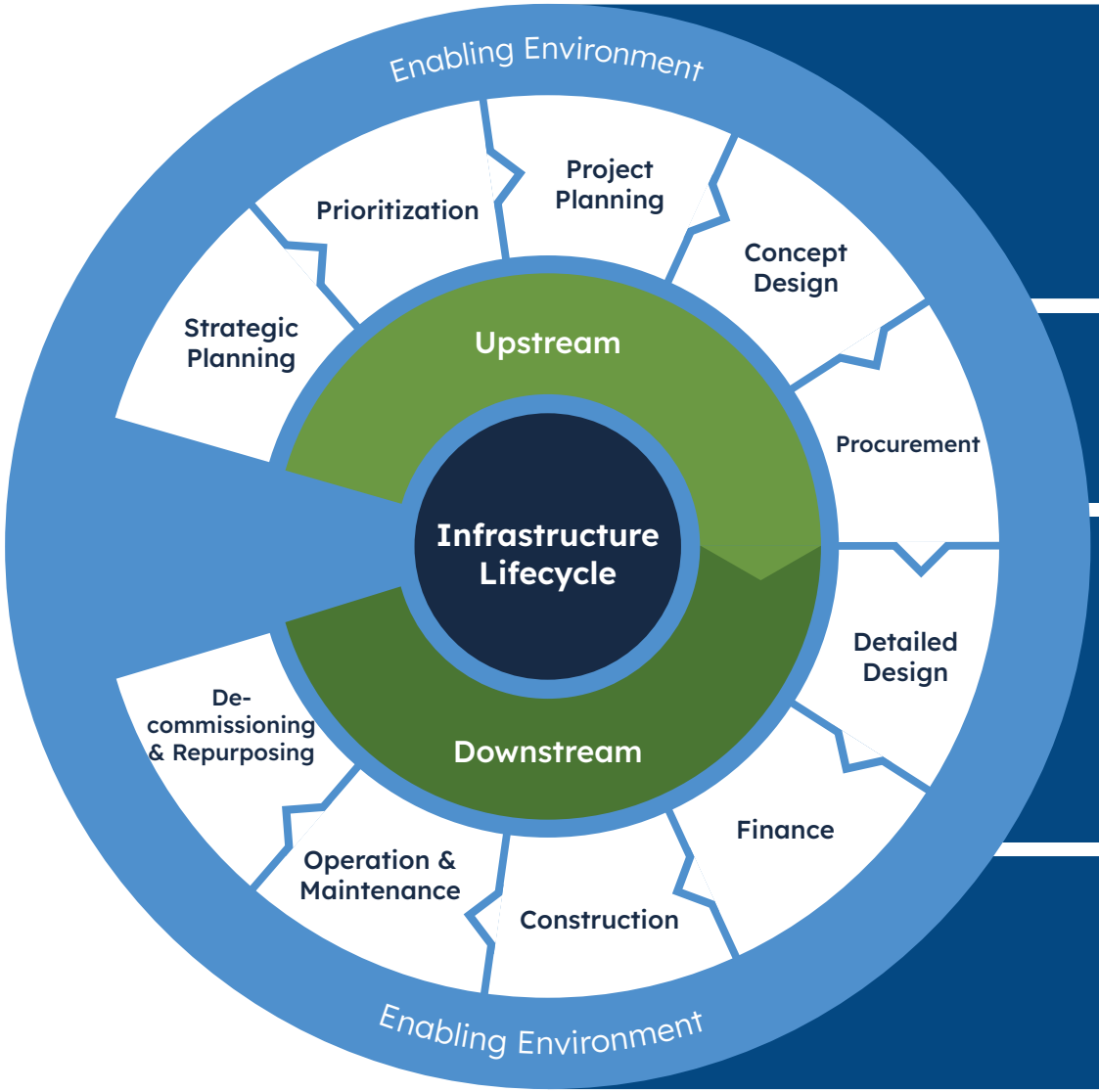
Topics to be assessed often include:

- Surface water and sediment
- Groundwater quality
- Soil and land use
- Air quality
- Noise and vibration
- Wastewater management
- Waste management
- Biodiversity
- Landscape and visual amenity
- Climate change

*These lists are not exhaustive.

It is essential to identify the applicable E&S requirements and assess E&S topics early on in the project development

Detailed Illustration of the Lifecycle of Infrastructure Development with Key Comments on Integrating E&S Concerns



Early Strategic Planning And Project Planning

Implementation of EIA/ESIA should occur early on in the strategic planning stage to actively consider different scenarios for an infrastructure project at the outset, i.e. alternative routes, alternative locations, project design, construction methods etc. Implementation of EIA in Mekong subregion countries often commences too late, after major project decisions (including site, design and construction preparation) have already been made.

Local vs Good International Industry Practice

Host country requirements are often not consistently applied or integrate effectively into the project lifecycle, which can lead to unidentified and unmanaged E&S risks and impacts in the development process.

Contractor Management

Poor contractor management is a frequent cause of adverse E&S impacts, which can lead to cost overruns and project delays. Project management staff sometimes lack knowledge of how to effectively integrate E&S considerations into contracts of EPC contractors and their subcontractors. A systematic approach is required at various phases of the contractor selection process, followed by regular monitoring and inspections. Contractor management, if any, is currently focused on mitigating risk with little thought on creating opportunities to improve E&S conditions.

Ongoing Monitoring And Adaptive Approach

Given the long project lifespan of infrastructure developments, it is important that the E&S performance of the project is monitored and managed throughout the different phases. A robust management plan should include procedures and an adaptive approach for handling scenarios that were not accounted for in the EIA.

Adapted from: https://sustainable-infrastructure-tools.org

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6 CASE STUDIES

Building on concepts touched on in earlier sections, four case studies are presented to describe the integration of E&S considerations into the project lifecycle and the challenges faced in E&S management for infrastructure development. These case studies are synthesized scenarios that have drawn influence from existing and confidential infrastructure developments within the Mekong subregion.

CASE STUDY 1

Restoration and extension of an existing 650km long railway network in Cambodia

Adapted from: https://www.centreforpublicimpact.org/case-study/rehabilitation-railway-Cambodia

Project Description

This large project set out to extend and restore the country's railway network that links Cambodia to Thailand. The intended outcomes of the project included an increase in competitiveness of the railway and an increase the efficiency of the overall national transport sector, which was hoped to facilitate subregional trade and economic growth.

E&S Impacts

The project caused up to 3,000 households to lose part of their land for the railway, whilst around 1,000 households had to be relocated. Overall, most of the affected households appear to have been left worse off due to issues including resettlement sites being too far from the household's work sites, inaccuracies in the calculation of land areas for compensation, late compensation payments, and the lack of adjustment for inflation in the compensation payment schemes.

E&S Challenges in Project Development

Whilst the project was reported to have carried out stakeholder engagement during the development phase, this involved mainly the local government and there were inadequate requirements for consultation with and participation by affected households, which contributed to an overall negative sentiment of the project by the local communities. There were also significant gaps in the project's resettlement plan such as lack of provisions for minimum standards for relocation sites and failure to consider inflation-indexed compensation. There was clear hardship amongst those who were affected.

CASE STUDY

2

Development of a 2,600ha Coastal Industrial Zone (including new gas power plants and a deep-water sea port) in Thailand

Adapted from: https://www.greenpeace.org/southeastasia/story/45080/thai-coastal-communities-unite-against-the-chana-industrial-project/

Project Description

The project involves the construction of facilities including gas power plants, industrial developments and a deep-water sea port as part of an integrated industrial park in a coastal town in Thailand.

E&S Concerns/Controversies

The project has met with protests by local communities who gathered at government buildings to oppose the project. Local communities were concerned that the environment and their livelihoods would be adversely affected by this large scale industrial park development. The coastal town where the industrial park has been designed in is mainly a rural and agricultural area, and the local government intends to officially re-zone the town for industrial development. Significant land reclamation is planned, which may have far-reaching impacts to local fishermen as well as marine biodiversity. Endangered dolphin species have been spotted in the waters around the coastal town.

E&S Challenges

Criticisms surrounding the project stem from lack of data regarding project impacts to the local environment and livelihoods. An environmental impact assessment for the project has not been carried out yet. Only a feasibility study report has been prepared which highlighted various significant environmental impacts (including pollution and ecological damage). Details on mitigation measures were also lacking. These factors adversely affected the public hearing process as local communities did not fully understand the impacts the project would have on their lives, and there was a lot of negative sentiment. The public hearing processes were also criticised for not involving all affected communities.

Lessons Learned

Early stakeholder engagement (as part of the project impact assessment) may have helped identify the concerns of affected stakeholders and contribute towards attaining the social license of the project through properly addressing and mitigating the concerns and carrying out continued engagement.

CASE STUDY

3

Development of a 50MW Waste-to-Energy (WTE) Power Plant

Adapted from: Author's own work

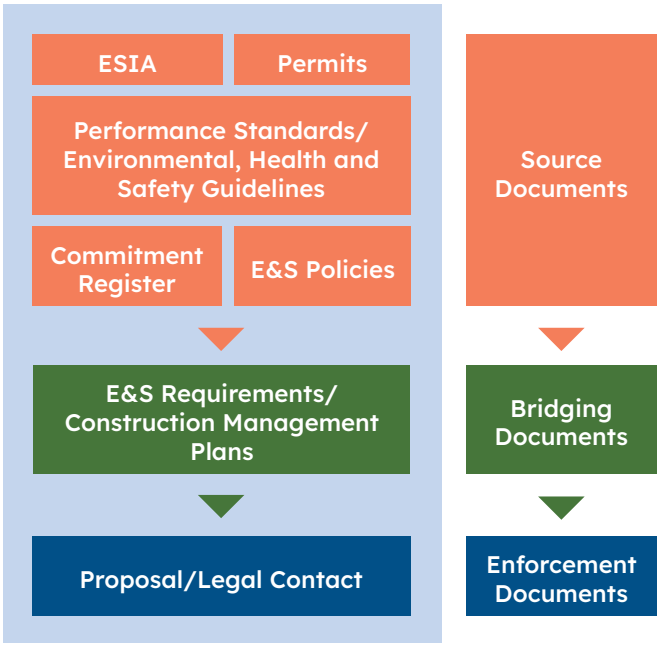
Project Description

The Project involves the construction of a 50MW WTE project, plant or facility that will incinerate municipal solid waste and generate electricity whilst relieving pressure from the existing landfills in the area.

Lessons Learned

Hiring EPC contractors/contractors/subcontractors needs a systematic approach at various phases of the selection process for effective control, management and enforcement of E&S issues.

The Process



Given the long project lifespan of infrastructure developments, it is important that the E&S performance of the project is monitored and managed throughout the different phases as different parties become involved (i.e. EPC contractor, operator).

E&S Concerns

The ESIA identified the key E&S aspects of the project which included solid waste, waste water, noise and dust. The construction phase also required a large workforce of 220 people, comprising of both local and foreign workers. Labour and working conditions will need to be monitored, along with the health and safety management on site. There is also some agricultural land that will be acquired for the transmission line.

E&S Challenges

While the ESIA had identified the potential E&S impacts of the Project, the tender and appointment of the EPC contractor was conducted before the ESIA and ESMP were finalised, and the ESMP requirements were not included in the original contractor requirements. (This was later included at an additional cost to the project proponent.) During construction monitoring, various nonconformities with the Project's E&S requirements were observed (e.g. improper waste management, poor condition of workers accommodation), and the EPC contractor was not well equipped to rectify and manage these issues.

CASE STUDY

4

Development of a Hydropower Project in Lao PDR

Adapted from: https://www.internationalrivers.org/resources/reports-and-publications/watered-down/

Project Description

The project is a part of a larger 1,272 MW cascade hydropower development at an important river in Lao PDR. The project was completed in 2021 and is currently in operation and expected to generate an average annual capacity of approximately 5 billion kilowatt-hours.

E&S Concerns

The project is recorded to have the largest resettlement impact among the seven dams built in this development program. In total it displaced 2,297 households since the project started in 2014. According to International Rivers, the primary livelihoods of women and elders as river weed collectors were adversely impacted by the project. It was unclear whether they would be able to make a living from river weed in the longer term due to impact from the dams. The women and elders received no compensation for the loss of income as the amount of river weed has decreased significantly since dam construction.

E&S Challenges and Lessons Learned

The resettlement and compensation took place during project construction which was in violation of Lao PDR's national regulations that require the process be completed at least one month before construction work commenced. It is important to point out that gender analysis and/or assessment was not conducted for the project making it difficult, if not impossible, to identify specific challenges faced by women and other vulnerable groups. Considering the strategic roles women commonly hold in managing and making use of water resources, it is crucial to undertake a gender assessment before construction starts as part of the project's baseline study, and accordingly integrate the analysis in project design, planning, and implementation.

7 LOOKING AHEAD

In line with growing attention towards sustainable infrastructure, various tools and standards have been developed with the goal of supporting E&S management in infrastructure development, four of which are below.

The FAST-Infra Sustainable Infrastructure Label (SI Label) is a globally applicable label for infrastructure projects demonstrating significant positive sustainability performance.

The SI Label is designed to enable developers and operators to show the positive impact of an infrastructure asset and attract investors seeking assets which positively contribute to sustainable outcomes. It refers to minimum standards that infrastructure assets are to adhere to, and comprise the IFC Performance Standards, as well as additional 'gaps filled'. A high degree of disclosure is required. External Independent Review is considered as market good practice and is strongly encouraged to facilitate trust and assurance for participants.

The Blue Dot Network is a mechanism to certify infrastructure projects that meet robust international quality standards.

Launched in In November 2019, the Blue Dot Network is a multi-stakeholder initiative with involvement from Australia, Japan, and the United States. It aims to provide assessment and certification of infrastructure development projects worldwide on measures of financial transparency, environmental sustainability, and impact on economic development, with the goal of mobilizing private capital to invest abroad. The mechanism is under development.

The Equator Principles are intended to serve as a common baseline and risk management framework for financial institutions to identify, assess and manage E&S risks when financing projects.

Launched in 2003, the Equator Principles are now in their fourth iteration and have been adopted by 134 financial institutions in 38 countries. Equator Principles Financial Institutions (EPFI) implement the 10 Equator Principles through their internal environmental and social risk management policies, procedures, and standards in order to meet the requirements. In the Lower Mekong countries, the Equator Principles also refer to the application of IFC Performance Standards.

IFC's Environmental and Social Performance Standards define IFC clients' responsibilities for managing their environmental and social risk, and have also been adopted for use by other financial institutions.

The 2012 edition of IFC Performance Standards are divided into eight and cover a range of E&S topics, which are also underpinned by Guidance Notes and associated World Bank Group (WBG) Environmental, Health & Safety (EHS) Guidelines. They are the most commonly adopted set of E&S standards by the private sector.

8 CONCLUSION

This Tutorial is intended to help stakeholders, including financial institutions, demystify the importance of E&S considerations and their integration into infrastructure project development processes. From understanding what E&S considerations are to why they are important for infrastructure development in the Mekong subregion has been illustrated in the case studies. This Tutorial also provides an overview of requirements guiding the E&S integration process with key takeaway points highlighted below.

TIMING

A key challenge for infrastructure developments is often the lack of early incorporation of E&S in the design phase and then through the project lifecycle. Retrospective application of E&S assessment and management is difficult and has limited effectiveness in achieving real impacts, particularly for infrastructure developments with long operation lifetimes.

IMPLEMENT

There is a need to "break" the perception that meeting legal requirements for E&S issues is sufficient. It is important to ensure there is a "flow through" of requirements and consistency in approach and standards across all stakeholders (e.g. project developer, EPC contractor, O&M company), which would be supported by monitoring and measurement throughout the project lifetime.

CAPACITY

Understanding and implementing E&S considerations and responsibilities may be confusing at times, and it is therefore important to ensure that adequate resources and expertise are in place for all parts of the lifecycle for development.

9 GLOSSARY, REFERENCES AND FURTHER READING

Glossary

Term	Description
Biodiversity	Biodiversity refers to variability among living organisms from all sources including terrestrial, marine, and other aquatic ecosystems and ecological complexes of which they are e a part, including diversity within species, between species, and of ecosystems.
Cultural Heritage	Cultural heritage refers to resources with which people identify as a reflection and expression of evolving values, beliefs, knowledge, and traditions.
Ecosystem	Ecosystem refers to a biological community of interacting organisms and their physical environment.
Environmental (and Social) Impact Assessment	Environmental (and Social) Impact Assessment (EIA/ESIA) refers to a process to identify and assess potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.
Gender Analysis and/or Assessment	Gender analysis and/or assessment refers to methods used to understand relationships between men and women, their access to and control over resources, and barriers they face relative to each other because of gender. A comprehensive gender analysis or assessment can be extended to other vulnerable groups while investigating different roles, rights, needs, and opportunities of women and men, boys and girls, and vulnerable groups in a given project context.
Greenhouse Gas	A greenhouse gas absorbs and emits radiant energy within thermal infrared range. This process is the fundamental cause of the greenhouse effect. Primary greenhouse gases in Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.
Grievance Mechanism	Grievance mechanism refers to a process that allows stakeholders to register concerns, suggestions, inquiries, and compliments. It also supports submission of grievances at multiple locations and through multiple mechanisms. It should be accessible to all stakeholders regardless of social, cultural, or economic standing.
Indigenous Peoples	There is no universally accepted definition of indigenous peoples and may be referred to in different countries as indigenous ethnic minorities, aboriginals, hill tribes, minority nationalities, scheduled tribes, first nations, or tribal groups. According to IFC Performance Standards 7, indigenous peoples can be used in a generic sense to refer to a distinct social and cultural group possessing characteristics in varying degrees including: i. Self-identification as a distinct indigenous cultural group and recognition of that identity by others ii. Collective attachment to geographically distinct habitats or ancestral territories and to natural resources in these habitats and territories iii. Customary cultural, economic, social, or political institutions separate from those of mainstream society or culture iv. Distinct language or dialect, often different from official language(s) of country or region where they reside.
Involuntary Resettlement	Involuntary resettlement refers to project-related land acquisition or restrictions on land use that may cause physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets, including those leading to loss of livelihood), or both. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.
Land Acquisition	Land acquisition refers to methods of obtaining land for project purposes, which may include outright purchase, expropriation of property, and acquisition of access rights, such as easements or rights of way. Land acquisition may also include: i. Acquisition of unoccupied or unutilized land whether or not landholder relies upon such land for income or livelihood purposes ii. Repossession of public land used or occupied by individuals or households iii. Project impacts that result in land being submerged or otherwise rendered unusable or inaccessible. Land includes anything growing on or permanently affixed, such as crops, buildings, and other improvements, and appurtenant water bodies.
Livelihood	Livelihood refers to full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Term	Description
Stakeholder	Stakeholder(s) refers to project-affected and other interested parties likely to be affected by the project, or those who may have an interest in the project and who could influence opinions of affected parties either positively or negatively or affect the implementation process or sustainability of project outcomes.
Sensitive Receptor	Sensitive receptors are environmental and social attributes considered important in assessing risks and considering impacts. They are varied and may include: i. Physical features, habitats, wildlife populations (e.g., landscapes, biodiversity) ii. Human-associated elements (e.g., health, economics), such as houses iii. Ecosystems iv. Natural processes (e.g., water and nutrient cycles, microclimate v. Cultural aspects (e.g., traditional spiritual ceremonies, etc.)
Stakeholder Engagement	Stakeholder engagement refers to a process organized by the borrower or on behalf of borrower, to enable stakeholders to be informed of, and contribute to, project design and implementation. Stakeholder engagement should begin early in project development and continue throughout implementation.

References

Sustainable Infrastructure Development for a Low-Carbon Transition in Central Asia and the Caucasus: Mapping of Potentially High-impact Infrastructure Projects and Needs Assessment. Annex: Overview of selected sustainable infrastructure standards and norms. https://www.oecd-ilibrary.org/sites/57e511f1-en/index.html?itemId=/content/component/57e511f1-en

Further Reading

IFC Performance Standards: https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards

IFC Guidance on ESMS: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_esms-general

Equator Principles 4 (including Implementation Note and Guidance Notes): https://equator-principles.com/resources/

ADB Safeguard Policy Statement: https://www.adb.org/documents/safeguard-policy-statement

FAST-Infra Sustainable Infrastructure Label (SI Label): https://www.climatepolicyinitiative.org/fast-infra/

Blue Dot Network: https://www.oecd.org/finance/oecd-and-the-blue-dot-network.htm

Guidelines on Public Participation in EIA in the Mekong Region: https://www.pactworld.org/library/guidelines-public-participation-eia-mekong-region

Financier profiles report : an overview of infrastructure financiers in the CLMTV countries: https://pdf.usaid.gov/pdf_docs/PA00XX9K.pdf

Disclaimers

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