



เสริกาโลงสุดการชิสเัชสงฐาริตณ ผู้ที่กษูอ่า The NGO Forum on Cambodia



Research Report On "Environmental and Social Impact Review (ESIR) Focusing on Development Projects in Preah Sihanouk and Koh Kong Provinces in Cambodia"

> By Sam Chanthy, PhD

> > February 2025







February 2025 © Fair Finance Cambodia

# **About Fair Finance Cambodia**

The Fair Finance Cambodia (FFC) coalition aims to reduce the negative impacts of crossborder investments on human rights, the environment, and climate change, particularly those made by multinational financial institutions, banks, and insurers, while increasing inclusive economic development. FFC is operational in Cambodia – wherein the Fair Finance Cambodia Civil Society Organization (CSO) coalition leads research and engagement with key stakeholders, including financial regulatory and policymaking institutions, banking and investment associations, multilateral development banks, and academia. FFC is a member of Fair Finance Asia, a regional network of CSOs committed to ensuring that financial institutions' funding decisions in the region respect local communities' social and environmental well-being.

#### Authorship

This report, commissioned by Fair Finance Cambodia, The NGO Forum on Cambodia, and ActionAid Cambodia, has been researched and written by Dr. Sam Chanthy.

**Citation:** Sam Chanthy (2025): *Environmental and Social Impact Review – Focusing on Development Projects in Preah Sihanoukville and Koh Kong Province*. Fair Finance Cambodia. Phnom Penh, Cambodia.

#### **Editorial Review & Contributions**

This report is finalized with the Fair Finance Asia and Cambodia Executive Teams and editorial reviews provided by Phon Yut Sakara, Loung Davy (ActionAid Cambodia), Mar Sophal (NGOF), Ven Saroeut, Bernadette Victorio, Kyle Juliene Cruz, and Srishty Anand.

**Disclaimer:** This publication was co-funded by the European Union. Its contents are the sole responsibility of the author and do not necessarily reflect the views of Fair Finance Cambodia, The NGO Forum on Cambodia, ActionAid Cambodia, and the European Union.

The cover photo was taken by Dr. Sam Chanthy in Keo Pos commune, Stueng Hav district, Cambodia.

# **Table of Contents**

Ab	breviations	vii
Exe	ecutive Summary	ix
1.	Introduction	1
2.	Study Objectives	2
3.	Scope & Limitations	3
4.	Study Methodology	4
	4.1 Collection of Secondary Data and Information	4
	4.2 Collection of Primary Data and Information	5
5.	Study Findings	9
	5.1 Coastal Area Development Regulations	9
	5.2 Regulation of Natural Protected Areas	10
	5.3 Environmental Impact Assessment Regulation	11
	5.4 Private Investment Regulations	12
	5.5 Physical Resources in Coastal Areas	14
	5.5.1 Cambodia's Coastal Climate	14
	5.5.2 Water Quality in Coastal Areas	14
	5.6 Biological Resources in Coastal Areas	15
	5.6.1 Key Coastal Ecological Characteristics	15
	5.6.2 Coastal Mangrove Forests	16
	5.6.3 Coastal Biodiversity	18
	5.6.4 Coastal Coral Reefs	21
	5.6.5 Coastal Seagrass	22
	5.6.6 Marine Species	23
	5.6.7 Coastal Resource Degradation	24
	5.6.8 Threats to Cambodia's Coastal Environment	24
	5.7 Socio-Economic Profiles in Coastal Areas	28
	5.7.1 Community-Based Groups (CBGs)	28
	5.7.2 Results from the Household Survey	30
	5.8 Financial Loan Portfolio in Cambodia	35
	5.9 Investment Financers and Impacts	36
	5.10 Insights from Local Communities and Provincial Departments	39
	5.10.1Views from Local Communities	39
	5.10.2Views from Provincial Authorities	40

	5.11	Investment and Development Impacts Observed in the Studied Areas	41
	5.12	Case Study	44
	5.	12.1 Case 1: SS Gold Sand Dredging in Andoung Touek Commune, Botum	
	Sa	akor District	44
	5.	12.2Case #2: Eco Beach Resort in Ou Chroy commune, Prey Nob District4	46
6.	Discus	ssion of Findings	50
7.	Conclu	usion	63
8.	Recon	nmendations	64
Bibl	iograp	hy	71

# List of Tables

Table 1: Sample and Sampling Methods	5
Table 2: List of sub-national KIIs	7
Table 3: Coral reef habitats in four coastal provinces	21
Table 4: Total areas of seagrass meadow in Koh Kong and Preah Sihanouk province	s 22
Table 5: Numbers of community-based groups, areas, and members	29
Table 6: Community-based groups as compared with provincial data	29
Table 7: Key demographic profiles of respondents	30
Table 8: Survey results on EIA and investment awareness (%)	34
Table 9: Regional credit performance as of 2023	35

# List of Figures

Figure 1: EIA Review and Approval Process in Cambodia	12
Figure 2: Socio-economic profiles of the studied provinces and districts	28
Figure 3: Main marine resources collected by coastal residents (%)	31
Figure 4: Varieties of marine resources collected by coastal residents	32
Figure 5: Perceived depletion in marine resource stocks by coastal residents.	33

# List of Photos

Photo 1: Communities visited during the study	8
Photo 2: Typical Cambodian coastal ecosystem	16
Photo 3: Key species in coastal areas	20
Photo 4: H. pinifolia found in Cambodia&	23
Photo 5: Threats to the coastal environment	27
Photo 6: Investment projects in and around the studied CFis/CPAs	42
Photo 7: Community Fisheries in Andong Touek Commune	46
Photo 8: Eco Beach Resort Project Area in Prey Nob District	49
Photo 9: Eco Beach Resort Design	50

### Acknowledgments

I would like to express my sincere gratitude to everyone who contributed to successfully completing this study report.

First and foremost, I extend my heartfelt appreciation to the alliance members—Ms. Loung Davy, Mr. Mar Sophal, Mr. Phon Yut Sakara, and Mr. Rith Dara—for their invaluable guidance, support, and encouragement throughout this study. Their expertise and insights were crucial in shaping the study and navigating the challenges we encountered. Many thanks to the critical reviewers – Saroeut Ven, Bernadette Victorio, Kyle Juliene Cruz, and Srishty Anand for their time and expertise in reviewing this report.

I also wish to thank the representatives from the provincial departments of Environment, Mines and Energy, and Agriculture, as well as the provincial offices in Koh Kong and Preah Sihanouk provinces, for their constructive feedback and suggestions, which significantly enhanced the quality of this report.

Special thanks go to my beloved fisheries and CPA community members and colleagues from marine protected communities and Cambodia National Research Organization (CNRO) in Botum Sakor district, Mlup Promviheathor Center (MPC) in Koh Kong province and Prey Nob district, Preah Sihanouk province, who participated in our study, and Open Development Cambodia for their archive records of development projects in the two provinces. Their collaboration and support created a welcoming environment during the field data collection, enriching this study experience through their diverse perspectives.

Finally, I want to thank my team members for their unwavering support throughout this journey.

Thank you all for your contributions, support, and inspiration.

Sam Chanthy, PhD Consultant

# Abbreviations

AAC	ActionAid Cambodia
ABC	Association of Banks in Cambodia
ADB	Asian Development Bank
ARDB	Agriculture and Rural Development Bank
BHR	Business and Human Rights
CBET	Community-Based Ecotourism
CBGs	Community-Based Groups
СВО	Community-Based Organization
CDB	Commune Database
CDC	Council for the Development of Cambodia
CDRI	Cambodia Development Research Institute
CFi	Community Fishery
CF	Community Forestry
СРА	Community Protected Area
EIA	Environmental Impact Assessment
ESG	Environmental, Social, and Governance
ESIA	Environmental and Social Impact Assessment
ESIR	Environmental and Social Impact Review
FAO	Food and Agriculture Organization
FCEE	Fishing Cat Ecological Enterprise
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
FFC	Fair Finance Cambodia
FFI	Fauna and Flora International
FiA	Fishery Administration
Fls	Financial Institutions
FPIC	Free, Prior, and Informed Consent
GDP	Gross Domestic Product

На	Hectares
IMF	International Monetary Fund
IUCN	International Union for Conservation of Nature
Klls	Key Informant Interviews
KKRS	Koh Kapik Ramsar Site
km	Kilometer
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MFF	Mangroves for the Future
МоЕ	Ministry of Environment
MPA	Marine Protected Area
NBC	National Bank of Cambodia
NGOF	NGO Forum on Cambodia
NGOs	Non-Governmental Organizations
NPAs	Natural Protected Areas
OECD	Organization for Economic Cooperation and Development
PKWS	Peam Krasop Wildlife Sanctuary
SEZ	Special Economic Zone
UTM	Universal Transverse Mercator

#### **Executive Summary**

The Environmental and Social Impact Assessment (ESIA), also referred to as Environmental Impact Assessment (EIA), is a mandatory requirement for all development projects in Cambodia as stipulated by the Environment and Natural Resource Code. The NGO Forum on Cambodia (NGOF) and ActionAid Cambodia (AAC) are collaborating on a research study to evaluate both the positive and negative impacts of private sector activities on society and the environment.

The study aims to examine the role of businesses in the contexts of Business and Human Rights (BHR) and Corporate Accountability, especially concerning community fisheries (CFis), which face threats to their access to land and natural resources due to commercial development projects. This initiative aligns with international BHR regulations and national laws, including the Environment and Natural Resource Code, the Law on Environmental Protection and Natural Resource Management, Sub-Decree no. 72 on Environmental Impact Assessment, the National Environment Strategy and Action Plan, the Cambodia Climate Change Strategic Plan, the Circular Strategy on Environment, and the National Strategic Plan on Green Growth.

This study evaluates local communities' socio-economic conditions and fishery resources, focusing on the impact of development projects on economic activities, the environmental landscape, and cultural practices. Additionally, it aims to identify the financial institutions (FIs) funding these projects and assess their compliance with safeguards and sustainability standards. The findings help inform advocacy plans for community-based groups (CBGs) and networks and support the official findings of the Environmental and Natural Resource Code (2023) and environment, social, and governance (ESG) standards. The study also explores the FIs financing investments in Cambodia's coastal areas and assesses their compliance with national and international standards.

The study team employed both quantitative and qualitative methods to gather data for a report and policy brief. Secondary data was collected through a comprehensive literature review, analysis of maps from the study regions, and examination of documents related to investment entities and coastal management in Cambodia. Primary data was collected through a combination of methods, including a household survey, key informant interviews (KIIs), focus group discussions (FGDs), and workshop validation. The survey included responses from 254 households (a 5% margin of error) within CFis and community-protected areas (CPAs) potentially impacted by investment projects in the Botum Sakor, Srae Ambel, and Prey Nob districts.

#### **Study Results**

Cambodia's coastal regions are governed by frameworks like the 2012 Circular on Coastal Development and the 2023 Environmental and Natural Resource Code, which aim to balance sustainable development with conservation efforts. The 2012 Circular designates reserved coastal land for green spaces, public facilities, and tourism infrastructure, with different regulations for urban and non-urban zones. However, development activities, such as ports and tourism sites, pose risks to natural resources vital for local livelihoods, necessitating environmental management plans. Legal enforcement is widely perceived as favoring offenders and undermining conservation efforts. Natural Protected Areas (NPAs) categorize coastal ecosystems into four zones to address this: Core, Conservation, Sustainable Use, and Community. This zoning approach promotes co-management with local communities through CPAs and CFis. Socioeconomic data from Preah Sihanouk and Koh Kong provinces, with a combined population of 86,745 families, indicates a significant reliance on marine resources. Over 50% of households in the surveyed districts participate in CBGs, such as CFis and CPAs, which manage between 28,573 and 75,450 hectares of land.

Biodiversity reviews highlight the wealth of ecosystems in Cambodia. Mangroves support 50 plant species and 352 arthropod morphospecies, providing critical habitats for endangered wildlife in coastal areas. Coral reefs, covering 2,882 hectares, and seagrass beds, spanning 2,277 hectares, are vital for marine biodiversity but face threats from overfishing, sedimentation, and pollution. Unsustainable practices like bottom trawling and coastal industrialization, particularly in Preah Sihanouk's economic zones, have exacerbated issues like waste management and habitat loss. Development initiatives like sand dredging, resort construction, and private investments from China drive economic growth but also lead to ecosystem degradation and community displacement. Coastal ecosystems, particularly the 83,700 hectares of mangroves, have experienced a 42% deforestation rate since 1989 due to private investment and logging, despite restoration efforts such as the Mangroves for the Future (MFF) initiative. Additionally, climate change exacerbates vulnerabilities by threatening water infrastructure, raising flood risks, and degrading water quality.

The household survey in Koh Kong and Preah Sihanouk provinces interviewed 254 households, comprising 39% male and 61% female respondents. Most participants were aged between 31 and 50, with 85% being married and 12% single. Most households had children, with 54% having between one and three children and 6% having no children. 47% completed primary education, and 21% attained secondary school qualifications. Occupations varied: 24% of respondents were engaged in fishing, 19% operated small family businesses, 19% identified as housewives, 17% worked as farmers, and 15% were employed as daily wage laborers. The household survey highlights dependence on marine fisheries (55% of respondents), mangroves (12%), and coastal rice farming (15%). Most households reported earnings between \$20 and \$250 monthly, with livelihoods centered on fishing, small businesses, and daily labor. Furthermore, the survey revealed that 68% of residents were unaware of EIAs, and 50.4% reported experiencing medium-to-significant adverse impacts from development projects. 72% were unaware of local investment projects in the study areas. Local concerns were largely centered around disrupted fishing access and environmental neglect within their community zones.

The specifics of investment project portfolios, including the identities of their financiers, remain largely unknown to the public. It is speculated that these financiers may include local tycoons or investors who have stakes in the projects. Given the nature of these investments—such as sand dredging and beach resorts—it appears they are primarily locally funded initiatives rather than foreign direct investments (FDIs). This assumption is supported by the regional economic dynamics, where local investors significantly influence resource extraction and tourism development. The limited disclosure of information presents considerable challenges, impeding awareness of the stakeholders involved in these projects. This lack of transparency undermines understanding of who may be affecting local communities and marine resources in the study areas. Consequently, it raises concerns about accountability and the capacity of community members to engage meaningfully in discussions regarding these investments' environmental and social impacts. Moreover, the absence of a robust legal framework and effective enforcement mechanisms may discourage potential investors. Insufficient regulations pose challenges for compliance-oriented investors, ultimately limiting Cambodia's ability to attract a diverse range of highly responsible investors.

Key challenges identified from the field interviews and group discussions include weak legal enforcement, inadequate monitoring of protected areas, poverty-driven resource exploitation, insufficient stakeholder collaboration in resource conservation, and nontransparent practices of private investments. As suggested by interviewed stakeholders, a balanced approach integrating community-led conservation, stricter regulations, and sustainable investment is critical to safeguarding Cambodia's coastal ecosystems while fostering equitable growth. Strengthening CBGs, enhancing EIA transparency, and investing in climate-resilient infrastructure are urgent priorities.

#### Results

- The enforcement of EIA regulations in Cambodia is inadequate, resulting in significant gaps in community engagement, public disclosure, and monitoring. The mandates outlined in the Code, which require appropriate community engagement in the EIA process, public disclosure of EIA reports, posting of EIA approval letters at project sites, and regular monitoring of EIA performance, are not being implemented effectively.
- Cambodia's marine coastline and estuaries have faced significant external pressures for nearly a decade, creating a challenging environment for CBGs dependent on these resources. Fears and frustrations from unresolved conflicts with powerful external actors, such as political elites and wealthy individuals, burden these communities. Projects like sand dredging and coastal reclamation have resulted in environmental degradation, destroying critical marine habitats and threatening food security and economic stability.
- Coastal communities, which depend heavily on marine fisheries for their livelihoods, face increasing vulnerability due to unsustainable practices such as overfishing, pollution, and habitat destruction. This depletion threatens economic stability, especially for rural households reliant on these resources.

- CBGs struggle with limited financial and material resources, hindering their ability to manage natural resources effectively. The declining support from NGOs further exacerbates this issue, leaving communities vulnerable to external pressures from powerful interests involved in environmentally damaging projects.
- Legal enforcement in coastal provinces is perceived as ineffective and biased, leading to a lack of trust in the legal system and undermining efforts for sustainable resource management. This erosion of trust can result in social fragmentation and increased inequality.
- Climate change intensifies the degradation of marine resources, disrupting daily lives and economic opportunities for these communities. Extreme weather events, exacerbated by climate change, further challenge traditional fishing practices.
- Finally, the lack of transparency and accountability in private investment projects raises concerns about their impact on local communities and the environment. The absence of the public projects' portfolios and ESG policies suggests insufficient commitment to sustainable practices and raises questions about the Cambodian government's regulatory role.

**In conclusion**, marine fisheries are crucial for coastal communities in Cambodia, but overfishing, habitat destruction, and ineffective management threaten their future. Alternatives like aquaculture and ecotourism could diversify income and alleviate pressure on marine resources. Stronger governance, legal enforcement and mechanisms (coastal management and EIA regulations), community-based resource management, and FIs are needed to prevent environmental degradation and socio-economic instability. Climate change impacts and lack of transparency in coastal private investment projects raise concerns about business accountability and irresponsible practices.

# The following are the recommendations in brief, based on the findings:

- It is recommended that the government intensify efforts to improve legal enforcement, transparency, and accountability in coastal regions by establishing or strengthening independent oversight bodies responsible for monitoring environmental laws.
- The MoE should continue to commit to disclosing comprehensive information related to EIA procedures, reports, and ongoing monitoring activities.
- The MoE should actively engage key stakeholders, particularly local communities and authorities, in consultations regarding EIA-related discussions.
- In addition to conducting a thorough EIA, ongoing monitoring and evaluation of the project's impacts on the community and the environment are essential.
- To further promote inclusive and transparent investment practices, the government must develop or impose business, development, or investmentrelated regulations that require all (coastal) projects to disclose critical information about their financiers, business models, and ESG policies.

- The establishment of mechanisms for grievance redress by the project is vital. Communities should have access to formal channels to report concerns or grievances related to project impacts.
- The government, in particular, shall re-strategize the development policies and priorities to attract financiers and investors committed to high standards of ESG performance.
- Strengthening meaningful consultations with affected communities and CSOs is essential to ensure that local concerns and engagements are fully acknowledged. This approach represents a win-win strategy, fostering civic engagement and CSO participation in development decisions and impact assessments.
- Moreover, establishing a joint mechanism between the government and CBGs can significantly empower these organizations in their monitoring and advocacy efforts.
- Encouraging FIs to adopt and implement strong ESG frameworks, enhancing their sustainability credentials and accountability, prioritizing projects with robust ESG commitments, and fostering responsible investment practices. There is also a need for regular assessments of FIs' adherence to ESG policies and publishing the findings to foster transparency and improvement. NBC, CDC, ABC, MoC, MoE, and MEF shall establish a joint platform to guide FIs and their financed projects in adopting a more sustainable and transparent practice.

Fishing Village in Ta Maek Commune, Botum Sakor District, Koh Kong Province (photo by Dr. Sam Chanthy, 2024)



#### 1. Introduction

The Environmental and Social Impact Assessment (ESIA or EIA) is mandatory for all medium to large development projects in Cambodia, including those initiated by private individuals, companies, joint ventures, public companies, or government ministries and agencies. The legal framework for the EIA is established under the Environment and Natural Resource Code, which is aligned with Cambodia's Constitution and emphasizes the importance of environmental protection.

There have been concerns regarding the overseas impacts of investment projects, particularly those that rely on external financing. Local banks in Cambodia typically offer loans that are not highly competitive for large and multilateral investments, leading to significant funding from outside the country for natural resource-based projects. These include special economic zones (SEZs), coastal real estate development projects, and energy initiatives. They have faced criticism for being environmentally destructive, lacking transparency, and not conducting comprehensive impact assessments. Mitigating the adverse effects of cross-border investments on human rights, the environment, and climate change is crucial, particularly those made by multinational FIs, banks, and insurers. At the same time, it is important to promote inclusive economic development.

To foster an enabling ESG framework for responsible business conduct, the NGO Forum on Cambodia (NGOF) and ActionAid Cambodia (AAC), both members of the Fair Finance Cambodia (FFC) Coalition, are collaborating on a research study titled "Environmental and Social Impact Review (ESIR) Focusing on Development Projects in Preah Sihanouk and Koh Kong Provinces in Cambodia." This study aims to evaluate both the positive and negative impacts of private sector activities on society and the environment. It examines the role of businesses in Business and Human Rights (BHR) and Corporate Accountability, particularly concerning the growing need for coordination with CFis, whose access to land and natural resources—especially fishery resources—is threatened by commercial development projects.

Many large-scale projects that lack proper and transparent ESIA processes negatively impact human rights and the environment, particularly by degrading underwater resources vital to CFis. In response, NGOF and AAC are pooling resources to conduct this study to gather evidence to demonstrate the impact of development on CFis' sustainable livelihoods, environmental sustainability, and tenure security.

This initiative aligns with both international BHR regulations and national laws. These include the Environment and Natural Resource Code, the Law on Environmental Protection and Natural Resource Management (1996), Sub-Decree no. 72 on Environmental Impact Assessment (1999), the National Environment Strategy and Action Plan (2016-2023), the Cambodia Climate Change Strategic Plan (2014-2023), the Circular Strategy on Environment (2023-2028), and the National Strategic Plan on Green Growth (2013-2030).

# 2. Study Objectives

This study aims to assess and evaluate the impacts of development projects on the socio-economic conditions of local communities and their fishery resources. It examines the positive and negative impacts of investments and development projects on the environmental landscape, economic activities, and cultural practices of affected communities. Additionally, it seeks to identify the FIs that fund these projects and evaluate their compliance with sustainability safeguards and standards. The findings will support advocacy efforts by community-based organizations (CBOs) and networks and shadow the official findings of the EIA reports and ESG standards of the development projects.

# Specific Objectives:

- 1. To analyze, evaluate, and propose appropriate alternatives and measures to prevent, control, mitigate, restore, or compensate for the existing and potential environmental and social impacts of the projects and investments, ensuring compliance with the Environmental and Natural Resource Code (2023) and other national legislation while promoting socially responsible practices among companies.
- 2. To identify which FIs fund investments and projects in the coastal areas of Cambodia and assess the national and international social and environmental safeguarding standards to which they adhere. This includes identifying key best practices, challenges, and the impacts of investments in Cambodia on human and labor rights (especially concerning indigenous peoples), land grabbing, pollution of water sources, and climate/deforestation.
- 3. To develop a policy brief that outlines the progress made in implementing the EIA as per the Environmental and Natural Resource Code (2023), along with alternative options for improving investment practices in Cambodia.
- 4. To provide practical and policy recommendations for enhancing responsible investment practices in Cambodia. These recommendations will be aimed at key stakeholders, including companies, the Council for the Development of Cambodia (CDC), the Ministry of Economy and Finance (MEF), the Ministry of Environment (MoE), the Ministry of Agriculture Forestry and Fisheries (MAFF), the Fisheries Administration (MAFF), the National Bank of Cambodia (NBC), the Association of Banks in Cambodia (ABC), as well as community fisheries and local communities that are affected by development projects and investments.

# 3. Scope & Limitations

The study focused on a select group of investment companies operating within CFis and CPAs in two districts of Koh Kong—Botum Sakor and Srae Ambel—and two districts in Preah Sihanouk province—Prey Nob and Stung Hav. These companies were chosen due to their reported socio-economic and environmental impacts, as highlighted by local villagers during preliminary consultations. The selection criteria were based on the companies' influence on community livelihoods, natural resource management, and environmental sustainability.

The districts were strategically selected because AAC has been actively supporting CFis and CPAs in these regions. This ongoing support has established a framework for collaboration and advocacy. By focusing on these areas, the study aims to gather data and improve community awareness of the impacts of investment activities. The findings will be shared with community members to bolster their advocacy efforts, empowering them in negotiations with private companies and local authorities to protect their local resources and promote sustainable practices.

The research encountered several methodological constraints that affected its scope and validity:

- Temporal Limitations (Cross-Sectional Design): The study relied on snapshot data (e.g., a single-time survey), which makes it difficult to establish causal relationships or capture longitudinal trends in coastal resource use or environmental changes.
- Sampling Challenges: Vulnerable groups, such as busy fishers, were underrepresented due to logistical barriers (e.g., working at sea during survey hours), which introduced potential sampling bias.
- Small Sample Size: The limited sample of 254 households may not adequately represent the broader coastal population, reducing the generalizability of the findings beyond the studied districts.
- Stakeholder Engagement Gaps: Despite repeated efforts, meetings with critical government bodies (such as the Ministry of Environment, Fishery Administration, Ministry of Mines and Energy) did not materialize despite confirmed receipt of appointment letters. The lack of clarity around these missed engagements hindered a comprehensive analysis of institutional commitments to coastal challenges, potentially skewing interpretations of policy implementation.
- Limited Access to Company Representatives: Company management teams or staff were unavailable for contact. Although appointment letters were sent, there was no acknowledgment despite multiple follow-ups. This lack of communication hindered the assessment of project portfolios, financing, and their potential impacts on local resources and communities. Without corporate input, the analysis risks missing crucial perspectives on investment practices, regulatory compliance, and community-level consequences, undermining efforts to advocate for equitable and environmentally sustainable development.

After the report was drafted, it was shared with key stakeholders, including government and non-governmental institutions, and representatives from the private sector. However, the response was notably limited, with minimal feedback received. This lack of engagement highlights a broader challenge in fostering dialogue between communities and stakeholders, essential for meaningful collaboration and effective policy implementation. The limited feedback may also reflect the complexities of stakeholder interests and priorities, underscoring the need for ongoing efforts to bridge communication gaps and encourage active participation from all parties involved.

Given these challenges, the study emphasizes the importance of continuous engagement and establishing more robust feedback mechanisms. Such initiatives could facilitate a more inclusive approach to resource management and ensure that community voices are heard in decision-making processes. Ultimately, the goal is to create a sustainable framework that addresses immediate concerns and supports long-term resilience for local communities in the face of external pressures from investment activities.

### 4. Study Methodology

The study team employed both quantitative and qualitative approaches to gather data for the findings and recommendations in the study report and policy brief. The data collection period ran from September to October 2024. The following data collection methods were applied in the study:

#### 4.1 Collection of Secondary Data and Information

The study team conducted a comprehensive literature review to gather secondary data, which involved systematically searching for and analyzing relevant academic articles, policy papers, and case studies related to investment practices and coastal management in Cambodia. Key policy documents reviewed included Cambodia's policies on green growth, the industrial development policy concerning green investments, and sustainable principles in Cambodia. This review was essential for understanding the existing body of knowledge and identifying gaps that the current study could address.

In addition to the literature review, the team analyzed current maps of the study regions, focusing on geographical, ecological, and socioeconomic features that could influence investment activities in the Cfis and CPAs. This spatial analysis helped visualize the distribution of resources and the potential impacts of investments on local communities.

The examination of existing documents and reports involved a comprehensive review of materials on legal mechanisms and policies, regulatory frameworks, and practices concerning investment entities and coastal management. By scrutinizing these documents, the research aimed to understand the legislative landscape governing investment operations and their implications for community rights and environmental sustainability.

The consultant also reviewed documents from the websites of prominent businesses, FIs, and government agencies, including the MoE. This online research provided insights into the commitments and practices of these entities regarding environmental protection and community engagement. It also helped identify public statements or reports relevant to the study's objectives.

All this information was synthesized to provide a robust context and background for the study, ensuring that the data collection process was grounded in a thorough understanding of the regulatory environment and existing challenges. This comprehensive approach not only informed the data analysis but also enhanced the credibility and relevance of the study's findings, ultimately aiming to support local advocacy efforts and promote sustainable practices in the region.

### 4.2 Collection of Primary Data and Information

Primary data and information were gathered using a combination of methods, including a household survey, key informant interviews, focus group discussions, and workshop validation, as outlined below.

Household Survey: A structured questionnaire was developed, incorporating various formats such as multiple-choice questions and rating scales. Four enumerators were recruited and trained to conduct the survey. The target respondents were households within CFis and CPAs that could potentially be affected by investment projects. The sample size was determined using the Yamane sample method, with a 5% margin of error. Respondents were selected through a systematic random sampling method, ensuring the participation of at least 40% women. The survey was conducted through face-to-face interviews, with 254 households participating, including 154 females (61%) (See *Table 1*).

Target	Investment	Influenced		Samplin		
		Locations	Village	Selected	Total	g
			_	household	household	Interval
				S	S	(k value)
Preah Sihanou k province	PreahKTHPreahCompanySihanou(Oil RefinerykProject inprovincePrey Nob –30 ha)		Preak Toal	50	266	6

Table 1: Sample and Sampling Methods

	1						
	Han Kheang (Coconut Planting Project – 47 ha)	Preak Toal Village, Toek Thla Commune, Prey Nob District	Kampon	45	242	F	
	Meas Solong (Tourist Bat Conservation – 307 ha)	No available informatio n	g Chen	45	242	5	
	Eco Beach Developmen t (187 ha)	Boeung Chum Village, Boeung Ta Prom Commune, Prey Nob District	CFi Boeung Chum	45	250	4	
	KP SAN Co., Ltd. (Sand Dredging)	Rithy Ti Mouy Village, Keo Phos Commune, Stung Hav District (in Keo Phos CFi)	Keo Phos CFi	30	150	5	
Koh	SEZ	Chroy Svay CFi		5			
Rong Province	Sand Dredging	Andong Toeuk CPA	Only FGD (8 persons, including 3 women)				

- Key Informant Interviews (KIIs): To gather insights and perspectives from key stakeholders, the study team conducted in-depth interviews with a select group of key informant interviewees knowledgeable about coastal resources and investment companies in coastal areas. Ten interviews were conducted. The institutions chosen for these interviews included:
  - a) The Council for the Development of Cambodia (CDC) to assess their enforcement of investment policy implementation and integration of ESG and HR criteria framework (2 KIIs).
  - b) The Department of Environmental Impact Assessment of the MoE and Provincial Departments to gather information about the current legal tools and the implementation of policies (2 KIIs).
  - c) The MEF to evaluate their enforcement of investment policy implementation and the integration of ESG and HR criteria framework (2 KIIs).

- d) The MAFF, especially the Fisheries Administration, to understand the implementation and practices of laws related to fishery, marine resources, and community fishery (2 KIIs).
- e) Major companies in southwestern provinces, along with FIs and ABC, to evaluate compliance with safeguard or sustainability standards (2 KIIs).
- f) Additionally, there were subnational KIIs from provincial, district, commune, and CFi levels, as shown in *Table 2*.

Informant	Number	Remark
KII with Prey Nob District	01	Governor/Deputy-Governor
KII with Toek Thla Commune	01	Commune Chief
KII with CFi Prey Nob 2	01	CFi Leader
KII with Ou Chrov Commune	01	Commune Chief
KII with Keo Phos CFi	01	CFi Leader
KII with Stung Hav District	01	Governor/Deputy-Governor
KII with Keo Phos Commune	01	Commune Chief
KII with Boueng Ta Prom	01	Commune Chief
Commune		
KII with Boueng Chum CFi	01	CFi Leader
KII with Private Investment	05	Those identified in the
Company		household survey areas.

Table 2: List of sub-national KIIs

- Focus Group Discussions (FGDs): The study team facilitated group discussions with community representatives and members, particularly those from CFis affected by development projects and investments along the coast. Six FGDs were held, with the aim of 40% female participation.
- Validation Workshop: A workshop was organized to gather additional feedback and input from key stakeholders, including community members, companies, the Cambodia Development Council (CDC), the Ministry of Environment (MoE), the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Fisheries Administration (FiA), the Ministry of Economy and Finance (MEF), civil society organizations (CSOs), non-governmental organizations (NGOs), Association of Banks in Cambodia (ABC), and banks such as Agriculture and Rural Development Bank (ARDB) and Prince Bank. Efforts were made to engage relevant corporate representatives in the discussions.



Photo 1: Communities visited during the study Source: Author, 2024

#### 5. Study Findings

#### 5.1 Coastal Area Development Regulations

The 2012 Circular on the Development of Cambodia Coastal Areas has guided this region's sustainable development and economic growth. Coastal reserved land is primarily designated for green spaces, scenic pathways, and vegetation, establishing the boundary between the coastal zone and the adjacent mainland. This land, extending from the coastal line inland, is considered public state property unless legally occupied. The width of the coastal reserved land is established at a minimum of 50 meters from the upper coastal line, although this may vary if public roads already exist along the coast.

Utilization of coastal reserved land differs based on location, such as urban or tourism zones. It may be used in urban areas for small shops, symbolic structures, parking lots, and public facilities. Commercial ports are restricted to existing or potential locations, and any buildings on coastal land must serve public or tourism purposes. Infrastructure developments like bridges to tourist ports and biodiversity museums may be permitted, provided they do not disrupt coastal activities. In less populated, non-urban areas, coastal land may be used for building ports, water tourism sites, or new entertainment areas. These developments must include environmental management plans to ensure safety and minimize risks. Factories, industries, and workshops may also be established, provided they meet technical standards to limit pollution and other disturbances.

Firths, rivers, canals, and water lines connected to the sea are regulated, with reserved land extending at least 20 meters from the highest water level during the rainy season. Public roads must be constructed along these reserved lands to prevent encroachment, and gardens and plant-growing areas are encouraged along these routes. In addition, any island development for residential or tourism purposes must follow master plans approved by the government or relevant ministries. If no master plan exists, detailed directions will be provided, focusing on preserving natural resources, constructing Khmer-style buildings, and creating public spaces. Waste management systems must be established to avoid environmental damage.

The Cambodian government also holds the authority to develop islands for nonresidential purposes, directly or in partnership with the private sector. According to the Circular, all developments must comply with preserving natural resources and biodiversity, and facilities such as ports for tourists and the public must be established.

Water territories, including internal waters rich in maritime resources and biodiversity, must be managed sustainably. Boats and tourist vessels are restricted to authorized areas to ensure safety and preserve biodiversity. Fishing is prohibited in these sensitive areas, except for small-scale family fishing for tourism purposes.

Constructions in internal waters, such as research stations or mining terminals, must be approved by the Royal Government, ensuring navigation paths remain clear.

Private investment in coastal areas must comply with Land-Use Master Plans and regulations, including creating waste management systems. EIAs are required for major developments like factories, ensuring public safety and environmental protection per Cambodian laws and technical standards.

# 5.2 Regulation of Natural Protected Areas

Natural Protected Areas (NPAs) are a key part of the government's strategy for conserving and developing natural resources, as mentioned in the 2023-2028 Circular Strategy on Environment.<sup>1</sup> According to Article 358 of the 2023 Environmental and Natural Resource Code<sup>2</sup>, the MoE or subnational administration is responsible for establishing NPAs in consultation with relevant ministries, institutions, and stakeholders. The designation of NPAs is based on research findings and the area's unique characteristics, such as biodiversity, ecosystems, historical sites, and other factors like geological, economic, social, and environmental significance. The criteria for establishing NPAs include areas home to rare or endangered species, vital ecosystems such as coral reefs and spawning grounds, and sites of historical or cultural importance, ensuring biodiversity protection and sustainable tourism development. This applies to coastal, island, and marine areas per Article 358. In addition, any modifications to NPAs, governed by Article 360, must be made through consultation, considering factors like research, resource management, biodiversity, and land tenure. Detailed maps and stakeholder consultations are required, and natural resource use within NPAs must be clearly defined.

NPAs are divided into four zones: Core Zone, Conservation Zone, Sustainable Use Zone, and Community Zone (Article 364). The Core Zone is strictly protected, with access limited to officials and researchers to conserve endangered species and ecosystems. The Conservation Zone, adjacent to the Core Zone, supports natural resource conservation and scenic areas, and limited resource use is allowed under supervision. The Sustainable Use Zone promotes economic activities that align with conservation efforts, supporting national development and local livelihoods. The Community Zone focuses on local economic and social development, including housing and agriculture, with restrictions on land use requiring MoE approval. Modifications to zone boundaries must be informed by scientific data, including wildlife, biodiversity, traditional knowledge, and compliance with government strategies (Article 364).

<sup>2</sup> https://www.moe.gov.kh/wp-content/uploads/2024/07/Code-on-Environment-and-Natural-Resources.pdf

<sup>&</sup>lt;sup>1</sup> <u>https://www.moe.gov.kh/wp-content/uploads/2023/11/Circular-Stratesy%E2%80%8B-for-Environment-2023-2028-1.pdf</u>

Moreover, Articles 368 and 369 encourage the involvement of local communities, civil society, and the public to manage and protect NPAs. Communities are granted rights to use natural resources per traditional practices in designated zones, following MoE guidelines. Article 370 emphasizes that natural resource use must align with management plans and technical guidelines to ensure sustainability within NPAs.

#### 5.3 Environmental Impact Assessment Regulation

EIA principles in Cambodia mandate that all development or investment projects undergo an assessment approved by the MoE before submission for final approval. *Figure 1* below outlines the current EIA review and approval process in Cambodia. Any licenses, permits, or decisions issued by authorities must comply with the conditions outlined in the EIA reports or environmental protection agreements. If they contradict these conditions, they are deemed null and void. However, EIAs are not required for state development projects approved by the Royal Government of Cambodia or the National Assembly for emergencies related to national security, sovereignty, or disaster management (Article 651). Moreover, all concession agreements granted by the Royal Government of Cambodia must include EIA approval documents.

MoE classifies projects based on environmental and social impacts, requiring a full EIA report, an initial EIA report, or an environmental protection agreement (Article 656). A project owner, therefore, cannot begin construction or operations without an approved EIA report or environmental protection agreement (Article 668). If these approvals are not obtained, the MoE can suspend the project. In addition, approval certificates must be visibly displayed at the worksite entrance.

The EIA process is only valid if it follows the principles of public participation (Article 655). Public stakeholders have the right to report and publish information about any activity or decision that may affect the environment and natural resources (Article 688). They can raise objections, request clarifications, and file complaints regarding environmental concerns through grievance mechanisms. Additionally, the EIA process mandates public participation to ensure stakeholders are aware of potential impacts and can make informed decisions about the projects (Article 690). Comments from public consultations must be recorded, and if project owners reject proposals, clear justifications must be provided.

MoE must ensure that all information from both full and initial EIAs is publicly available, enabling stakeholders and local communities to access accurate data (Article 693). Project owners must publicly share relevant documents, plans, and mitigation measures through their websites. Moreover, stakeholders have the right to report environmental and social concerns and to file complaints with project owners or relevant authorities (Article 697). These authorities must address the issues promptly and inform stakeholders about the resolution. Grievance mechanisms will be used to resolve environmental and natural resource disputesadditionally, Articles 710-713 guarantee the right to access environmental and natural resource information. MoE and relevant subnational administrations must determine procedures for public information disclosure, except for confidential data. Project owners may also request that certain project-related information remain confidential if it concerns private investment operations.



Figure 1: EIA Review and Approval Process in Cambodia

#### 5.4 Private Investment Regulations

In recent years, Cambodia has positioned itself as an attractive destination for private investment, driven by a series of incentives and supportive policies established by the CDC. These incentives aim to foster economic growth, enhance job creation, and stimulate sustainable development across various sectors. According to Article 24 of the Investment Law<sup>3</sup>, priority is granted to projects categorized as Qualified Investment Projects (QIP). QIPs focus on green energy and technologies aimed at climate change adaptation and mitigation and include investments in environmental protection management, biodiversity conservation, and the circular economy.

Additionally, Article 15 of the Sub-Decree on the Implementation of the Law on Investment<sup>4</sup> provides further incentives for QIPs that establish various types of waste treatment infrastructure, such as solid, hazardous, and liquid waste. These projects can benefit from a 150% deduction from their tax base. Furthermore, the Investment Law stipulates that projects receiving a registration certificate must fulfill certain conditions, including obtaining an environmental protection contract or an EIA report approved by the MoE. This framework underscores the Royal Government of Cambodia's commitment to environmental sustainability and the promotion of responsible investment practices.

Other key investment incentives include:

<sup>&</sup>lt;sup>3</sup> https://cdc.gov.kh/wp-content/uploads/2022/04/LOI English-Updated-13Dec21.pdf

<sup>&</sup>lt;sup>4</sup> https://cdc.gov.kh/wp-content/uploads/2023/08/8823-LOI-and-Sub-Decree-ENG-Version.pdf

- 1. **Tax Incentives:** One of the primary attractions for investors is the range of tax incentives offered. Under Article 26-27 of the Law on Investment, qualifying investments may benefit from a profit tax exemption for up to 9 years, depending on the sector and the investment location. This exemption is particularly enticing for manufacturing, agriculture, and tourism industries.
- 2. **Customs Duties Exemptions:** The CDC provides customs duties exemptions on machinery, equipment, and raw materials imports necessary for establishing and operating investment projects. This is detailed in Article 26 of the Investment Law, which encourages investors to bring in essential tools without the burden of additional costs.
- 3. Land Lease and Ownership: Article 21 of the Investment Law stipulates that foreign investors can lease land for up to 50 years, with the possibility of extending the lease for an additional 50 years.<sup>5</sup> This long-term stability is crucial for investors looking to establish significant operations in Cambodia.
- 4. **Sector-Specific Incentives:** The CDC also outlines incentives tailored to specific sectors. For instance, investments in the agricultural sector may benefit from additional support as per relevant sub-decrees that promote agricultural development, including access to funding and technology transfer initiatives.
- 5. **Investment Promotion and Protection:** The CDC's Sub-Decree on the Organization and Functioning establishes the framework for promoting and protecting investments. The CDC acts as a one-stop service provider, facilitating the approval process for investment projects and ensuring investors receive the necessary support to navigate regulatory requirements.
- 6. **Special Economic Zones (SEZs)**: The establishment of SEZs, as encouraged by the Law on Special Economic Zones<sup>6</sup>, provides further incentives, such as additional tax breaks and streamlined regulatory processes, to attract investment in targeted areas. SEZs are designed to boost export-oriented industries and create job opportunities. *See Chapter 4: Incentives for Special Economic Zone of the Law on Special Economic Zones*.
- 7. **Labor Regulations:** The Cambodian government has also made efforts to create a favorable labor environment, as outlined in the Labor Law, including provisions for flexible labor practices and establishing vocational training programs to ensure a skilled workforce that meets industry needs.

The investment incentives approved by the CDC reflect the government's commitment to creating a conducive environment for private investments. By offering tax exemptions, customs duty relief, long-term land leases, and sector-specific support, Cambodia actively encourages local and foreign investors to contribute to its economic development. The alignment of these incentives with the regulatory framework, mainly through key articles in the Investment Law and associated sub-decrees, underscores a strategic approach to attracting sustainable investment that benefits the country's growth trajectory.

<sup>&</sup>lt;sup>5</sup> <u>https://faolex.fao.org/docs/pdf/cam204996.pdf</u> (p. 66)

<sup>&</sup>lt;sup>6</sup> <u>https://cdc.gov.kh/wp-content/uploads/2022/05/SUB-DECREE-148-ANKR.BK-ON-THE-ESTABLISHMENT-AND-MANAGEMENT-OF-THE-SPECIAL-ECONOMIC-ZONE-FINAL\_060314-.pdf</u>

#### 5.5 Physical Resources in Coastal Areas

#### 5.5.1 Cambodia's Coastal Climate

According to the Climate Change Knowledge Portal<sup>7</sup>, Cambodia's climate is tropical, with high temperatures and two distinct seasons: a monsoon-driven rainy season from May to October and a dry season from November to April. The rainy season is marked by the arrival of the summer monsoon, which brings the heaviest rainfall to the southeast and northwest regions. The average annual rainfall is typically 1,400-2,000 mm, with higher amounts in coastal and highland areas, while inland regions receive less. Inter-annual variations in climate result from the El Niño Southern Oscillation, which influences the nature of the monsoons in the region.

Temperature trends indicate a rise, with an approximate increase of 0.18°C per decade since the 1960s. The most significant temperature increases have been noted during the dry season (from November to April), showing increases of 0.20°C to 0.23°C per decade. The number of 'hot days' in the country has increased by as much as 46 days per year over the last century. While precipitation levels have not significantly changed over the 20<sup>th</sup> century, they are linked to the El Niño Southern Oscillation phenomenon. Years of strong El Niño events have been associated with moderate to severe drought conditions.

Climate change poses significant risks to water infrastructure, leading to concerns about water quality and delayed access to safe water and sanitation. Frequent floods increase the risk of water treatment and supply infrastructure damage, leading to service disruptions. Low-lying coastal cities are particularly susceptible to severe flooding. Rainfall variability caused by climate change can significantly affect urban drainage systems, increasing overflows of combined wastewater and stormwater. As the frequency of floods and droughts rises, the risks of water pollution and pathogenic contamination also increase. Deteriorating water quality and pollution negatively impact health and well-being and delay access to safe water and sanitation (World Bank, 2023). Similarly, greater focus should be placed on the impacts of climate change on water security (both quantity and quality), water management, and especially the combined effects of climate change and inadequate planning on coastal ecosystems and infrastructure (*p. 79*).

# 5.5.2 Water Quality in Coastal Areas

The report provides data on water quality in 12 Preks<sup>8</sup> flowing into coastal areas from 2004 to 2006. It is a part of the National State of Oceans and Coasts 2018: Blue Economy Growth in Cambodia. The average dissolved oxygen concentration in coastal areas is about 5 mg/l, with the lowest levels in Prek Kaoh Touch and the highest in western streams, specifically Prek Ta Taj. Biochemical Oxygen Demand (BOD) measures the amount of dissolved oxygen organisms require to break down

<sup>&</sup>lt;sup>7</sup> <u>https://climateknowledgeportal.worldbank.org/country/cambodia/climate-data-historical</u>

<sup>&</sup>lt;sup>8</sup> They are valleys or canals that are waterways from rivers to lakes or from other places to rivers, seas.

organic material aerobically, and it is typically below 1 mg/l. Between 2004 and 2005, BOD values reached the worst levels, exceeding 1mg/L in Prek Khdat and partly in Prek Kampong Bay. Water quality, however, improved between 2005 and 2006, and the BOD in all streams in the coastal area declined to below 1 mg/l.

Total nitrogen concentrations were highest in the eastern areas, with greater rice production and higher density of humans and livestock. Levels exceeding 0.4 mg/l were recorded in Prek Kbal Romeas, Prek Kampong Bay, Prek Kaoh Touch, Prek Khdat, Trapang Ropov, Prek Kampong Smach, Prek Toek Sap, and Prek Andong Toek. In contrast, Prek Kaoh Touch had a lower total nitrogen concentration of approximately 0.07 mg/l between 2005 and 2006.

Total phosphorus concentrations were highest in Prek Kampong Som and Prek Trapang Ropov between 2005 and 2006. Low phosphorous levels were recorded in Prek Trapeang Roung, Prek Ta Taj, and Prek Kaoh Pao in the western area. Only Prek Kampong Som's total phosphorus values increased between 2005 and 2006. Except for Prek Kampong Som, the total phosphorus concentrations in coastal streams significantly decreased to approximately 0.01 mg/l, reflecting better freshwater quality in the coastal area (PEMSEA and MoE, 2019, pp. 97-100).

#### 5.6 Biological Resources in Coastal Areas

#### **5.6.1 Key Coastal Ecological Characteristics**

Cambodia's coastal ecosystems consist of three groups: coastal watershed forests, mangrove and rear mangrove forests, and near coastal marine waters.<sup>9</sup> These ecosystems are crucial for conserving biodiversity and have economic significance for Cambodia and other countries around the Gulf of Thailand.

Coastal watershed forests, located in the catchments of the Metock, Kuot, Russei Chrum, Kep, Sala Muntum, Trapeang Rung, Piphot, Srae Ambel, and Veal Ring rivers, are extensive and are the least disturbed in the mainland. They protect the soil and regulate water and nutrient flow near coastal waters.

Mangrove and rear mangrove forests separate land from the sea and have unique ecological characteristics. They are situated in the intertidal zone and are inundated twice daily by tides. The marine zone of Cambodia's coastline consists of sandy, muddy, and rocky shores, sea-grass flats, and coral reefs. These areas are likely to harbor species such as dugongs, sea turtles, and dolphins, which have become increasingly rare in other parts of the Gulf.

<sup>&</sup>lt;sup>9</sup> https://wepa-db.net/archive/policies/state/cambodia/seaarea3 2.htm







Dugongs (*Halophila ovalis*), recently found in Kep in August 2024<sup>10</sup> Photo 2: Typical Cambodian coastal ecosystem

# 5.6.2 Coastal Mangrove Forests

Mangrove forests are among Cambodia's most unique and vital coastal resources, though the country's coastline supports a variety of other valuable ecosystems. Cambodia has approximately 83,700 hectares of mangrove forest.<sup>11</sup> According to the FiA's 2010 estimates, Cambodia's mangrove forests covered 78,405 hectares (ha), with specific areas being Kampot (1,900 ha), Kep (1,005 ha), Preah Sihanouk (13,500 ha), and Koh Kong (62,000 ha) (Veettil & Quang, 2019). Cambodia is home

<sup>&</sup>lt;sup>10</sup> <u>https://web.facebook.com/volunteer.marine.conservation.cambodia</u>

<sup>&</sup>lt;sup>11</sup> https://opendevelopmentcambodia.net/km/topics/marine-and-coastal-areas/

to the 10<sup>th</sup> largest mangrove ecosystem in Asia. However, estimates of total mangrove coverage vary, with Rizvi and Singer (2011) reporting 43,000 ha and the Food and Agriculture Organization (FAO) in 2005 estimating 69,200 ha. To date, 37 true mangrove species have been identified in Cambodia, the most common being *Rhizophora apiculata* and *Nypa fruticans*. Other notable species include *Bruguiera gymnorrhiza*, *B. sexangula*, *Ceriops tagal*, *Lumnitzera littorea*, *Heritiera littoralis*, *Xylocarpus granatum*, *Hibiscus tiliaceus*, *Phoenix paludosa*, *Acrostichum speciosum*, *Aegialitis* sp., and *Acanthus* sp. PEMSEA and MoE (2019, p. 101) records 74 mangrove species.

Mangrove forests, located at the interface between land and sea, are vital ecosystems that benefit both nature and people. They offer natural protection from coastal erosion and storm surges and capture and store significant amounts of "blue carbon," making them a valuable nature-based solution for combating climate change (Muñoz, et al., 2024).<sup>12</sup> Additionally, they help improve water quality and provide essential habitats and shelter for diverse wildlife species.

These rich saltwater ecosystems are crucial for maintaining coastal biodiversity, providing food, shelter, and breeding grounds for various species, including fish, birds, reptiles, mammals, and crustaceans. In addition to supporting local wildlife, mangrove ecosystems contribute to coastal communities' livelihoods and food security. Small-scale fishers rely on species like fish, shrimp, prawns, and crabs for their subsistence and income. These marine resources are central to Cambodia's coastal cuisine and help local families afford necessities like education and healthcare.

Beyond their ecological contributions, Cambodia's coastal areas, including mangrove forests, beaches, and islands, have become increasingly important for tourism. These natural landscapes attract visitors, stimulating local economies and creating job opportunities through tourism-related services. The dual role of coastal ecosystems in supporting fisheries and tourism highlights their multifaceted value to Cambodia, emphasizing the need for sustainable management and conservation to preserve these resources for future generations. Despite their ecological and economic importance, mangrove forests in Cambodia have faced significant degradation.

Between 1989 and 2017, Cambodia's four coastal provinces—Koh Kong, Kampot, Preah Sihanouk, and Kep—experienced an estimated 42%<sup>13</sup> loss of mangrove forests, equivalent to 36,810 hectares (approximately 1,415 ha/year). The breakdown of mangrove loss by province is as follows:

<sup>&</sup>lt;sup>12</sup> <u>https://www.fauna-flora.org/wp-content/uploads/2024/04/Mangrove-Biodiversity-Survey-</u> <u>Report.pdf?\_gl=1\*17uf30j\*\_up\*MQ..\*\_ga\*MTQxNzc5OTI0NC4xNzl2NDcyODM3\*\_ga\_G1PKXP4Q77\*MTcyNjQ3MjgzNC4xLjAuMTcyNjQ3MjgzNC4wLjAuMA..\*\_ga\_KJVKWBSL06\*MTcyNjQ3MjgzNS4xLjAuMTcyNjQ3MjgzNS4wLjAuMA..</u>

<sup>&</sup>lt;sup>13</sup> Using Landsat multispectral satellite data, the overall loss of mangrove forests between 1989 and 2017 has been assessed as 42% (1415 ha/year) in the four coastal provinces of Cambodia (Koh Kong, Kampot, Preah Sihanoukville, and Kep). <u>https://storymaps.arcgis.com/stories/7949763f7c804cc88100d4237badd777</u>

- Koh Kong: 39% loss (26,437 ha)
- Kampot: 45% loss (1,986 ha)
- Preah Sihanouk: 52% loss (8,127 ha)
- Kep: 34% loss (260 ha)

Koh Kong saw the highest absolute loss of over 26,000 hectares, with significant clearing occurring in the late 1990s. Preah Sihanouk province faced the most drastic reduction in percentage loss, losing 52% of its mangrove forests during this period (Veettil & Quang, 2019).

The 2018 State of Oceans and Coasts report recorded a total loss of 4,835 hectares of mangrove forests between 1993 and 1997, with significant reductions in the Botum Sakor, Smach Meanchey, and Srae Ambel districts. These reductions ranged from 3% to 20% of the 1993 mangrove coverage (PEMSEA and MoE, 2019, p. 102).

Currently, deforestation driven primarily by the demand for private investment has led to a decline in mangrove coverage. However, there is limited data available on recent trends in forest destruction, and the extent of the problem remains unclear. This lack of information hinders efforts to address and reverse the damage caused to these critical ecosystems.

In 2013, Cambodia joined the Mangroves for the Future (MFF) initiative, which aimed to enhance investments in mangrove ecosystems to promote sustainable development. The MFF initiative designated Koh Kong as the priority area for mangrove restoration. Since 2016, various projects have been implemented, including mangrove reforestation, promoting sustainable farming practices, and reducing mangrove logging (Su, 2021).

# 5.6.3 Coastal Biodiversity

Due to the lack of specific biological data for the Botum Sakor, Srae Ambel, Prey Nob, and Stung Hav districts, findings from the 2023 biodiversity survey<sup>14</sup> conducted in the Peam Krasop Wildlife Sanctuary (PKWS) and Koh Kapik Ramsar Site (KKRS)- conducted by Fauna and Flora International (FFI), Fishing Cat Ecological Enterprise (FCEE), and the MoE- serve as a baseline for understanding biodiversity in similar coastal habitats. While these findings may not fully capture species distribution, they provide a broad ecological overview. This survey focused on bats, botany, invertebrates, herpetology, ornithology, mammals, and juvenile fish.

**Bats:** In Koh Kong province, 27 bat species were recorded, including three listed by the International Union for Conservation of Nature (IUCN) (2022) as either Near Threatened or Data Deficient:

- *Pteropus hypomelanus* (Near Threatened)
- Murina walstoni (Data Deficient)

<sup>&</sup>lt;sup>14</sup> <u>https://www.fauna-flora.org/wp-content/uploads/2024/04/Mangrove-Biodiversity-Survey-Report.pdf</u>

• *Kerivoula picta* (Near Threatened).

*P. hypomelanus* is also classified as nationally rare under Cambodian law. During the field survey, 113 bats from nine species across five families were captured and released. Leaf-nosed bats (*Hipposideridae*) comprised 50% of captures, followed by frugivorous bats (*Pteropodidae*, 44%). The remaining 6% of captures belonged to sheath-tailed (*Emballonuridae*), horseshoe (*Rhinolophidae*), and evening (*Vespertilionidae*) bats, representing four species (Muñoz, et al., 2024).

**Mangrove plant diversity:** Approximately 50 mangrove plant species have been identified. A recent study by Lo, Quoi, and Visal (2018) documented 26 mangrove species in peat soil mangroves of Botum Sakor National Park, while Khou (2018) recorded 35 species in Preah Sihanouk Province. A broader guide on Southeast Asian mangroves by Giesen, Wulffraat, M., and Scholten (2006) reports 35 species in Cambodia's mangrove forests, while the UNEP (2004) recorded 50 species in the country's mangrove ecosystems. This current study identified 62 species, including true mangroves and associated plants like shrubs and vines.

**Invertebrates:** In the PKWS mangrove forest, researchers collected 1,235 individual arthropods, identifying 352 species or morphospecies across 120 families and 17 orders. The Shannon-Weiner diversity index was calculated to be 4.61, and the Pielou's evenness index was 0.79. Sawflies, wasps, and bees were the most abundant, comprising 300 individuals, while true bugs had the highest species count, totaling 62 species (Muñoz, et al., 2024, p. 91).

**Herpetofauna (Amphibians and reptiles):** Herpetological surveys identified 12 amphibians and 5 reptiles, totaling 17 species. Only two species, the brackish frog (*Fejervarya moodiei*) and the dog-faced water snake (*Cerberus schneiderii*), are considered mangrove specialists (Muñoz, et al., 2024, p. 142).

**Birds:** The ornithological survey recorded 157 bird species, including 15 listed as Near Threatened to Endangered on the IUCN Red List, highlighting the importance of PKWS and KKRS for bird conservation. The 2022 camera trap survey documented 35 bird species, notably including Chinese egrets observed at five sites within mangrove habitats and the Vulnerable great hornbill (*Buceros bicornis*), with two individuals foraging for small reptiles in evergreen forests (Muñoz, et al., 2024, p. 166).

**Mammals:** The survey identified 23 mammal species, with two additional species recorded by the FCEE between January and July 2022, including another Endangered species. Of the 23 species, 9 were classified as Threatened: 1 Critically Endangered, 3 Endangered, and 5 Vulnerable. Among the species observed, the Vulnerable sambar deer (*Rusa unicolor*) was the only large mammal. Two top predators were recorded: the Endangered dhole (*Cuon alpinus*) in evergreen forests and the Vulnerable fishing cat (*Prionailurus viverrinus*) in mangrove forests.

Most species were medium-sized, with six small mammal species (rodents and shrews) also identified.

**Juvenile fish:** The juvenile fish survey, conducted from June 3 to June 7, 2023, collected 3,798 fish larvae and juveniles using plankton and seine nets. These represented 74 species, 53 genera, 31 families, and 15 orders from the Peam Krasop Wildlife Sanctuary. Eight orders made up 99.51% of the total abundance, with Perciformes (79.02%) being the most prevalent.

Ten families accounted for 95.47% of the abundance, including:

- Ambassidae
- Leiognathidae
- Gobiidae
- Carangidae.

Common species included *Ambassis vachellii, Leiognathus equula, Neostethus sp.,* and *Toxotes jaculatrix*. The Spotted Seahorse (*Hippocampus kuda*) was noted for its IUCN Threatened status (Muñoz, et al., 2024, p. 225).



Dog-faced water snake CerberusSpotted Seahorse Hippocampusschneiderii is common in mangroves andkuda in Peam Krasop Wildlifemudflats (p.132)Sanctuary (p.225)Photo 3: Key species in coastal areas

Species with high economic value as juveniles and adults (caught at sea or in mangrove estuaries) include (Muñoz, et al., 2024):

- Epinephelus coioides
- Moolgarda cunnesius
- Nibea soldado
- Herklotsichthys dispilonotus
- Carangoides praeustus
- Scomberoides lysan
- Lutjanus russellii
- Scatophagus argus
- Siganus guttatus
- Sillago aeolus/Sillago sihama
- Eleutheronema tetradactylum
- Sardinella albella
- Sphyraena putnamae

This highlights the role of mangrove forests in coastal waters as crucial feeding and nursery grounds for many estuarine and marine fish species, including those with significant commercial importance and those listed as threatened on the IUCN Red List. It underscores the importance of protecting mangrove forests to conserve fish biodiversity and support local community livelihoods in the region and beyond.

### 5.6.4 Coastal Coral Reefs

Coral reefs are vital marine habitats along Cambodia's mainland coast and islands, supporting diverse fish and marine organisms. Cambodia's total coral reef area is estimated at 2,882.49 hectares (Fisheries Administration, 2022)(*see Table 3*).

The province of Preah Sihanouk has the largest coral reef habitat due to extensive fringing reefs in Koh Rong Marine National Park, offshore islands, and reef bank features. In contrast, Kep has the smallest coral reef habitat, which is expected given the small size of the province and limited islands in the Koh Tonsay archipelago. Cambodian waters are home to approximately 70 coral species, with at least 70 species documented around Koh Tang in Sihanoukville. Coral habitats also support various fish species (PEMSEA and MoE, 2019, pp. 103-104). While most Cambodian islands have abundant coral reefs, detailed data on the specific species and their quantities is limited.

Province	Coral reef habitats (ha)				
Preah Sihanouk	1,627.23				
Kampot	611.23				
Koh Kong	576.36				
Кер	67.38				

Table 3: Coral reef habitats in four coastal provinces

Source: Fisheries Administration, (2022, p. 15)

According to past studies, Cambodian coral reefs are generally in fair to good condition, with coral cover ranging from 23.1% in the Sdach Island group of Koh Kong to 58.1% in the Takev Island group of Sihanoukville. Major ongoing threats to these reefs include overfishing, using dynamite and other illegal fishing methods, coral harvesting for trade, and declining water quality (PEMSEA and MoE, 2019).

# 5.6.5 Coastal Seagrass

Seagrass in Cambodia can be classified into two types: extensive meadows along the mainland and interlinked paths with coral reefs around islands (PEMSEA and MoE, 2019). These shallow areas serve as habitats for juvenile fish and provide nursery functions for various fish species. Although the study area has not been previously recognized as a seagrass habitat, the broader regional landscape supports such ecosystems.

In 2021-2022, the Fisheries Administration conducted a mapping survey at 11 locations across Koh Kong and Preah Sihanouk provinces, covering 2,277 hectares (Fisheries Administration, 2022) (see *Table 4* below).

The survey team mapped the largest seagrass habitat in Chrouy Pros Bay, Koh Kong, totaling 1,485.38 hectares. This large bay is sheltered from strong winds and waves by Koh Kong Krao island. It contains three distinct seagrass habitats:

- A large meadow adjacent to the Peam Krasop Wildlife Sanctuary
- A smaller meadow south of the bay near Prek Ksach village
- Smaller patches along the eastern flank of Koh Kong Krao.

The second-largest seagrass habitat was identified in Steung Hav, Preah Sihanouk, covering 610 hectares on the eastern side of Kampong Som Bay. This shallow area provides an ideal habitat for seagrass species. Seagrass habitat in Prey Nob district, on the border with Preah Sihanouk and Kampot, totaled 98 hectares.

Two major seagrass meadows were identified in the Koh Ta Kiev Archipelago, totaling 98 hectares. The seagrass meadow at Chrouy Pros was predominately monospecific, primarily consisting primarily of *H. pinifolia*, with some occurrences of smaller pioneering species. The seagrass areas mapped in the two provinces were relatively small, with two small patches found in sheltered bays on the outer island of Koh Tang, two patches in Ream National Park, and another off the island of Koh Toteong.

Table	4:	Total	areas	of	seagrass	meadow	in	Koh	Kong	and	Preah	Sihanouk
provin	ces	5										

Province	Site	Seagrass meadow size (ha)
Koh Kong	Chrouy Bros Bay	1,338
	Koh Kong Krao	45.38
	Preak Ksach	102

	Koh Toteong	0.48
	Koh Sdach Mainland South	11
Preah	Steung Hav	610
Sihanouk	Koh Bong	50.6
	Koh Ta Kiev	64
	Koh Tang	9
	Prey Nub	98
	Koh Thmei (Koh Thmor Tom	4.98
	combined)	

Source: Fisheries Administration (2022, p. 11)

According to the 2023 Annual Report from the Provincial Department of Agriculture, Forestry, and Fisheries, Preah Sihanouk Province has 164 hectares of seagrass areas<sup>15</sup>, while there are 606 hectares of seagrass in Koh Kong province<sup>16</sup>. Cambodia's seagrass beds are vulnerable to water quality degradation due to land-based pollution and destructive fishing practices. The water quality affects seagrass due to illegal logging, increased fertilizer and pesticide use in coastal agricultural areas, domestic and industrial wastewater discharge, and other human activities.



Photo 4: H. pinifolia found in Cambodia<sup>17&18</sup>

#### 5.6.6 Marine Species

According to the State of Oceans and Coasts 2018,<sup>19</sup> Cambodian coastal waters are rich in biodiversity, with significant aquatic resources and numerous endangered marine species, such as green turtles, dolphins, sharks, sea turtles, rare tortoises, and dugongs. Approximately 525 marine fish species inhabit Cambodia's seawater, with a total stock estimated at 50,000 metric tons. However, the exact number of reef fish species and invertebrates is unknown.

<sup>&</sup>lt;sup>15</sup> Per. Communication in October 2024

<sup>&</sup>lt;sup>16</sup> Per. Communication in October 2024

<sup>&</sup>lt;sup>17</sup> <u>https://marineconservationcambodia.org/2020/12/01/seagrass-conservation-project/</u>

<sup>&</sup>lt;sup>18</sup> <u>https://endangeredwild.life/biodiversity-projects/cambodian-seagrass/</u>

<sup>&</sup>lt;sup>19</sup> <u>https://www.pemsea.org/sites/default/files/2023-</u>

<sup>12/</sup>NSOC%20Cambodia%202018%20%28FINAL%29%2009092020.pdf
Other marine species include 20 types of marine crabs, 42 species of marine gastropods, 24 species of marine bivalves, and 11 species of marine mammals. Marine mammals such as dugongs and marine dolphins are considered endangered. Dugong populations have been recorded in Preah Sihanouk province and Kampot Bay. Other cetaceans found in Cambodia's coastal waters include the Indo-Pacific humpback dolphin, common dolphin, bottlenose dolphin, spinner dolphin, and finless porpoise. Other marine species, like the green turtle and hawksbill turtle, are also considered endangered. Moreover, valuable reef fish species like sweetlips, snapper, barramundi cod, grouper, hump-head wrasse, bumphead parrotfish, and various parrotfish are targeted for collection. These species are raised in cages along the coast and sold live to local restaurants and international markets when they reach commercial sizes.

# 5.6.7 Coastal Resource Degradation

Coastal **forest areas** are being converted for various purposes, including agriculture, agro-industry expansion, infrastructure development, and the increasing demand for food and housing. The key drivers of biodiversity loss and habitat destruction are land concessions, illegal land use, and encroachment. Additionally, improper agricultural practices, such as the misuse of chemicals, lead to soil loss, reduced agricultural yields, and an increased reliance on fertilizers and pesticides. These practices often result in clearing fertile forest areas nearby, further affecting coastal biodiversity and habitats (PEMSEA and MoE, 2019).

Cambodia's **coral reefs and seagrass** face threats from unsustainable fishing practices, erosion, sedimentation, waste dumping, coastal development, rising sea temperatures, and climate change. Anthropogenic impacts include sedimentation, pollution, overfishing, and limited coral breakage due to anchors and fishing gear. Sedimentation from land run-off seriously threatens the reefs, hampering their recovery from mass-bleaching events. Addressing sedimentation from both islands and mainland Cambodia is crucial for reef survival. While some fish families like Butterflyfish and Parrotfish are relatively abundant, predatory fish families like Groupers and Snappers are declining in numbers. Commercially valuable invertebrates, such as lobsters and sea cucumbers, are either sparse or non-existent at most reef sites. These findings underscore the vulnerability of key reef fish families to continued fishing and warrant the establishment of a no-take Marine Protected Area (MPA).

## 5.6.8 Threats to Cambodia's Coastal Environment

The State of Oceans and Coasts 2018 highlights the threats that urbanization, industrialization, and commercial agriculture pose to coastal water quality, ecosystems, and fishery habitats. Activities like dredging, discharge of untreated waste, and heavy construction degrade coastal water quality and damage fragile ecosystems. They lead to water pollution, eutrophication, public health deterioration, and declining nearshore fisheries.

The government's designation of Preah Sihanouk province as an economic and industrial zone aims to drive economic growth. However, this initiative has also led to significant environmental challenges, particularly waste management. As population growth and consumption increase, waste disposal has become a pressing issue, threatening the fragile marine ecosystems critical to Cambodia's coastal economy.

**Industrial waste** from the rapidly expanding industrial zones has not been adequately managed, with untreated wastewater and pollutants often discharged directly into the sea. This pollution threatens marine flora and fauna, degrades seawater quality, and damages marine fisheries, which support millions of rural households. Moreover, the degradation of coastal recreational areas due to waste pollution from hotels, restaurants, and other businesses raises concerns about the sustainability of tourism, a key driver of the local economy.

Marine **solid waste**, including plastic bottles, bags, food packaging, and fishing gear, has significant direct and indirect impacts on aquatic wildlife, ecosystems, tourism, and fisheries. For example, fishing nets smother corals, causing their deaths. Plastic waste entering the sea breaks down into suspended microplastics, which fish, invertebrates, and plankton readily ingest. Scientific evidence shows that these microplastics can transport harmful chemicals through the environment, becoming more concentrated in larger, predatory marine species (PEMSEA and MoE, 2019, p. 119).

**Agricultural waste**, particularly residues from pesticides and chemical fertilizers, further exacerbates pollution. Cambodia's increasing use of these chemicals, particularly in rice and vegetable cultivation, has raised concerns about water quality and ecosystem health. With fertilizer use rising significantly, from 10 kilograms per hectare in 2005 to 33 kilograms in 2018, and the use of poorly regulated pesticides growing, the situation threatens not only marine ecosystems but also the safety of farmers and the quality of food produced (ADB, 2021). Proper regulation and the safe use of pesticides are critical to balancing agricultural productivity with environmental sustainability.

**Offshore development** along Cambodia's coastal estuaries compounds these environmental risks. The environmental impacts of these developments can be categorized into the physical presence of infrastructure, operational discharges (solid and liquid waste), and accidental spills. These concerns highlight the degradation of marine resources and threaten the economic activities of local populations who depend on fishing and coastal tourism (ADB, 2021; PEMSEA and MoE, 2019).

**Illegal fishing practices**, such as the use of dynamite, poisonous substances, and illegal gear, severely damage marine environments. These destructive methods not only kill fish but also devastate entire ecosystems, diminishing the long-term

viability of marine resources and threatening the livelihoods of coastal communities.

**Overfishing** is further straining marine resources. Fish stocks are being depleted at rates exceeding the biological capacity for replenishment. Certain fishing methods also damage the seafloor and habitats where many fish and other benthic animals reside. These methods are known for catching large amounts of bycatch, such as fish, sea turtles, seabirds, and marine mammals, which are unintentionally caught and often incidentally killed. Bycatch can be 90% of a trawl's total catch, further contributing to marine biodiversity loss (PEMSEA and MoE, 2019, p. 117). Bottom trawling, the most destructive practice, uses a large net to scoop up everything in its path, causing significant damage to seafloor ecosystems. Blast fishing, also known as dynamite fishing, is the illegal practice of using explosives to stun or kill schools of fish for easy collection, often destroying the underlying habitats that support the fish and killing many other organisms.



Domestic solid waste and wastewater

**Coastal residencies** 



Spaces already cleared and occupied for private investment in coastal areas.



Rice farming in coastal areas



Special Economic Zone in a coastal area

The State of Oceans and Coasts 2018<sup>20</sup> highlights the degradation of the marine environment and the depletion of fish habitats, such as mangroves and seagrass. This deterioration is primarily due to land encroachment for agricultural activities, fuelwood and charcoal production, seaport expansion, salt and shrimp farming, coastal development, human settlement, and population growth and poverty (p. 46). In addition, the **lack of recent assessments of coastal and marine habitats, islands, and marine water quality** significantly stresses coastal and marine ecosystems and biodiversity. Regular monitoring of the Royal Decree on protected areas, along with other existing regulations and the status of buffer zones, is crucial. A more effective management system for fish sanctuaries and MPAs is also necessary.

**Existing laws are poorly enforced**, leading to uncontrolled development, pollution, and illegal activities. Technical constraints, inadequate human and financial resources, a lack of patrolling and monitoring equipment, and insufficient collaboration among stakeholders exacerbate the situation.

Moreover, **poverty and the lack of alternative livelihoods** push coastal communities toward unsustainable resource extraction, including mangrove deforestation, overfishing, and illegal land conversion. Additionally, untreated domestic waste is discharged directly into coastal waters, harming fish populations and human health (PEMSEA and MoE, 2019, p. 46).

## The negative influences of Chinese investments in coastal areas are evident.

Using Preah Sihanouk province as a case study, Po & Heng's 2019 analysis notes that despite the economic benefits, Chinese investments have significantly negatively impacted Cambodia, particularly in four areas: political, socio-cultural, environmental, and socio-economic. While these investments provide advantages, they benefit a small group of individuals, such as high-ranking government officials and elites, while ordinary Cambodians bear the negative consequences. This paper focuses primarily on environmental challenges rather than political or socio-cultural issues. Many Chinese nationals in Cambodia, especially in Preah Sihanouk province, have shown little concern for environmental protection, leading to worsening sanitation and waste management. Many Cambodians, therefore, perceive Chinese immigrants as engaging in environmentally harmful practices.

Chinese-operated casinos, power plants, and offshore oil platforms have contributed to environmental degradation by discharging pollution from factories and construction sites into the sea. Poor standards at Chinese-run casinos and high-rise construction projects have also exacerbated pollution levels. Moreover, Chinese investment in resort development projects seriously threatens forests and biodiversity. A prime example is the Golden Silver Golf Resort in Preah Sihanouk

<sup>&</sup>lt;sup>20</sup> <u>https://www.pemsea.org/sites/default/files/2023-</u> 12/NSOC%20Cambodia%202018%20%28FINAL%29%2009092020.pdf

province, spanning 3,300 hectares and is projected to cost around \$5 billion over 20 years. It has raised significant environmental concerns, mainly deforestation and removing valuable tree species like Siamese rosewood, reducing Cambodia's climate resilience and increasing its vulnerability to natural disasters.

# 5.7 Socio-Economic Profiles in Coastal Areas

According to the 2023 Commune Database (CDB), the combined population of Preah Sihanouk and Koh Kong provinces is 86,745 families, totaling 380,219 people. Among these, 14,112 families are headed by women. Preah Sihanouk province has a larger population than Koh Kong. Srae Ambel and Botum Sakor districts have 10,276 and 5,684 families, respectively, with 1,793 and 1,474 female-headed families. Meanwhile, Prey Nob and Stung Hav districts have 25,368 and 4,031 families, including 4,230 and 611 female-headed families (see *Figure 2* for details).



Figure 2: Socio-economic profiles of the studied provinces and districts Source: CDB (2023)

# 5.7.1 Community-Based Groups (CBGs)

This report highlights three types of CBGs: community forestry (CFs), community fisheries (CFis), and community protected areas (CPAs). Other CBGs, such as community-based ecotourism (CBET) and irrigation, have limited data. In Koh Kong province, there are 6 CFs, 11 CFis, and 18 CPAs, covering a total area of 75,450

hectares and involving 12,199 families as community members. In contrast, Preah Sihanouk province has 2 CFs, 13 CFis, and 2 CPAs, spanning 28,573 hectares and including 5,145 community members.

Breaking this down by districts, Botum Sakor has 1 CF, 4 CFis, and 2 CPAs, covering an area of 28,850 hectares and engaging 3,955 community members. Srae Ambel, on the other hand, has 3 CFs, 4 CFis, and 6 CPAs, with a total area of 19,920 hectares and 4,193 members. In Preah Sihanouk province, Prey Nob district has no CFs but has 6 CFis and 2 CPAs, covering a total area of 9,578 hectares and involving 3,611 families. Stung Hav has no CFs and CPAs but has 4 CFis, which cover 6,612 hectares and engage 486 families (*Table 5*).

Notably, many families in these provinces are actively involved in CBGs. In Koh Kong, 47% of families in the two study districts are members. This figure rises to 56% in Preah Sihanouk province. In the Botum Sakor district, 70% of families participate in CBGs, compared to 41% in Srae Ambel, 14% in Prey Nob, and 12% in Stung Hav (*Table 6*).

By Province	К	Koh Kong			
			Siha	inouk	
Number of CFs		6		2	
CF Area (ha)		5,749	1,126		
CF Family Members		327			
Number of CFis		11		13	
CFi Area (ha)		48,253	23	,488	
CFi Family Members		4,783	3,	982	
Number of CPAs		18		2	
CPA Area (ha)		21,448	3,959		
CPA Family Members		5,768	836		
By Districts	Botum	Srae Ambel	Prey	Stung	
	Sakor		Nob	Hav	
Number of CFs	1	3	0	0	
CF Area (ha)	1,590	3,664	0	0	
CF Family Members	533	635	0	0	
Number of CFis	4	4	6	4	
CFi Area (ha)	22,959	13,522	5,619	6,612	
CFi Family Members	2,098	1,961	2,775	486	
Number of CPAs	2	6	2	0	
CPA Area (ha)	4,301	2,734	3,959	0	
CPA Family Members	1,324 1,597		836	0	
Source: CDB (2023)					

Table 5: Numbers of community-based groups, areas, and members

Table 6: Community-based groups as compared with provincial data

By Province	Koh Kong	Preah Sihanouk
<b>Total Families</b>	34,344	52,401

Percentage of family as	47		56	
Community Members				
By District	Botum	Srae	Prey Nob	Stung Hav
	Sakor	Ambel		
Total Families	5,684	10,276	25,368	4,031
Percentage of family as	70	41	14	12
Community Members				
Source: CDB (2023)				

## 5.7.2 Results from the Household Survey

The survey interviewed 254 individuals, with 39% identifying as male and 61% as female, evenly distributed between Koh Kong and Preah Sihanouk provinces. 90% of the respondents were originally from the studied districts. Regarding age distribution, 55% of the respondents were between 31 and 50, 23% were between 51 and 70, and 21% were aged 15 to 30. Only 1% were over 70 years old.

Regarding household roles, respondents were asked to identify the head of their household. Among them, 38% identified as the household head, while 49% identified as the spouse of the head. The remaining respondents included daughters, sons, sisters, or brothers. As for marital status, the data indicates that 85% of respondents were married, 12% were single, and the rest were either separated or widowed. Regarding children, 54% of respondents had between 1 and 3 children, 25% had 4 to 5 children, and 6% had no children. When considering family size, 3% lived alone, 68% had between 2 and 5 members, and 29% had more than five members in their households. Regarding education, 25% of respondents had no formal schooling, and only 7% completed high school. The majority, 47%, completed primary education, and 21% had attended secondary school.

The occupations of the respondents varied widely. A quarter (24%) were involved in fishing, 19% operated small family businesses selling local products and groceries, and another 19% identified as housewives. Additionally, 17% were farmers, and 15% worked as daily wage laborers. This diverse range of occupations reflects the various livelihoods present in these coastal communities. Regarding monthly household income, 20% earned less than \$50, while 65% earned between \$50 and \$250. The remaining 15% earned more than \$250. In terms of monthly expenditure, 24% spent less than \$50, 39% had expenses ranging from \$50 to \$250, and another 39% reported spending more than \$250 per month (*Table 7*).

Demographie	c Category	%	Demographic Category		%
Gender	Male	39	Children None		6
	Female	61		1-3	54
Originality	Native	90		4-5	25
	In-migration	10		>5	5
Age	15-30	21	Occupation	Fishing	24

Table 7: Key demographic profiles of respondents

	31-50	55	_	Family business	19
	51-70	23	-	Housewife	19
	>70	1	_	Farmer	17
Household	Head	38		Daily laborer	15
Rolationshin	Spouse	49	Monthly	<\$50	20
Relationship	Others	13	Income	\$50-\$250	65
Marital	Married	85		>\$250	15
Status	Single	12	Education	No Schooling	25
	Separated	2	_	Primary School	47
	Widowed	1		Secondary	21
				School	
				High School	7
				University	1

When the respondents were asked to identify **the most important marine resources** in their local area, the responses clearly indicated that marine fisheries were the most important resource. They relied on these fisheries daily for food and supplemental income from sales. Approximately 55% of the respondents regularly harvested marine fisheries, highlighting the pivotal role fishing played in their livelihoods.

Meanwhile, 12% of respondents reported using the mangrove areas frequently, indicating that the mangrove ecosystem provided important supplementary resources, such as fuelwood and other non-fishing activities. Another 15% of the respondents were engaged in coastal rice farming, constituting a smaller fraction of the population. Roughly 8% were involved with sea canals, commuting daily to and from the fishing grounds, highlighting the community's dependence on natural waterways for transportation. Only about 5% of the total population was involved in aquaculture activities such as raising fish or other aquatic species in the sea. The remaining respondents primarily engaged in activities related to tourism, recreation, or Chamkar, which typically refers to upland farming or the cultivation of fruit trees or vegetables (*Figure 3*).



Figure 3: Main marine resources collected by coastal residents (%)

When asked to specify the **particular marine resources** they collected, fish were the most significant, accounting for 48% of the total catch. This category also includes species regarded as commercially valuable. The high percentage of fish in the catch underscores this food source's important role in both basic nutrition and financial gain for coastal communities.

Apart from fish, other marine species were collected in smaller but relatively even amounts: mud and blue crabs made up 9%, squid 8%, shrimp 8%, and lobster 7%. All these marine species are highly valuable economic resources, particularly for local markets and potential exports. The similar proportions among these species suggest that while fish are the primary resource, the other species also play a significant role in local livelihoods, complementing what the communities harvest and sell.

Less frequently encountered species mentioned by respondents include snails, clams, oysters, snakes, and birds. Although not regularly caught, these species contribute to the overall biodiversity on which these communities depend. The presence of such species in the catch indicates that the richness of the general marine ecosystem extends beyond just fish and shellfish (*Figure 4*). These incidental catches can provide supplementary food or additional income, especially when fish are scarce.



Figure 4: Varieties of marine resources collected by coastal residents

To assess how marine resources contributed to **reducing household vulnerability**, respondents were asked whether these resources helped them cope

with natural and socio-economic challenges. A significant majority (68%) felt that the daily collection of marine resources was crucial in bolstering their ability to handle hardships. However, 31% expressed concerns about potential resource depletion and its impact on livelihood security.

When asked about **changes in environmental conditions and resource availability**, 40% believed the resources had significantly degraded, while 35% rated the degradation as moderate. Only 2% felt the situation was critical, believing the resources were nearly depleted. Meanwhile, 23% of respondents rated the degradation as minimal or slight (*Figure 5*).



Figure 5: Perceived depletion in marine resource stocks by coastal residents.

When asked about **climate change awareness**, 78% of respondents acknowledged being aware of it, while 22% had no awareness. However, when evaluating their actual understanding of the topic, 66% admitted to having only a moderate grasp of what climate change entails. A smaller group, 7%, stated they had no knowledge, while only 6% considered themselves well-informed. Social media, particularly Facebook, was the primary source of information for 75% of respondents, followed by TV and radio (20%), while 5% attributed their knowledge to NGO staff working in their communities.

Regarding **awareness of EIA**, 68% of respondents were unaware of what it entails, while 30% reported having some awareness (see *Table 8*). Among those familiar with EIA, only 11% had been invited to a consultation in the past five years. Of those who attended, half found the consultation inadequate in addressing their concerns, while the other half felt that it only minimally met their needs. Additionally, 40% of those invited reported that they did not provide consent during the consultation, while 60% felt only slightly informed about the topics discussed. The commune chief typically invited villagers to attend meetings, where they were informed that the gathering would discuss an investment project, often without any prior details. Sometimes, they were called on short notice to participate. During these meetings, 'project staff' (as referred to generically by

locals) presented the project, often in a complex and highly detailed manner, making it difficult for attendees to understand fully. After the presentation, attendees were asked if they had any concerns about the project. Usually, the commune chief would comment first, and the local villagers would echo the same sentiments.

This meeting environment did not benefit the villagers, as they lacked timely and comprehensive knowledge about the project and its potential impacts. Their primary concerns were ensuring the project would not harm the community or degrade local natural resources. When impacts or damages did occur, villagers simply requested fair compensation.

Regarding **investment projects** in their local areas, 72% of respondents were unaware of any such projects, while 28% had only limited knowledge (see *Table 8*). When asked to evaluate the benefits of these investment projects in terms of employment opportunities, infrastructure development, community donations, or natural resource restoration, 64% of respondents reported experiencing no benefits at all. Around 21% felt they gained little from the projects, and only 15% reported moderate to significant benefits.

Conversely, when asked about the **negative effects of these investment projects**, 50.4% of respondents rated them as having medium to significant adverse impacts on their communities (see *Table 8*). The other 49.6% believed these projects had little or no negative effects. Regarding how they learned about these investment projects, 51% mentioned being informed by local authorities, while 38% received their information through social media. Additionally, 9% credited NGO staff for providing information, 4% heard about the projects from the staff members of the investment companies themselves, and 1.2% relied on TV and radio for updates.

Province	Community	No awareness of EIA	Engagement in EIA	Awareness of investment projects	Perceived benefits from investment projects	Perceived negative impacts from investment projects
Koh Kong	Ta Maek CFi	65	15	30	10	50
U	Andoung Toek CPA	68	12	25	18	50
	Kandoal CFi	60	12	20	10	50
	Chroy Svay CFi	68	13	37	20	45
Preah Sihanouk	Keo Phos CFi	70	11	40	18	65
	Prey Nob CFi	63	9	35	18	55

#### Table 8: Survey results on EIA and investment awareness (%)

	Boung Chhum CFi	85	8	10	11	38
Total		68.4	11.4	28.1	15.0	50.4

## 5.8 Financial Loan Portfolio in Cambodia

As of December 2023, Cambodia's banking system comprises 58 commercial banks, 9 specialized banks, 4 microfinance deposit-taking institutions, 83 microfinance non-deposit-taking institutions, 114 rural credit institutions, 16 leasing institutions, 6 third-party processors, 33 payment service institutions, 1 credit bureau, 5 representative offices, and 2,915 money changers (NBC, 2023, pp. 29-30). Credit was allocated across key economic sectors, including retail trade, mortgages, real estate, personal lending, construction, wholesale trade, agriculture, manufacturing, and the hotel and restaurant industry. There is a total of 16.7 million accounts within the system.

According to the Annual Report of Credit Bureau Cambodia (CBC) 2023,<sup>21</sup> over half of the borrowers (56%) are concentrated in the plain areas. Among the provinces, Phnom Penh has the highest concentration of borrowers at 24.0%, followed by Kandal, Kampong Speu, Takeo, Prey Veng, Kampong Cham, Svay Rieng, and Tboung Khmum. Of the total loans, 17% are secured through mortgages, with the lowest 30+ days past due (30+DPD) ratio of 3.99%. Small business loans constitute a significant portion of the loan portfolio, comprising 61% of the outstanding balance, with the second-highest 30+DPD ratio of 6.75% (CBC, 2023, p. 79). The Plain Region is the largest area for credit, accounting for 70% of the outstanding balance and 56% of borrowers. This is followed by the Tonle Sap region, which holds 20% of the outstanding balance and 30% of borrowers. The Coastal region represents 5.7% of the outstanding balance and 7% of borrowers, while the Plateau region accounts for 3.9% of the outstanding balance and 7% of borrowers. Despite the varying sizes of these four regions, the distribution of FIs is relatively balanced, with 29% located in the Plains, 26% in Tonle Sap, 24% in the Coastal region, and 21% in the Plateau region (see *Table 9*).

Areas	Province	Financial	Outstanding	Loan	Active
		Institutions	Balance	Account	Borrowers
Plains	8	189	\$34,768.7M	\$2.40M	2,779.2K
Plateau	5	139	\$1,945.9M	\$0.30M	347.8K
Tonle Sap	8	173	\$9,896.9M	\$1.31M	1,513.2K
Coastal	4	160	\$2,825.6M	\$0.27M	341.6K

Table 9: Regional credit performance as of 2023

Note: M=Million, K=Thousands (.000)

Source: CBC (2023, p.79-83)

<sup>&</sup>lt;sup>21</sup> https://www.creditbureau.com.kh/directus/assets/46ed51b3-f29f-4f4a-aa1f-f68b494ff47d

#### 5.9 Investment Financers and Impacts

The study revealed a significant lack of information regarding the financers of selected investment projects. While the names of the projects are known, details about their investment portfolios, including the identities of the financers and the applicable EIA reports, remain confidential. Despite numerous attempts to obtain this information through online searches, meeting invitations, and personal communications, no verifiable data has emerged to support a comprehensive analysis. It is speculated that the financers may include local tycoons or investors with stakes in these projects. Given the nature of the investments, such as sand dredging and beach resort development, these projects appear to be primarily locally funded rather than backed by FDIs. This assumption is reinforced by regional economic dynamics, where local investors play a dominant role in resource extraction and tourism development.

The Law on Investment in the Kingdom of Cambodia, endorsed on 15 October 2021, mandates that investors disclose annual financial statements, operational reports, annual tax returns, tax incentive reports (for eligible projects), employment records, training and development reports, EIA reports, environmental monitoring reports, CSR reports, and other necessary documentation. Article 13 specifically requires investment projects registered with the CDC to submit project implementation reports according to the schedule set by the CDC.<sup>22</sup> Companies must also maintain accurate financial records and submit annual financial statements to the appropriate authorities, such as the Tax Department. Additionally, investment projects in Cambodia, especially those with potential environmental or social impacts, may need to conduct an EIA. Investors must comply with labor regulations concerning wages, working hours, occupational safety and health, and employee benefits.

While Cambodia has implemented stricter investment regulations to ensure transparency and accountability, enforcement remains a significant challenge. Compliance is often weak in practice, and stakeholders are reluctant to disclose information. The U.S. Department of State's 2024 Investment Climate Statements highlights that "lack of judicial independence and transparency hinders the proper enforcement of laws." <sup>23</sup> Similarly, the International Trade Administration stresses that "doing business in Cambodia presents significant challenges," citing the country's position of 106 out of 141 in the World Economic Forum's Global Competitiveness Report (2019) and 150 out of 180 in Transparency International's Corruption Perceptions Index (2022).<sup>24</sup> Moreover, the American Chamber of Commerce in Cambodia's 2024 Business Climate Survey identifies "uncertainty

<sup>&</sup>lt;sup>22</sup> https://cdc.gov.kh/wp-content/uploads/2022/04/LOI English-Updated-13Dec21.pdf

<sup>&</sup>lt;sup>23</sup> https://www.state.gov/reports/2024-investment-climate-statements/cambodia/?utm\_source=chatgpt.com

<sup>&</sup>lt;sup>24</sup> <u>https://www.trade.gov/country-commercial-guides/cambodia-market-challenges?utm\_source=chatgpt.com</u>

over the enforcement and interpretation of laws and regulations" as a key issue for businesses operating in the country. <sup>25</sup>

The limited disclosure of investment information presents significant obstacles to understanding the key stakeholders involved in these projects. This lack of transparency prevents a clear assessment of who influences local communities and marine resources in the study areas. Consequently, it raises concerns about accountability and limits community members' ability to engage effectively in discussions regarding these investments' environmental and social implications.

Cambodia's coastal provinces have become a pivotal hub for development and investment, attracting diverse financiers and developers. These include funding from both the national government and local authorities, as well as international FIs such as the World Bank, International Finance Corporation (IFC), Asian Development Bank (ADB), and International Monetary Fund (IMF). Bilateral aid agencies from Japan, South Korea, and China are also expected to play a significant role. In addition, private investors, including local businessmen and FDIs, further shape the funding landscape. Additionally, NGOs focusing on sustainable development contribute by promoting a balance between economic growth and conservation efforts.

This diverse financing environment is critical to the region's economic and environmental trajectory, particularly as Chinese investments have become increasingly prominent. While international institutions such as the ADB, World Bank, IFC, and IMF adhere to rigorous environmental and social safeguard policies, concerns remain over the compliance of certain local business people and FDIs with these standards.

One major development initiative is the master plan to transform Preah Sihanouk province into a Multi-Purpose Model SEZ<sup>26</sup>. Under the guidance of Prime Minister Hun Manet, the plan has been expanded to include the development of an economic corridor that encompasses all four coastal provinces—Koh Kong, Kampot, Kep, and Preah Sihanouk (Mathew, 2024). The official designation for this initiative is now the "Master Plan to Develop Preah Sihanouk Province into a Model Multi-Purpose SEZ and Develop Cambodia's Coastal Provinces into a Multi-Purpose and Comprehensive Economic Corridor." This expansion reflects a strategic vision for regional economic integration and sustainable development.

Historically, **Chinese companies have been significant investors in Cambodia's coastal areas, particularly in Preah Sihanouk province** (Vannarith, 2017). Before the influx of Chinese capital, Russian investments were notable, focusing primarily on local resorts and restaurants (Ellis-Petersen, 2018). A recent analysis by

<sup>&</sup>lt;sup>25</sup> <u>https://cambodiainvestmentreview.com/2024/11/20/amcham-cambodias-business-climate-survey-2024-promising-investment-climate-but-regulatory-uncertainty-and-infrastructure-issues-pose-risks/?utm\_source=chatqpt.com</u>

<sup>&</sup>lt;sup>26</sup> <u>https://www.unido.org/sites/default/files/files/2021-</u>

<sup>02/</sup>PCP%20Cambodia PCP%20Peer%20Learning%20Session UNIDO Masterplan%20for%20SHV.pdf

Calabrese & Wang (2023) identifies two primary sources of Chinese capital: **state capital**<sup>27</sup>, which is primarily directed toward national infrastructure projects, and **global private capital**<sup>28</sup>, which often seeks short-term, profit-driven opportunities at the sub-national level. Camba (2020) argues that the mobilization of flexible capital, particularly when intertwined with local elites and criminal elements, has limited developmental potential. This scenario creates a so-called Sino-centric capital export regime, where state-backed capital aims to impose a development model aligned with Chinese interests, while flexible capital seeks to bypass regulatory constraints in China and explore new avenues for profit accumulation (Camba, 2020).

However, **negative impacts associated with Chinese investments have raised significant concerns.** Po and Heng (2019) note that resort development has had detrimental effects on forests and biodiversity. The extensive loss of forest cover, particularly valuable tree species like Siamese rosewood, has exacerbated illegal logging and heightened Cambodia's vulnerability to climate change and natural disasters. A 2020 reassessment further emphasized that private Chinese investments, particularly in coastal mega-tourism projects, have been linked to land disputes and environmental degradation, often encroaching on protected areas such as Ream National Park (IDI, 2020).

Local communities have expressed dissatisfaction with certain Chinese projects, including hydropower plants and land concessions, citing infringements on labor rights and environmental protections (Vannarith, 2017). While Chinese investment has generated wealth in Sihanouk province, the benefits have primarily remained with the Chinese community, limiting economic spillover to the local population. Chinese residents and visitors tend to patronize Chinese businesses, restaurants, and hotels, resulting in minimal direct economic benefits for local Cambodians (Ellis-Petersen, 2018).

Given these complexities, the Cambodian government faces increasing pressure to diversify its sources of foreign investment. **Overreliance on Chinese capital poses risks to the long-term welfare of Cambodia and its citizens** (Sovinda & Kimkong, 2019). There is growing concern that Chinese businesses prioritize financial returns over social, cultural, and environmental considerations, often neglecting the interests of ordinary Cambodians. Additionally, this economic dependence creates a power asymmetry that allows China to exert considerable political influence over Cambodia, particularly concerning international issues like the South China Sea dispute.

<sup>&</sup>lt;sup>27</sup> Chinese state capital in the extractives sector in Zambia, for example, was driven by the desire to secure a stable supply of commodities to China, leading to an interest in building a collaborative long-term relationship with the host country's government and contributing to economic diversification and value addition.

<sup>&</sup>lt;sup>28</sup> Global private capital was driven by immediate profit-maximization goals, and therefore was highly volatile: in order to make money, investors were ready to cut jobs and subcontract operations rather than to invest, and to withdraw when profits were not growing.

**Cambodia's weak legal framework and enforcement mechanisms** can deter potential investors. Insufficient regulations create challenges for compliancefocused investors, hindering Cambodia's ability to attract a diverse investor base (Calabrese, Borodyna, & Nadin, 2022). Reports of preferential land deals for Chinese investors, often facilitated through connections with influential political figures, further complicate the investment landscape. Although Cambodian law restricts land concessions on state-private land to a maximum of 10,000 hectares, numerous more extensive concessions have been granted. One of the most controversial cases is the Dara Sakor project in Koh Kong, which has sparked speculation about its potential use for Chinese military operations (Long, 2020).

## 5.10 Insights from Local Communities and Provincial Departments

#### **5.10.1 Views from Local Communities**

During the data collection period, local communities in Preah Sihanouk and Koh Kong provinces participated in scheduled group discussions. They were notified in advance about these meetings and informed of their purpose.

Community members emphasized their deep reliance on natural resources, particularly mangroves and marine fisheries, which have sustained their livelihoods for generations. These resources are crucial for their livelihoods and economic activities. However, they also acknowledged ongoing degradation due to illegal activities- both by insiders and outsiders- and private investment projects encroaching on their natural environments. These encroachments often occur directly and indirectly, sometimes involving third parties. Despite these challenges, local community committees have actively worked to protect these resources, raising awareness about sustainable extraction practices, effective management plans, and stakeholder engagement strategies.

"The marine resources are our lifeline. We depend on them for our survival and have relied on them for years. However, their stocks are declining, and we are very concerned," said a group member from Ta Maek Commune in Botum Sakor district, Koh Kong province.

However, many community members were unfamiliar with EIAs and had not been engaged in the process. They urged authorities to inform and consult them about decisions affecting their resources, thus allowing them to either support conservation initiatives or seek alternative livelihoods. Additionally, they called for more stringent enforcement of regulations to prevent environmental violations and encourage community-driven conservation efforts.

"No, we are not very familiar with the EIA. We hear that assessments are conducted, but we do not know the specifics. We spend most of our time at sea fishing, which is why we have not

*been actively involved in providing comments during the assessment process*," said group members from Toek Thla commune in Prey Nob district, Preah Sihanouk province.

Local communities in coastal Cambodia have expressed concerns about private investment projects, including environmental degradation, overfishing, loss of livelihoods, lack of community engagement, land conflicts, inadequate infrastructure, economic inequality, and limited long-term planning. These concerns stem from the destruction of natural habitats, overfishing, displacement of local fishermen, lack of community engagement, land disputes, and inadequate infrastructure.

Residents report that private investments have led to overfishing, disrupting fish stocks and traditional fishermen's livelihoods. Many feel alienated and ignored due to the lack of community engagement and involvement in decision-making processes. Land disputes have also been reported, with some communities claiming their land was taken without fair compensation or consultation.

These concerns highlight growing apprehension among Cambodia's coastal communities about balancing economic development and environmental sustainability. They also underscore the urgent need for more inclusive and transparent investment practices.

#### **5.10.2 Views from Provincial Authorities**

Provincial officials are optimistic about the development and investment in their provinces, highlighting their role in creating jobs, stimulating local economic activities, and enhancing infrastructure. In Preah Sihanouk province, investment has been significant, with 134 approved projects worth over \$1.8 billion since 1994<sup>29</sup>, showcasing a diverse economic landscape. However, comparable investment figures for Koh Kong are not readily available. While the provincial planning and investment office facilitates project assessments and ensures regulatory compliance, the potential for conflicts over land tenure and natural resources underscores the need for negotiation and compromise between investors and local communities. Interviewed officials acknowledge these conflicts, noting that many disputes have been resolved at the provincial level. In contrast, others fall outside provincial jurisdiction and have been escalated to the national government for intervention.

"There are investment challenges that we cannot resolve at the provincial level. We can only report and request intervention from the national government through the relevant ministries," stated the head of the investment office in Preah Sihanouk province.

<sup>&</sup>lt;sup>29</sup> Personal interview with a head of provincial investment office of the Preah Sihanouk province on 22 October 2024.

Preah Sihanouk and Koh Kong province officials emphasized the necessity of risk or impact assessments before granting licenses or permits for proposed investment projects to safeguard communities and natural resources. EIA is a key requirement, ensuring that potential impacts are identified and mitigation plans are developed. Public participation is also conducted to gather input from communities and local authorities, ensuring their concerns are addressed in reports and resolutions.

> "Before submitting their EIA report to MoE, projects must obtain our consent through provincial consultation. Once the EIA report reaches the MoE, an inter-ministerial committee reviews it, and our provincial representative is invited to provide final comments," explained an official from the Department of Environment in Koh Kong province.

Provincial departments have limited involvement in granting licenses, as approvals primarily come from ministerial levels. Provincial departments can approve investments under \$5 million, while those above this threshold require approval from the CDC. The provincial departments of mines and energy, environment, agriculture, and fisheries focus on ensuring regulatory compliance and providing support where possible. They also work to protect and develop resources as delegated by their line ministries. For example, transferring responsibilities for resource crimes from the MoE to the provincial department highlights a shift towards local management, requiring enhanced collaboration with local authorities and community education to mitigate illegal activities. While CFis demonstrate a proactive approach to sustainable fishing practices, climate change, illegal fishing, and habitat degradation challenges persist.

Preah Sihanouk and Koh Kong provinces face similar challenges in managing CFis and protected areas. The establishment of CPAs is a promising initiative, but the limited capacity of these organizations and the lack of comprehensive management plans hinder adequate resource protection. Interviewed officials suggested that capacity building, legal support, and sustainable development initiatives are essential to enhancing the resilience of local ecosystems and communities.

#### 5.11 Investment and Development Impacts Observed in the Studied Areas

Investment and development activities in coastal Cambodia have had both positive and negative impacts. Positive impacts include economic growth, infrastructure development, and tourism expansion. Infrastructure improvements, such as roads, ports, and utilities, enhance access to markets and services. Tourism-related projects attract visitors, promote cultural exchange, and boost local economies. Aquaculture investments have improved fish production, providing a stable income for local fishermen and contributing to food security. However, negative impacts include environmental degradation, overfishing, displacement of communities, social conflicts, economic inequality, and unsustainable practices on natural resources. A balanced approach integrating economic growth with environmental sustainability is essential to mitigate these adverse effects. Engaging local communities in decision-making processes and ensuring responsible development projects can help reduce harm while maximizing benefits for coastal populations.





Photo 6: Investment projects in and around the studied CFis/CPAs

Sand dredging activities by SS Gold Trading Co., Ltd. have been reported in the vicinity of Kandoal and Ta Maek CFis. Similarly, KP SAN Co., Ltd. is engaged in sand dredging within Keo Pos CFi.

An SEZ known as the Srae Ambel Free Trade Zone (Cambodia) Co., Ltd., covering an area of 180 hectares and requiring an investment of \$80 million<sup>30</sup>, has been

<sup>&</sup>lt;sup>30</sup> <u>Sre Ambel District Gears Up for a Transformation: US\$80M Investment Unveils 180-Hectare SEZ - Construction &</u> <u>Property News</u>

established in the Srae Ambel district lies outside the boundaries of Chroy Svay CFi. Another SEZ, spanning 47 hectares, has been granted to Cambodia Boern Hai SEZ, represented by tycoon Han Kheang.<sup>31</sup> Han Kheang has also secured an additional 287.33 hectares for a coconut farming and processing project, referred to as the Exporting and Processing Industrial Farm<sup>32</sup>, located in Kampong Smach Touch village, Toek L'ak commune, Prey Nob district in the Preah Sihanouk Ville province. Unfortunately, detailed investment portfolios for these projects have not been made available for critical analysis, and their precise locations (UTMs) remain unknown.

Eco-Beach Development Co., Ltd. has been reported to operate within Boeung Chum CFi in Ou Chrov commune, Prey Nob district, Preah Sihanouk Ville province. This 187-hectare project is said to be integrated with the CFi, with commitments to share benefits, rehabilitate local infrastructure, and plant 10,000 mangrove trees annually.

Additionally, a 14.9-hectare area in Toek Thla commune has been cleared, reportedly owned by a local tycoon (name unknown), though its intended purpose remains unclear. Furthermore, a previously planned coal plant project in Toek Thla commune, covering over 100 hectares, has since been canceled, leaving uncertainty about plans for this substantial area, which includes both inland and mangrove forests.

The sea sand dredging conducted by SS Gold Trading Co., Ltd. in Koh Kong province, along with KP SAN Co., Ltd., and the resort investment by Eco Beach Development Co., Ltd. in Preah Sihanouk Ville, has been reported to have detrimental impacts on marine biology and coastal mangrove ecosystems in these areas. Unfortunately, minimal information on these projects makes conducting a thorough critical analysis of their development and environmental implications difficult.

Local community members interviewed expressed deep concerns about these projects despite the lack of significant progress or changes in recent times. Since their inception, these developments have encroached upon natural spaces, disrupting traditional fishing practices and restricting access to marine resources that local communities have relied on for generations.

Although several consultations were held regarding these projects, community members felt these meetings lacked substance and meaningful engagement. Feedback provided by the community was often ignored or inadequately addressed, leading to frustration among residents.

<sup>&</sup>lt;sup>31</sup> Letter no. 586 dated on 22 October 2021 from Council of Ministers. This project locates in Preak Toal village, Toek Thla commune, Prey Nob district, Preah Sihanouk Ville province (personal communication).

<sup>&</sup>lt;sup>32</sup> Based on letter (no number) to H.E. Veng Sakon, Minister of Agriculture, Forestry and Fisheries dated on 13 August 2020 from Tycoon Han Kheang. Sent from the address house 35B, Village 6, Sangkat Boung Kok 2, Khan Toul Kork, Phnom Penh, Cambodia

Two prominent impacts highlighted by the communities are the degradation of marine fisheries and the loss of mangrove forests. Local fishermen reported noticeable declines in fish stocks, attributing this to the disruptive activities associated with the dredging and resort developments. The alteration of coastal habitats has affected marine life and compromised the natural protection mangroves offer against erosion and storm surges, further jeopardizing local livelihoods. Moreover, the encroachment into these natural habitats has diminished the ecological balance, threatening biodiversity and the overall health of the coastal environment. Mangrove forests serve as crucial breeding grounds for various fish species and are particularly vulnerable to the impacts of sand dredging and resort construction. The loss of these habitats can have cascading effects on the entire marine ecosystem, ultimately impacting food security and the economic stability of coastal communities.

# 5.12 Case Study

# 5.12.1 Case 1: SS Gold Sand Dredging in Andoung Touek Commune, Botum Sakor District

**Sand dredging project in Andoung Touek Commune raises concerns among local fishermen and authorities**. A proposed sand dredging project in Andoung Touek commune, located in the Botum Sakor district of Koh Kong province, has sparked concerns among local fishermen and authorities. The project, undertaken by **SS Gold Trading Co., Ltd.**, could result in the loss of fishing grounds for thousands of fishermen, affecting over 1,000 families in the district. SS Gold Trading Co., Ltd. was registered with the Ministry of Commerce on 14 June 2018 (Registration number – 00034170, Tax Identification Number (TIN)-K009-901806365). Its main business activities registered were hotels and resorts, and other associated businesses included quarrying stone, sand, and clay, as well as extracting and dredging industrial sand for construction and gravel. The company office is at house #269 CD, second floor, Sangkat Ou Beak K'am, Khan Sen Sok, Phnom Penh.

According to information gathered from community leaders and members, the project has raised significant concerns among local fishermen, who fear that the dredging activities will destroy their fishing grounds and affect their livelihoods. On February 13, 2024, company representatives met with local authorities, including Deputy Governor of Botum Sakor District, and Commune Chief, to discuss the project. Over 10 local fishermen also attended the meeting, expressing their concerns about the project's potential impact on their livelihoods.

Regarding authorities' response and call for caution, the Deputy Governor of Botum Sakor District, acknowledged the fishermen's concerns and emphasized the need for careful consideration of the project's potential impacts. He stated that a decision on the project would require input from higher authorities at the provincial level. The Director of Energy and Mining of Botum Sakor District urged the company to conduct a thorough study to avoid harming the interests of local fishermen and the environment. He cautioned against a repeat of the 2011-2012 incident when over 500 people protested against a similar project in the area.

In response, the company representatives claimed that they would consider the concerns of local people and the environment during the study. However, the fishermen remained skeptical, fearing the project would destroy their fishing grounds and affect their livelihoods. The fate of thousands of fishermen and the environment hangs in the balance, and relevant ministries must intervene and thoroughly study the project's potential impacts.

In light of the concerns raised by the local community and authorities, the relevant ministries must take immediate action to address the fishermen's and the environment's concerns. A thorough and transparent impact assessment of the project's potential impacts is necessary to ensure that the interests of all stakeholders are protected. The government must also take steps to engage with the local community and address their concerns about the project.

During interviews conducted in August 2024, local fishermen expressed similar concerns about the sand dredging activities and demanded greater transparency and information sharing. They wanted to understand the project's potential impacts better and be informed about the necessary actions to mitigate them. Recently, fishermen have observed several dredging boats surveying the area, leading them to believe another company has taken over the project, seeking to collect sand data before commencing dredging operations. This development has heightened their concerns about the project's effects on their fishing grounds and the potential loss of marine biodiversity, which is crucial for the sustainability of their marine fisheries. The fishermen are worried about being displaced from their traditional fishing grounds or disrupted by the project's activities. They are frustrated that no detailed information has been shared with them, and no collaborative channels have been established to inform the community about the project's impacts, leaving them unprepared to respond to the challenges that lie ahead. Their suggestion was to request to stop the project or move the dredging locations to deeper water.

> "I have seen company's dredging boats roaming around for the survey. I believe it is a new company. However, the project concerns us as we have experienced their dredging activities in the past, which killed our mud cockles due to the suspended solid from the dredging. Also, it chases us away from our fishing grounds." – Kandoal CFi Member.

> "We have no detailed information about the project except rumors about the project activities. We are always concerned when we hear them coming. We should be well consulted and engaged so that we know what to do." – Ta Meak CFi Member.

In short, the sand dredging project in Andong Touek commune has raised significant concerns among local fishermen and authorities. The relevant ministries must take immediate action to address these concerns and ensure that the project is undertaken responsibly and sustainably. The fate of thousands of fishermen and the environment hangs in the balance, and the government must take all necessary steps to protect their interests.



Kandoal CFi Photo 7: Community Fisheries in Andong Touek Commune

## 5.12.2 Case #2: Eco Beach Resort in Ou Chroy commune, Prey Nob District

The Eco Beach Resort project, located in Srae Cham Krom Village, Ou Chrov Commune, Prey Nob District, Preah Sihanouk province, represents a significant development initiative that has the potential to transform the local area. Rich in mangroves and flooded forests, the site is ideal for an eco-resort, with the natural resources offering a strong foundation for sustainable tourism. The project's proximity to major infrastructure, including being just 2.3 km from National Road No. 4, 20 km from Preah Sihanouk International Airport, 30 km from the city of Preah Sihanouk, and 195 km from Phnom Penh, further enhances its attractiveness for both local and international visitors.

The project began formally with a request by the company to the Ministry of Agriculture, Forestry, and Fishery (MAFF) on June 15, 2019, seeking to rent 187 hectares of land within the Boeung Chum Community Fishery (CFi) for eco-resort development. The project will build a Bungalow (48.35 ha), Tourism Port (14.57 ha), and other national tourism attractions, including a mud crap farm (34.69 ha),

tourism market (16.28 ha), resting area (16.78 ha) and boating areas (39.73 ha).<sup>33</sup> Roads will also be built in the area, with a width of 7m (6.3 ha), 12m (2.21 ha), and 20m (8.09 ha). There will be 170.4 ha of development area and 16.6 ha of infrastructure area. The project will be developed in three stages – 50 ha for stage 1, 63.69 ha for stage 2, and 56.71 ha for stage 3.

The ministry's approval was based on the project's potential to contribute to conservation and local livelihoods. Rather than a typical land lease, the ministry framed this as a collaborative partnership with the Boeung Chum CFi, expecting the project to strengthen CFi management and enhance local conservation efforts. However, the ministry also emphasized that the company must develop a detailed master plan and engage in participatory consultations with the Boeung Chum CFi. The provincial fishery cantonment and local authorities coordinated this process to ensure the project aligned with the community's interests and conservation goals.

In terms of provincial support and environmental considerations, the project gained further support from the Preah Sihanouk provincial hall, which, in a letter to MAFF on July 23, 2021, affirmed the company's capability to develop the ecotourism project. The provincial authority recognized the project's potential to generate employment, reduce out-migration, and promote sustainable tourism. However, they also required the company to revise its master plan and conduct a comprehensive EIA, securing all necessary licenses before the project could proceed. Additionally, a stipulation was made that the company plant at least 150,000 mangrove trees within three years, underscoring the project's environmental responsibilities.

The agreement between Eco Beach Resort Co., Ltd. and Fishery Administration (also governing and on behalf of Boeung Chum CFi), signed on August 23, 2021, detailed the project's phased approach. The first stage would involve developing 50 hectares over 15 years, with the potential for further expansion based on the project's success and subsequent agreements with the CFi. Crucially, the agreement specified that the project should not interfere with the fishing activities or other development initiatives of the CFi. The income generated from the project would be shared between the company and the CFi, under the supervision of the Fishery Cantonment, ensuring that the community benefits from the project's success.

In terms of community concerns and lack of engagement, despite formal agreements and potential benefits, significant concerns persist among the Boeung Chum CFi members, mainly stemming from a lack of communication and transparency. Interviews conducted in August 2024 revealed that many CFi members were unaware of the project's details, partly because the project had been inactive for over a year. This lack of awareness has fueled anxiety among community members, who fear the project could negatively impact their fishing activities and the mangrove areas they depend on for collecting marine resources.

<sup>&</sup>lt;sup>33</sup> Architectural design of the project by Creative Green Design Co., Ltd. in 2019.

Adding to the community's concerns are reports that the company has allegedly purchased land within the CFi area from local villagers, an act that would be illegal if true, as it involves the sale and purchase of state public property. The complex and unclear land tenure history further complicates the situation, with local authorities, including the commune chief, unable to explain how ownership processes were managed in the past.

The absence of effective communication channels between the company and the CFi members has exacerbated these issues. Community members reported being not adequately informed about the project's progress, plans, or potential impacts, leading to exclusion and mistrust. The lack of participatory dialogue and collaboration between the company and the CFi has left the community feeling vulnerable and uncertain about the future of their livelihoods and the natural resources on which they rely.

"No, we do not know about this project, but I am afraid that it will have a negative impact on our resources." – Boeung Chum CFi Member.

"I heard that the company bought many hectares around their project from individual villagers. It cost around \$50,000 per hectare at that time. The company also asked me for the price of my two hectares, but I did not sell them." – A woman living close to the project site.

Regarding potential impacts and the need for stakeholder engagement, the Eco Beach Resort project can significantly impact the marine resources and overall wellbeing of the Boeung Chum CFi. The lack of transparency and communication has already led to rising fears and concerns among community members, who are uncertain about how the project will affect their traditional fishing grounds and the mangrove forests crucial to their way of life.

These concerns could escalate without proper engagement and information sharing, leading to potential conflicts between the community and the company. It is essential that all relevant stakeholders, including the provincial fishery cantonment, local authorities, and the company, take proactive steps to disclose detailed information about the project and establish open lines of communication with the CFi members.

The associated costs of such investment projects are particularly evident in the mangrove forests, where ecological resources have been affected. As the project cleared and backfilled wetland mangroves for real estate and other infrastructure related to eco-tourism development, the delicate balance of the local ecosystem is disrupted. Although the project may not have involved extensive clearing, local villagers have observed disturbances to their fisheries, which are vital for their livelihoods. Moreover, access to their coastal resources within the CFi has become

restricted, raising serious concerns about the sustainability of their subsistence practices and economic income. Many villagers rely on fishing and gathering from these coastal areas, and the changes brought about by the investment project threaten their traditional ways of life. The decline in fish populations and the loss of access to these resources jeopardize food security and diminish opportunities for economic activities passed down through generations. In addition, the ecological degradation caused by land reclamation and habitat destruction can lead to long-term consequences, including biodiversity loss and the disruption of critical ecosystems that provide protective services against coastal erosion and climate change. As the villagers grapple with these challenges, they increasingly voice their concerns and call for more transparent and inclusive project planning and implementation practices.



Photo 8: Eco Beach Resort Project Area in Prey Nob District



Photo 9: Eco Beach Resort Design

## 6. Discussion of Findings

6.1 EIA regulations and clauses are not effectively enforced, revealing significant gaps in actual practice. The mandates outlined in the Code, which require appropriate community engagement in the EIA process, public disclosure of EIA reports, posting of EIA approval letters at project sites, and regular monitoring of EIA performance, are not being implemented effectively. This lack of enforcement undermines the integrity of the regulations and compliance efforts. Efforts to access the EIA report through a formal request to MoE were unsuccessful, as no response was received when this report was finalized. Community members expressed frustration, stating they were not meaningfully engaged in the EIA process; many had little to no understanding of what an EIA even entailed. Furthermore, there have been no follow-up activities from the MoE to assess the performance of investment projects concerning the EIA. Community members reported that no officials had visited to gather feedback or learn about the impacts of the projects. This sentiment highlights a disconnect between the authorities and the communities affected by these projects, raising serious questions about the accountability and responsiveness of the regulatory framework in place.

> "We have not seen any officials coming to check in with us about our concerns or the impacts of the projects. They only showed up when we protested or complained about the project," group members from both Preah Sihanouk and Koh Kong provinces remarked.

The lack of proactive engagement and monitoring not only alienates local communities but also jeopardizes the efficacy of the EIA process itself. Without meaningful dialogue and oversight, the potential for negative impacts on local

communities and the environment remains unchecked, further exacerbating the challenges faced by those who rely on these natural resources for their livelihoods.

6.2 Marine fisheries remain solely dependent on the coastal residents. This data highlights the overwhelming reliance on marine fisheries for subsistence and economic activity among coastal communities. The fact that over half of the respondents collect marine resources daily underscores the vulnerability of these communities to changes in fish stocks, environmental conditions, and access to marine areas. The low engagement in aquaculture may suggest untapped potential for expanding sustainable livelihood options, which could help alleviate pressure on wild fisheries. The reliance on mangroves by 12% of respondents also emphasizes the need for conservation efforts to ensure that these ecosystems remain viable, as they provide crucial resources for the community. However, the relatively small numbers of individuals involved in tourism or aquaculture point to underdeveloped sectors that could be targeted for growth, helping to diversify income sources and reduce over-dependence on marine fisheries. These insights suggest that while fishing remains the backbone of local economies, there are opportunities to enhance sustainability through better resource management and by promoting alternative livelihoods like aquaculture and ecotourism. Many experiences have confirmed that boosting ecotourism in the country will sustainably uplift the livelihoods of the rural communities and more effective resource conservation.

Ecotourism in Cambodia is gaining recognition as an ideal destination, with over 40% of the country's land area dedicated to government-protected zones, including national parks, wildlife sanctuaries, and community forests (EuroCham, 2023). According to Siphannara (2019), ecotourism in Cambodia has significantly contributed to income generation and job creation for local communities while fostering community development and protecting natural resources. This demonstrates the potential of ecotourism to promote sustainable development and conservation efforts in the region. A policy brief published by CDRI in 2021 reconfirms that ecotourism can contribute to the well-being of local communities by providing them with direct financial benefits and improving their livelihood opportunities (Komar, Pichdara, & Sodavy, 2021). Additionally, it can raise environmental awareness, increase the value of natural forest and biodiversity resources, and promote a local conservation movement. Furthermore, ecotourism can help protect the natural and cultural resources of the tourism destination for future generations to enjoy.

**6.3 The communities' natural resources have been declining, posing future economic instability for the communities.** The decline in natural resources within coastal communities in Cambodia poses a significant threat to future economic stability, particularly for the rural and poor households that rely heavily on these resources for their livelihoods. Community leaders, members, local authorities, and recent studies have consistently observed and reported this

concerning trend. The depletion of marine resources such as fish, crabs, shrimp, prawns, snails, and mangroves has been particularly alarming, with evidence pointing to reduced daily and seasonal catches. This decline threatens these communities' food security and undermines their economic well-being, as many households depend on fishing and related activities for their income.

Cambodia's economy and local communities are heavily dependent on its abundant natural resources, but these resources are being degraded at an alarming rate due to unsustainable economic activities. Specifically, there has been a significant decline in forest cover, with a 21% reduction between 2006 and 2014 and an estimated loss of 45% of the country's original wetland area.<sup>34</sup> These losses have far-reaching consequences, impacting the productivity of the agricultural and fisheries sectors, reducing hydropower generation, and diminishing tourism assets.

"Marine resource depletion encompasses overfishing, habitat destruction, and pollution. According to the United Nations Food and Agriculture Organization (FAO), around 90% of the world's fisheries are now either overexploited or fully exploited. One of the most immediate and devastating effects of overfishing is the decline in marine biodiversity. When certain fish populations are overharvested, it disrupts the delicate balance within ecosystems." - (AnuMeena Care Foundation, 2023)

"Along the coast of Cambodia, illegal fishing is driving fish stocks toward collapse and fishing communities into poverty." – (Ball, Flynn, & Srey, 2024)

"Coastal development has come at the cost of Cambodia's coastal and marine seascapes, evidenced by declining marine biodiversity, habitat loss, and the associated depletion of natural capital due to lack of integrated planning and management." – (World Bank, 2023, p. 5)

The degradation of Cambodia's coastal resources has far-reaching implications. The health of marine ecosystems is crucial for the immediate survival of these communities and the long-term sustainability of the country's economy. The continued decline of these resources could lead to a cascade of economic and social problems, including increased poverty, food insecurity, and forced migration. Already among the most vulnerable, rural households would be the hardest hit, as their ability to cope with economic shocks would be further weakened by the loss of their primary livelihoods. Urgent action is needed to protect and sustainably manage Cambodia's natural capital to ensure long-term economic growth and stability.

<sup>&</sup>lt;sup>34</sup> https://www.worldbank.org/en/results/2019/10/30/cambodia-reducing-poverty-and-sharing-prosperity

Several factors have been identified as contributing to this resource decline. The ineffective governance of CBGs has been a significant issue, as these organizations often lack the capacity, resources, or authority to manage the resources effectively. External pressures from individual elites, who often exploit these resources for personal gain, have exacerbated the problem. In addition, the unregulated impacts of nearby private investment projects have further strained the marine ecosystems, leading to habitat destruction and pollution. Last but not least, the ineffective enforcement of legal regulations has allowed illegal fishing activities and other harmful practices to continue unchecked, further accelerating the degradation of these vital resources.

The combination of these factors creates a complex and challenging situation. On one hand, there is a clear need for stronger governance and legal enforcement to protect and manage coastal resources more effectively. On the other hand, there is also a need to address the underlying social and economic pressures that drive resource exploitation, such as poverty, lack of alternative livelihoods, and unequal access to resources. Without comprehensive and coordinated interventions, the current trends will likely continue, leading to even greater environmental degradation and socio-economic instability.

The potential consequences of inaction are dire. If the decline in marine resources is not reversed, the coping capacity of poor households will be severely compromised. As their traditional livelihoods become unsustainable, many may be forced to migrate to urban areas or even out of the country for work. This could increase urban poverty, social unrest, and pressure on already strained city public services. Moreover, the loss of biodiversity and ecosystem services could have long-term impacts on Cambodia's natural environment's overall health and resilience, further undermining the country's development prospects.

Furthermore, addressing the external pressures contributing to resource degradation is essential. This includes regulating the activities of private investment projects to ensure they do not harm the environment and holding individuals and companies accountable for any damage they cause. EIA should be effectively enforced for those potentially affecting projects. There should also be efforts to reduce the demand for resources from elites and other external actors, potentially through policy measures that promote more sustainable and equitable resource use.

Immediate and result-based actions are needed to address these challenges. First, there must be a concerted effort to strengthen the governance of community-based resource management groups. This could involve capacity-building initiatives, greater support from government and non-governmental organizations, and increased community participation in decision-making processes. Second, there needs to be stricter enforcement of legal regulations to prevent illegal fishing and other harmful activities. This could be achieved through increased monitoring

and surveillance, harsher violation penalties, and more transparent and accountable governance structures.

6.4 The ineffective governance of CBGs is a significant factor accelerating the decline of natural resources in many coastal communities. Through an analysis of qualitative records from community leaders and local authorities, it becomes clear that these groups face substantial challenges that hinder their ability to manage and protect their resources effectively. One of the most critical issues is the lack of financial and material resources to patrol, chase, or arrest offenders who exploit these resources illegally. This shortage of resources has created a situation where community leaders and authorities are often unable to respond adequately to the pressures and threats facing their communities.

A recurring theme in discussions with these leaders and authorities is "no budget and material," reflecting the stark reality that many CBGs have no consistent income and no budget to plan or execute concrete actions against illegal activities that threaten their marine resources. The absence of financial support severely limits their capacity to enforce regulations, monitor resource use, and protect the ecosystems that their communities depend on for survival. Moreover, the problem is compounded by the lack of participation among community members in resource management activities. Instead of contributing to protecting their resources, some community members are involved in illegal activities, such as unauthorized fishing, which further complicates the efforts of community leaders and authorities. This lack of community engagement weakens the overall governance structure and makes it more challenging to implement and enforce management plans or bylaws.

Community management committees, often the frontline defenders of these resources, face additional challenges due to the absence of financial incentives or salaries. These committees are expected to carry out critical tasks without compensation, such as patrolling and enforcing regulations. This lack of support creates a demoralizing environment and increases the likelihood of these committees resorting to unlawful acts to sustain their operations. For instance, some community leaders may ask for payments from outsiders who come to fish in their zones, using these funds to cover patrolling activities. While this practice may provide short-term financial relief, it ultimately undermines the integrity of the resource management system and can lead to further degradation of the resources.

"We ask for 20,000-30,000 Cambodian Riels (\$5-\$7.5) per boat from the outsiders, but not from our community members. We used to arrest them and hand them to the provincial fishery cantonments. However, they were later released, or we found it too frustrating to keep asking the court or cantonments to confirm the cases at the provincial offices without covering our food and back-and-forth transportation costs. Eventually, we got fed up and started asking for payments directly, instead of reporting them to the authorities, as dealing with the legal process was draining our time and money." – One community deputy leader in Botum Sakor district.

Another significant issue is the gap between the development of community management plans or bylaws and their actual implementation. These plans often exist only on paper, with little to no actual enforcement or exercise of the rules they contain. This discrepancy is primarily attributed to the lack of financial resources and community participation, which reduces the effectiveness of these governance tools and diminishes their perceived value. Without the necessary resources and engagement, even the most well-crafted plans will fail to protect the community's natural resources.

The situation is further exacerbated by the declining support from NGOs, which have historically played a crucial role in providing financial and technical assistance to these communities. Many interviewees expressed concern that NGO support is fading, leaving them without the critical external aid that once helped bolster their efforts. The withdrawal of this support has left CBGs in a vulnerable position, struggling to manage their resources effectively and facing the potential for even more significant resource depletion.

6.5 The external pressures exerted by individual elites and private investment companies on Cambodia's marine coastline and estuaries have been a significant and ongoing concern for nearly a decade. These pressures have created a tense and often traumatic environment for CBGs that rely on these resources for their livelihoods. The narratives shared by community leaders, members, and local authorities during meetings highlight the deep-seated fears and frustrations these communities have experienced due to the unresolved disputes between themselves and powerful external actors. These disputes often revolve around large-scale development projects, such as sand dredging, coastal satellite city development, deep-water seaports, coastal reclamation, tourism, and SEZs. These projects are typically driven by the interests of political elites and wealthy tycoons who wield significant influence and power. The impact of these projects on coastal communities has been profound, both in terms of environmental degradation and the psychological toll on the people who live there. Also, the environmental consequences of these development projects are particularly troubling. Activities like sand dredging and coastal reclamation can destroy critical marine habitats, including mangroves, seaweeds, and coral reefs, which are vital for maintaining biodiversity and supporting local fisheries. The disruption of these ecosystems directly impacts the livelihoods of coastal communities, as it diminishes their access to vital resources such as fish and other marine life. This degradation threatens food security and undermines the economic stability of these communities, which depend heavily on marine resources for income.

"Abundant natural resources in themselves influence governance structures and the likelihood of the outbreak of conflict." – Conceição, Fuentes, & Levine (2011, p. 3)

In addition to the environmental damage, these projects have caused significant psychological and social disruptions within the communities. The relentless pressure from powerful external actors has created a pervasive sense of fear and helplessness among community members. Many feel powerless to stand up against the might of these elites and companies, leading to a deep sense of discouragement and disempowerment. This has been exacerbated by the long-standing nature of these disputes, which have persisted for nearly a decade without resolution. In the meantime, the psychological impact on the communities cannot be understated. The constant threat of losing their livelihoods and the fear of retribution for speaking out against powerful interests have created an atmosphere of anxiety and stress, thus weakening these communities' social fabric as individuals become more focused on survival rather than collective action. The trauma of these ongoing disputes has left a lasting mark on the communities, making it challenging for them to organize effectively or resist further encroachments on their land and resources.

Moreover, the public nature of these disputes, with stories of community struggles against powerful interests being posted, published, and debated, has only added to the sense of vulnerability felt by these communities. While public attention can sometimes lead to support and solidarity from other groups, it can also increase the pressure on community members, who may fear reprisals or further intimidation from those they are challenging.

The communities' perception of themselves as weak and incapable of effectively challenging these projects is rooted in a harsh reality. The imbalance of power between the communities and the external actors is stark. The latter often have access to considerable financial resources, legal expertise, and political connections, making it extremely difficult for CBGs to assert their rights or protect their resources. This power dynamic has not only led to the exploitation of natural resources but has also eroded the communities' confidence in their ability to advocate for themselves and their environment.

"We are not very united and lack financial and collaborative resources. We cannot take any effective action other than requesting their mercy and seeking compensation for any damage to our communities. We have only a legal paper [community registration] which can be revoked any time they [authorities] want." – One community leader in Prey Nob district. 6.6 The issue of ineffective legal enforcement in managing and protecting natural resources, particularly marine resources, in Cambodia's coastal provinces, like Koh Kong and Preah Sihanouk provinces, has emerged as a critical concern. The analysis of interview and meeting records from community members, leaders, and authorities reveals a pervasive lack of confidence in the legal system's ability to safeguard these resources. Instead of being seen as a protective measure, legal enforcement is perceived as a mechanism that often favors resource offenders, undermining the efforts to preserve and sustain vital environmental assets.

"But weak enforcement of [forest management] regulations and large-scale corruption limit the potential [of the forest] for poverty reduction in many states. Better institutions are needed both for ensuring the long-term sustainability of the [forest] sector and for the purposes of improving revenue capture by the state." – OECD (2009, p. 20)

The failure of legal enforcement is not just a technical or procedural issue; it reflects deeper systemic problems within the governance structures responsible for natural resource management. One of the most troubling aspects highlighted in the interviews is the widespread belief that enforcement officials are not committed to upholding the law but are complicit in resource exploitation. This belief stems from repeated instances where legal actions against offenders have either been weak, delayed, or absent. In many cases, community members perceive that legal officials are more inclined to support resource offenders in exchange for bribes or other promised benefits rather than enforcing laws designed to protect the environment.

"We are tired of protecting our resources. Officials come to get paid and go. We learn that they facilitate the resource crime cases in exchange for (cash) benefits. That is why whenever communities report the cases, they ignore, delay the responses, or act as if they know nothing. It is usually hopeless for us to challenge the offenders alone." – Common remarks of the interviews in both Koh Kong and Preah Sihanouk provinces.

This perception of corruption and collusion between law enforcement and resource offenders has created a significant trust deficit within the communities. When legal instruments are seen as tools of exploitation rather than protection, the entire legal framework for natural resource management is compromised. The communities, already vulnerable due to the environmental degradation of their resources, find themselves further disenfranchised when they cannot rely on the law to defend their interests. This lack of trust in legal enforcement creates a vicious cycle where communities feel powerless and discouraged from reporting crimes or engaging in advocacy, knowing that the system is stacked against them. Moreover, the stereotype that law enforcement officials collude with offenders has become a pervasive and ingrained belief among the communities. This stereotype, while rooted in observed behavior patterns, also reinforces the powerlessness felt by these communities. When the legal system is perceived as inherently corrupt, it diminishes the motivation for communities to seek justice or cooperate with authorities, further eroding the rule of law. The expectation that legal interventions will fail or be subverted discourages proactive community engagement in resource management, leaving the door open for continued exploitation and degradation of natural resources.

The implications of this ineffective legal enforcement extend beyond the immediate environmental damage. The erosion of legal trust also has social and economic repercussions as communities lose faith in the broader governance systems meant to protect their rights and livelihoods. This lack of faith can lead to a breakdown in social cohesion, as individuals and groups may resort to self-help measures or align with powerful actors who promise protection or economic benefits, even if these actors contribute to resource depletion. This can further social fragmentation and deepen inequality within and between communities.

Furthermore, the ineffective legal enforcement undermines the potential for sustainable development in these regions. Without a strong legal framework to regulate resource use and protect the environment, efforts to promote sustainable practices will likely fail, jeopardizing the long-term viability of the resources and hindering economic opportunities that could arise from more sustainable resource management, such as eco-tourism or community-based conservation projects.

In analyzing this situation, it is clear that addressing the problem of ineffective legal enforcement requires a multifaceted approach. Strengthening the legal framework is essential but must be accompanied by efforts to rebuild trust between communities and enforcement agencies. This could involve increasing transparency in legal proceedings, providing better protection for whistleblowers, and ensuring that enforcement officials are held accountable for their actions. Additionally, empowering communities through education and legal support can help them become more effective advocates for their rights and the protection of their resources.

6.7 The coupling of climate change with the already degraded marine resources presents a profound challenge for coastal communities, particularly those dependent on marine fisheries for their livelihoods. The analysis of interview records and quantitative survey results reveal that community members are increasingly aware of and affected by the intensifying impacts of climate change, which are exacerbating the existing environmental degradation of their marine resources. This dual threat significantly disrupts their daily lives, diminishing their economic opportunities and further eroding their social welfare.

One of the most striking observations from the interviews is the acknowledgment of more extreme weather events in recent years. Community members have reported experiencing higher temperatures, unpredictable weather patterns, stronger wind gusts, erratic rainfall, and more intense coastal storms. Cambodia's natural resources are facing degradation due to unsustainable economic activities, with significant declines in forest cover and wetland areas leading to negative impacts on various sectors such as agriculture, fisheries, hydropower, and tourism. This is consistent with broader scientific findings on the effects of climate change, with models predicting an increase in the frequency and intensity of extreme weather events, particularly in vulnerable coastal regions. Cambodia's mean annual temperatures are expected to rise between 0.3 to 0.6°C by 2025 and from 1.6-2.0°C by 2100.

Meanwhile, mean annual rainfall is projected to increase from 3% to 35% by 2100, with greater increases in lowland areas compared to highlands.<sup>35</sup> Climate change has already had significant impacts in Cambodia, with severe droughts and floods increasing in frequency, affecting millions of people and causing significant economic losses. Without proper adaptation and mitigation measures, climate change could cost up to 9% of Cambodia's GDP by 2050 and increase the poverty rate by up to 6 percentage points by 2040.36

The recent high heat stress experienced nationwide in early 2024, frequently mentioned by the interviewees, highlights climate change's immediate and tangible impact on these communities. Prolonged periods of extreme heat can severely affect human health and the environment. In coastal areas, high temperatures can lead to the warming of ocean waters, which can cause coral bleaching, disrupt marine ecosystems, and reduce fish populations. These changes directly impact the livelihoods of those who rely on fishing, as the degradation of marine habitats leads to declining fish stocks and reduced catches.

The increasing unpredictability of weather patterns also poses significant challenges for fishing communities. Traditional knowledge and practices, which have been passed down through generations and are based on relatively stable weather patterns, are becoming less reliable. The ability to predict weather conditions is crucial for safe and productive fishing. When the weather becomes erratic, it disrupts fishing schedules, endangers lives, and reduces the effectiveness of fishing efforts. This unpredictability also affects other aspects of daily life, such as agricultural activities and transportation, further undermining the economic stability of these communities.

"We hardly rely on our traditional knowledge of weather for our fishing. The knowledge and practices we learn from our parents have rapidly changed as the climate has changed. We need to

<sup>&</sup>lt;sup>35</sup> <u>https://www.globalsupportprogramme.org/sites/default/files/uploaded-images/d2 t3 presentation thoeun cambodia.pdf</u>

<sup>&</sup>lt;sup>36</sup> <u>https://www.worldbank.org/en/news/press-release/2023/10/31/acting-on-climate-change-is-key-for-cambodia-to-achieve-its-development-goals</u>
build our current knowledge and act accordingly, or we will end up getting less fish and less income." – One community member noted in Koh Kong province.

The intensification of coastal storms and stronger wind gusts, as reported by the interviewees, further compound these challenges. These extreme weather events can cause significant physical damage to infrastructure, such as boats, fishing gear, and homes, leading to financial losses that are difficult to recover from. The increased frequency and intensity of storms also mean that communities have less time to rebuild and recover between events, leading to a cumulative impact on their resilience and capacity to cope with future shocks.

The economic consequences of these climate-related disruptions are evident in the declining marine fishery catches reported by community members. As weather patterns shift and marine ecosystems are altered, fish populations are affected, leading to lower yields for fishermen. This decline reduces the immediate income of those directly involved in fishing and has broader economic implications for the entire community. Fish is a primary source of protein for many coastal populations, and a decline in fish availability can lead to food insecurity, higher food prices, and increased poverty.

In addition to the economic impact, the disruptions caused by climate change have significant social and psychological effects on these communities. The stress of dealing with increasingly unpredictable and extreme weather, coupled with the decline in natural resources, can lead to feelings of anxiety, helplessness, and loss. These psychological impacts can weaken social cohesion and reduce the ability of communities to work together to find solutions to their challenges.

The coupling of climate change with already degraded marine resources creates a feedback loop that further exacerbates the vulnerability of coastal communities. As marine resources decline, communities become more dependent on them, leading to overexploitation and further degradation. At the same time, the effects of climate change make it more challenging to sustain and manage these resources, leading to a downward spiral of environmental degradation and economic decline.

6.8 The issue of limited information on the project portfolios, financers, and sustainability-related policies of coastal private investment projects in Cambodia highlights significant concerns regarding business transparency, integrity, and the overall governance of these projects. The absence of these accessible data and policies raises questions about these projects' business transparency and accountability and their commitments to sustainable and responsible business practices. Such absences will cause the following consequences.

- Lack of Transparency and Accountability: The first primary concern is the lack of transparency surrounding the financers of these coastal investment projects. Without clear and publicly available information on who is funding these projects, it becomes difficult to assess their motivations, ethical standards, and potential conflicts of interest. Financers play a crucial role in determining the direction and nature of investment projects, as they often set the terms for how projects are managed and what standards must be adhered to. The absence of transparency in this area creates a significant risk that projects could be driven by short-term profit motives rather than long-term sustainability and community well-being.
- Risks of Irresponsible Investment Practices: The lack of information on ESG policies associated with these projects further exacerbates concerns about their potential impact on local communities and the environment. ESG policies are vital for ensuring that businesses operate in a manner that is not only profitable but also socially and environmentally responsible. These policies typically address environmental protection, respect for human rights, fair labor practices, and ethical governance. Without clear ESG commitments, there is a risk that these investment projects may engage in irresponsible practices that could harm the environment, violate community rights, and undermine local economies.

The absence of ESG policies also suggests a lack of commitment to Free, Prior, and Informed Consent (FPIC) principles and mutual collaboration with local communities. FPIC is a crucial process that ensures communities are adequately informed about projects that affect them, have the opportunity to participate in decision-making, and can give or withhold their consent. When investment projects bypass this process, they risk alienating local communities, leading to conflicts and undermining the social license to operate.

 Ineffective Government's Role and Responsibility: The situation also reflects broader issues with the Cambodian government's management and oversight of these investment projects. Effective government regulation ensures private investments align with national development goals, respect community rights, and contribute to sustainable development. The apparent lack of government screening for community-friendly investment projects indicates a governance gap that could allow harmful projects to proceed without adequate checks and balances.

The possibility that relevant information is being withheld from the public is particularly troubling. Access to information is a fundamental right enshrined in Cambodian law and international human rights standards. Ensuring citizens can hold the government and private sector accountable is critical. When information about investment projects and their impacts is not shared publicly, it undermines trust in both the government and the private sector, and it hampers the ability of communities and civil society organizations to advocate for their rights and interests.

The Limited Role of Financers and ESG Policies: Financers are among the most influential stakeholders in any investment project, as their funding decisions can shape the entire project's approach and outcomes. Responsible financers are expected to ensure that the projects they fund adhere to high ethical standards, including firm ESG commitments. Financers who demand transparency, environmental stewardship, and respect for human rights can significantly influence the positive impact of an investment. Conversely, when financers do not prioritize these values, there is a higher risk that the projects they support will engage in harmful practices.

ESG policies are critical in establishing the investment culture and values guiding projects' interaction with the environment and local communities. These policies provide a framework for sustainable business practices, ensuring that investments contribute positively to all stakeholders, including the communities where resources are extracted. A strong ESG framework can help mitigate adverse environmental and social impacts, foster positive relationships with local communities, and enhance the long-term sustainability of the project and the local ecosystem.

The Bank Policy Assessment in Cambodia conducted by FFC in 2023 highlights concerns about the roles of FIs in maintaining their commitment to ESG policies and practices. All eight themes<sup>37</sup> assessed across the eight banks<sup>38</sup> received low scores, indicating a reluctance to engage yet underscoring the need for a more focused approach. For example, transparency and accountability improved from a score of 0.6 in 2020 to 1.0 in 2022, although it slightly decreased to 0.9 in 2023. This trend suggests ongoing efforts but emphasizes the necessity for continued enhancement among banks. While gender equality scores have risen, they remain low, reflecting banks' minimal actions to advance this crucial issue. Human rights consistently received the lowest scores across assessments, indicating a significant gap in the banks' commitment to these vital concerns. Overall, it is clear that more intensive strategies and collaborative efforts are required to achieve meaningful progress in these areas. A stronger focus on implementation, stakeholder engagement, and accountability will be essential to drive changes in the banking sector regarding ESG policies and practices. FIs must strengthen their sustainability credentials as the sector evolves to remain competitive in an increasingly aware market.

<sup>&</sup>lt;sup>37</sup> These eight themes are climate change, corruption, gender equality, human rights, labor rights, nature, tax, and transparency and accountability.

<sup>&</sup>lt;sup>38</sup> These eight banks are ABA, ACLEDA, CANADIA, CAMPU, CIMB, Bank of China, KB-Prasac, and SATHAPANA.

## 7. Conclusion

Development is essential for a country's growth but must be pursued with minimal costs to other resources; otherwise, such growth will not be sustainable in the long term. The Royal Government of Cambodia is committed to advancing national development while managing the associated impacts by implementing various political and technical tools. These tools include regulatory frameworks that ensure environmental protection, social equity, and community engagement in decision-making processes. Furthermore, the government has initiated programs to enhance transparency and accountability among FIs and investors, fostering a climate of trust and collaboration. This holistic approach seeks to mitigate negative impacts and promotes responsible investment that can contribute to the country's socio-economic development.

EIA is a crucial tool for assessing the environmental consequences of proposed development and investment projects in Cambodia. However, the performance of EIA has been controversial due to its misuse as a decision-making tool, incomplete or inappropriate processes, and public distrust. The rise in investment projects in coastal areas like Preah Sihanouk province has highlighted the growing tension between economic development and environmental sustainability. Coastal communities heavily rely on marine resources for their livelihoods, but rapid development has led to the degradation of essential habitats, including mangroves and marine ecosystems. This degradation threatens the economic stability of coastal communities, leading to increased economic uncertainty.

There is a need for rigorous standards and guidelines for conducting EIAs to ensure thorough assessments that reflect potential environmental impacts. Engaging the public in the EIA process through transparent communication and stakeholder consultations can help rebuild trust and address community concerns. Training for EIA practitioners on best practices and environmental management can improve the quality of assessments and their implementation. Establishing robust monitoring mechanisms to oversee compliance with EIA recommendations can ensure that mitigation measures are effectively implemented.

Marine fisheries remain central to the livelihoods of coastal communities, but unsustainable practices and governance challenges threaten their future. The decline in marine and natural resources due to overfishing, habitat destruction, and ineffective management puts the economic stability of these communities at risk. There is potential for sustainable alternatives like aquaculture and ecotourism, which could diversify income and alleviate pressure on marine resources. Stronger governance, legal enforcement, and support for community-based resource management are essential to prevent further environmental degradation and socio-economic instability. Immediate actions are necessary to promote sustainable development and protect these vital ecosystems. Cambodia's coastal communities face profound challenges due to external pressures from elite-driven development projects, weak legal enforcement, and the impacts of climate change. Large-scale projects such as sand dredging and coastal reclamation have degraded marine ecosystems and disrupted local livelihoods, while ineffective legal measures and perceived corruption have disempowered communities. The effects of climate change, particularly unpredictable weather and rising temperatures, further exacerbate these issues, threatening economic stability and social cohesion. Transparency and strong ESG policies are essential for ensuring sustainable, community-centered development.

FIs, both local and international, play crucial roles in financing investment projects and are accountable for the impacts associated with their financing frameworks. The current situation in Cambodia casts doubt on the willingness of FIs and private developers to disclose detailed information about their investment portfolios and ESG-related policies. This lack of transparency hampers accountability and undermines collaboration among all stakeholders involved. There is a need for a joint mechanism involving the CDC, NBC, ABC, MoE, the Ministry of Commerce (MoC), and the MEF to address this issue. This mechanism should guide FIs and investors in adopting more transparent and sustainable practices in Cambodia.

In this context, it is crucial for stakeholders—including local communities, civil society, and private investors—to participate actively in the development process. Their involvement can lead to more informed decision-making and ensure that projects align with the needs and priorities of the people. By adopting a sustainable development model, Cambodia can pave the way for a resilient economy that benefits current and future generations. Ultimately, the challenge lies in integrating growth strategies with environmental stewardship and social responsibility, creating a pathway for sustainable development that secures the country's future while respecting its rich cultural and natural heritage.

In conclusion, the limited information on the financers and ESG policies of coastal private investment projects in Cambodia raises serious concerns about business transparency, accountability, and the potential for irresponsible practices. Addressing these issues requires a concerted effort from the government, private sector, and civil society to ensure that investments contribute to sustainable development and respect the rights and interests of all stakeholders.

## 8. Recommendations

The decline of natural resources in Cambodia's coastal communities is a pressing issue that requires immediate and comprehensive action. Without effective interventions, the continued degradation of marine ecosystems will have devastating consequences for the livelihoods of poor households, the stability of the economy, and the overall sustainability of the environment. It is imperative that all stakeholders—community leaders, government authorities, private sector actors, and civil society—work together to address the root causes of resource

decline and implement strategies that promote the long-term resilience and wellbeing of these vulnerable communities. The following recommendations are proposed to bring all stakeholders together to protect and develop natural coastal resources.

- It is recommended that the government intensify its efforts to enhance legal enforcement, transparency, and accountability in coastal regions by establishing or reinforcing independent oversight bodies tasked with monitoring environmental laws. These bodies would serve as watchdogs, ensuring that regulations are followed and violations are promptly addressed. The government can enhance public trust in its commitment to environmental protection and good governance by having independent organizations in place.
- MoE actively continues to enhance the effectiveness of environmental protection laws, particularly in relation to coastal development. This includes the implementation of stricter regulations aimed at deterring resource exploitation. By increasing law enforcement efforts and conducting more extensive environmental awareness campaigns, the MoE aims to educate the public about the importance of sustainable practices and the long-term benefits of preserving natural resources. These initiatives will safeguard critical ecosystems and promote responsible development that aligns with environmental conservation goals.
- To foster greater transparency and accountability within the EIA process, MoE shall continue to commit to disclosing comprehensive information related to EIA procedures, reports, and ongoing monitoring activities. This commitment is in accordance with the Environment and Natural Resource Code, which emphasizes the need for public access to information. Making these documents readily available makes the MoE trustable among stakeholders, including local communities, environmental organizations, and investors. Improved transparency will facilitate informed public discourse and enable communities to engage meaningfully in decision-making regarding development projects that may affect their environment.
- MoE shall dynamically dedicate itself to engaging key stakeholders, particularly local communities and authorities, in consultations regarding EIA-related discussions. This collaborative approach ensures that the voices of those most affected by coastal development are heard and considered. By involving local communities in the EIA process, the MoE can gather valuable insights and traditional knowledge that may contribute to more effective environmental assessments. These consultations will also help identify potential socio-economic impacts and foster a sense of ownership among local populations, ultimately leading to more sustainable outcomes. The MoE's efforts to strengthen stakeholder engagement will enhance the legitimacy of

the EIA process and promote a more inclusive approach to environmental governance.

- In addition to conducting a robust EIA, ongoing monitoring and evaluation of the project's impacts on the community and the environment are crucial. This should involve regular, structured reporting by the project developers to CFi, CPA members, and other relevant stakeholders. Creating a schedule for these reports will help keep the community in the loop regarding project developments and their corresponding effects. Notably, there should be channels for community input and feedback, allowing residents to voice their concerns and contribute to discussions about the project's impact. This participatory approach empowers local communities and enhances the project's adaptive management strategies, ensuring they can respond to unforeseen environmental or social challenges.
- To further promote inclusive and transparent investment practices, the government must develop or impose business, development, or investment-related regulations that require all (coastal) projects to disclose critical information about their financers, business models, and ESG policies. This transparency is essential for ensuring that local communities are well aware of the projects and actively involved in decision-making processes that affect their environment and livelihoods. Establishing a public registry of investment projects will enhance accountability, allowing stakeholders to track the commitments made by investors concerning their ESG practices. Such a registry would serve as a valuable resource for local communities, enabling them to assess various investments' potential risks and benefits. The government can foster a more responsible investment climate that prioritizes sustainable development and community welfare by holding investors accountable for their environmental and social impacts.
- Furthermore, community engagement should extend beyond the initial project planning and implementation stages or only in the EIA process. Continuous dialogues between investors, government officials, and local communities are essential to build trust and ensure all parties' interests are considered. Organizing regular community forums or workshops can facilitate this ongoing engagement, allowing for exchanging ideas, concerns, and potential solutions.
- The establishment of mechanisms for grievance redress by the project is vital. Communities should have access to formal channels to report concerns or grievances related to project impacts. These mechanisms should be easily accessible, culturally appropriate, and designed to ensure community voices are heard and addressed.
- The government is recommended to assure sustainable economic development in Cambodia by promoting eco-friendly investment projects, encouraging private investors to adopt sustainable business models, and

**developing a sustainable resource management framework** that balances economic growth with environmental protection and local livelihoods, focusing on community-based tourism and conservation initiatives.

- Promoting sustainable aquaculture and ecotourism in Cambodia can help diversify livelihoods and reduce pressure on marine fisheries. The government, development partners, and NGOs shall continue to support coastal communities intensively by promoting sustainable practices, providing training, and offering financing for related resource uses and management. For instance, investing in community-led ecotourism projects can leverage communities' natural and cultural heritage, generating income and promoting conservation.
- The government, development partners, and NGOs continue intensively to enhance the conservation and restoration of mangrove forests, which are vital for local fisheries and coastal ecosystems, by implementing reforestation projects and involving local communities in their management.
- Training and financial support remain important for community-based natural resource management groups, which can be used to enhance governance and encourage community participation in conservation activities. This can be achieved through tools for capacity building, participatory planning and implementation, monitoring fishing areas, transparent governance structures, and financial incentives for maintaining marine biodiversity, reporting illegal activities, and reforestation efforts.
- Establishing a transparent and fair benefit-sharing mechanism is essential to ensure that local communities derive tangible benefits from private investment projects. Such a mechanism should be designed collaboratively with input from community members, ensuring that it reflects their needs and priorities. This participatory approach fosters trust and enhances the legitimacy of the investment projects.
- In addition, investors should consider developing a local joint support or development mechanism with local organizations or initiatives aligned with community interests. These contributions could support education, healthcare, or other social services that enhance the quality of life for residents. Such investment in the community's well-being can demonstrate their commitment to social responsibility and foster goodwill among local populations.
- Another crucial aspect of the benefit-sharing mechanism could involve investing in community infrastructure. This may include building or improving roads, schools, healthcare facilities, or water supply systems. Private investments can create lasting improvements in the community, stimulating economic growth and enhancing residents' quality of life. Collaborating with

local authorities and community leaders can help identify the most pressing infrastructure needs and ensure that investments are targeted effectively.

- Additionally, support for local conservation initiatives should be a fundamental part of the benefit-sharing framework. Many communities have a vested interest in preserving their natural resources and biodiversity. By funding conservation programs of CFi/CPA, such as reforestation efforts or marine protection initiatives, investors can contribute to the sustainability of the local environment, benefiting the community and securing the long-term viability of the resources upon which the investment projects depend.
- The government, in particular, shall re-strategize the development policies and priorities to attract financers committed to high standards of ESG performance. This can be achieved by granting incentives for responsible investments, such as tax breaks or grants for projects that prioritize sustainability and social responsibility. Additionally, establishing partnerships with international organizations that promote sustainable finance can help bring investment that is aligned with long-term ecological and communitycentered goals. These partnerships can provide financial resources and expertise to ensure development projects are environmentally sound and socially beneficial in the coastal zones of Cambodia.
- Empowering CBGs to monitor and report on investment projects' environmental and social impacts is vital for fostering accountability and transparency. CBGs often serve as the voice of local communities, advocating for their rights and ensuring that their concerns are addressed in development processes. Capacity-building initiatives should be tailored to equip CBGs with the necessary skills and knowledge to navigate the intricacies of investment processes. These initiatives could include training programs focused on environmental law, social impact assessment, and the principles of ESG. Workshops and seminars can provide CBGs with practical tools for conducting assessments, gathering data, and analyzing the impacts of investment projects.
- Strengthening meaningful consultations with affected communities and CSOs is essential to ensure that local concerns and engagements are fully acknowledged. This approach represents a win-win strategy, fostering civic engagement and CSO participation in development decisions and impact assessments. By incorporating their voices and authority, locally accepted decisions can be achieved. The MoE or Provincial Investment Boards should involve local communities whenever possible in scrutinizing investments and the impact assessment process, utilizing a free, prior, and informed consent approach.
- Moreover, establishing a joint mechanism between the government and CBGs can significantly empower these organizations in their monitoring and advocacy efforts. This collaborative framework should facilitate regular

communication and coordination between state institutions (i.e., MoE, MAFF) and CBGs, creating a platform for sharing information and best practices. Such a mechanism would not only enhance the effectiveness of monitoring but also foster a sense of partnership and mutual accountability.

- Raising public awareness about ESG policies and responsible investment is crucial for sustainable development in Cambodia. Government, NGOs, and the private sector can encourage a shift towards responsible investment behaviors by enhancing understanding of these concepts. Educational campaigns can inform the public about the importance of ESG policies, focusing on the long-term benefits of sustainable practices. Public forums can facilitate dialogue and engagement, allowing stakeholders to voice concerns and expectations regarding investment practices. Moreover, various media channels, such as social media, television, radio, and print media, can disseminate information about ESG policies and responsible investment practices.
- Encouraging FIs to adopt and implement strong ESG frameworks, enhancing their sustainability credentials and accountability, prioritizing projects with robust ESG commitments, and fostering responsible investment practices. Regular assessments of FIs' adherence to ESG policies and publishing the findings to foster transparency and improvement are also necessary. NBC, CDC, ABC, MoE, MoC, and MEF shall establish a joint platform to guide FIs and their financed projects in adopting a more sustainable and transparent practice.
- Partnerships with local influencers and community leaders can enhance the impact of awareness campaigns by enlisting respected figures to advocate for sustainable practices. Influencers can help communicate the message in culturally relevant ways, making it more relatable and engaging for the community. Schools and educational institutions also play a vital role in raising awareness about ESG policies by integrating sustainability topics into the curriculum and encouraging students to participate in sustainability-related projects. This approach can foster a sense of responsibility and engagement from an early age, ultimately leading to more sustainable development practices in Cambodia.

Privately cleared land in Toek Thla Commune, Prey Nob District, Preah Sihanouk Province (photo by Dr. Sam Chanthy, 2024)

## **Bibliography**

ADB. (2021). Cambodia Agriculture, Natural Resources, and Rural Development Sector Assessment, Strategy, and Roadmap. Manila, the Philippines: Asian Development Bank. Retrieved from

https://www.adb.org/sites/default/files/publication/718806/cambodiaagriculture-rural-development-road-map.pdf

- AnuMeena Care Foundation. (2023, September 10). *Depletion of Marine Resources: A Global Crisis*. Retrieved from AnuMeena Care Foundation: https://www.linkedin.com/pulse/depletion-marine-resources-global-crisisanumeenacare
- Ball, A., Flynn, G., & Srey, V. (2024, June 12). Efforts to save Cambodia's coast tread water as fish stocks plummet. Retrieved from MONGABAY: https://news.mongabay.com/2024/06/efforts-to-save-cambodias-coast-treadwater-as-fish-stocks-plummet/
- Calabrese, L., & Wang, Y. (2023). Chinese capital, regulatory strength and the BRI: A tale of 'fractured development' in Cambodia. *World Development, 169*, 1-19. doi:10.1016/j.worlddev.2023.106290
- Calabrese, L., Borodyna, O., & Nadin, R. (2022). *Risks along the Belt and Road: Chinese investment and infrastructure development in Cambodia*. London: ODI Report. Overseas Develoment Institute. Retrieved from

https://www.econstor.eu/bitstream/10419/280294/1/1824154666.pdf

- Camba, A. (2020). The Sino-centric Capital Export Regime: State-backed and Flexible Capital in the Philippines. *Development and Change*, *51*(4), 970-997. doi:10.1111/dech.12604
- CBC. (2023). Annual Report 2023. Phnom Penh, Cambodia: Credit Bureau Cambodia. Retrieved from https://www.creditbureau.com.kh/directus/assets/46ed51b3f29f-4f4a-aa1f-f68b494ff47d

Conceição, P., Fuentes, R., & Levine, S. (2011). *Managing Natural Resources for Human Development in Low-Income Countries*. Working Paper, United Nations Development Programme. Retrieved from https://www.undp.org/sites/g/files/zskgke326/files/migration/africa/Natural-Resources-Low-Income-Countries.pdf

Ellis-Petersen, H. (2018, July 31). '*No Cambodia left': how Chinese money is changing Sihanoukville*. Retrieved from The Guardian: https://www.theguardian.com/cities/2018/jul/31/no-cambodia-left-chinese-money-changing-sihanoukville

EuroCham. (2023). *Souring from Cambodia: Ecotourism*. Phnom Penh, Cambodia: EuroCham Cambodia. Retrieved from https://www.eurochamcambodia.org/uploads/b94e7-sourcing-from-cambodia-ecotourism-2023.pdf

Fisheries Administration. (2022). Seagrass and Coral Reef Distribution and Monitoring. Phnom Penh, Cambodia: Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries. Retrieved from

https://data.opendevelopmentcambodia.net/en/library\_record/koh-kongpreah-sihanouk-kampot-and-kep-seagrass-and-coral-reef-distribution-andmonitoring/resource/899515b9-590a-4566-b5c9-b06c4bdd9c25

- Giesen, W., Wulffraat, S., M., Z., & Scholten, L. (2006). *Mangrove Guidebook For Southeast Asia*. Bangkok 10200.
- IDI. (2020). Briefing Paper: Reassessing China's Investment Footprint in Cambodia. UK, England: Inclusive Development International. Retrieved from https://www.inclusivedevelopment.net/wpcontent/uploads/2020/08/2020\_IDI\_Briefing-on-Chinas-Footprint-in-Cambodia-Update.pdf
- Khou, E. (2018). Technical Report On Vegetation And Floristic At The Sihanouk International Airport.
- Komar, K., Pichdara, L., & Sodavy, N. (2021). Strengthening Community-Based Ecotourism for Livelihood improvement in Preah Nimith CBET, Preah Vihear, Cambodia. Policy Brief. Phnom Penh, Cambodia: Cambodia Development Research Institute. Retrieved from https://cdri.org.kh/storage/pdf/PB%202021,%205\_Community-Based%20Ecotourism\_1637159539.pdf
- Lo, J., Quoi, L., & Visal, S. (2018). Some preliminary observations on peat-forming mangroves in Botum Sakor, Cambodia. *Mires and Peat, 22*, 1-10. doi:10.19189/MaP.2017.OMB.288
- Long, D. (2020, October 21). *Cambodia, China and the Dara Sakor Problem*. Retrieved from The Diplomat: https://thediplomat.com/2020/10/cambodia-china-andthe-dara-sakor-problem/
- Mathew, M. (2024, April 05). *PM widens S'ville master plan to cover all coastal provinces*. Retrieved from Khmer Times: https://www.khmertimeskh.com/501468056/pmwidens-sville-master-plan-to-cover-all-coastal-provinces/
- Muñoz, V. H., Phearoon, N., Furey, N., Sopha, S., Reaksmey, S., Chartier, G., ... Rog, S. (2024). Mangrove biodiversity survey report, Peam Krasop and Koh Kapik. Phnom Penh, Cambodia: Fauna & Flora and Fishing Cat Ecological Enterprise in collaboration with the Ministry of Environment. Retrieved from https://www.fauna-flora.org/wp-content/uploads/2024/04/Mangrove-Biodiversity-Survey-

Report.pdf?\_gl=1\*17uf30j\*\_up\*MQ..\*\_ga\*MTQxNzc5OTI0NC4xNzl2NDcyODM3\* \_ga\_G1PKXP4Q77\*MTcyNjQ3MjgzNC4xLjAuMTcyNjQ3MjgzNC4wLjAuMA..\*\_ga\_ KJVKWBSL06\*MTcyNjQ3MjgzNS4xLjAuMTcyNjQ3M

- NBC. (2023). Annual Report 2023. Phnom Penh, Cambodia: National Bank of Cambodia. Retrieved from https://nbc.gov.kh/download\_files/publication/annual\_rep\_eng/NBC%20Annual %20Report%202023%20Eng.pdf
- OECD. (2009). Natural Resource and Pro-Poor Growth: The Economics and Politics. In *Natural Resources and Pro-Poor Growth: The Economics and Politics*. Paris: OECD Publishing. doi:10.1787/9789264060258-2-en
- PEMSEA and MoE. (2019). National State of Oceans and Coasts 2018: Blue Economy Growth - Cambodia. Quezon City, the Philippines: Partnerships in Environmental Management for the Seas of East Asia, and Ministry of Environment. Retrieved from https://www.pemsea.org/sites/default/files/2023-

12/NSOC%20Cambodia%202018%20%28FINAL%29%2009092020.pdf

Po, S., & Heng, K. (2019). Assessing the Impacts of Chinese Investments in Cambodia: The Case of Preah Sihanoukville Province. Working Paper on China-Cambodia Relations: Pacific Forum. Retrieved from

https://www.researchgate.net/profile/Sovinda-

Po/publication/333310139\_Assessing\_the\_Impacts\_of\_Chinese\_Investments\_in\_ Cambodia\_The\_Case\_of\_Preah\_Sihanoukville\_Province\_ISSUES\_INSIGHTS\_A\_Wor king\_Paper\_on\_China-Cambodia\_Relations\_Pacific\_Forum/links/5ce6271

- Siphannara, P. (2019). Overview of Community-Based Ecotourism for Sustainable Development In Cambodia. Briefing Note. Phnom Penh, Cambodia: Parlimentary Institute of Cambodia. Retrieved from https://pcasia.org/pic/wpcontent/uploads/simple-file-list/20191014\_Overview-of-Community-Based-Ecotourism-for-Sustainable-Development-in-Cambodia.pdf
- Sovinda, P., & Kimkong, H. (2019). Assessing the Impacts of Chinese Investments in Cambodia: The Case of Preah Sihanoukville Province. Working Paper 4. Vol. 19. Honolulu: Pacific Forum. Retrieved from https://cicp.org.kh/wpcontent/uploads/2021/01/Working-Paper-on-China-Cambodia-Relations-Assessing-the-Impacts-of-Chinese-Investments-in-Cambodia-The-Case-of-Preah-Sihanouk-Ville-Province.pdf
- Su, J. (2021, April 4). *Mapping Mangroves in Cambodia Evaluating mangrove forest land cover changes in Kampong Som Bay, Cambodia, using Landsat 8 OLI satellite data*. Retrieved from StoryMaps:

https://storymaps.arcgis.com/stories/7949763f7c804cc88100d4237badd777

- UNEP. (2004). *National Reports on Mangroves in the South China Sea*. Bangkok, Thailand: UNEP/GEF/SCS Technical Publication No. 14. Retrieved from https://iwlearn.net/resolveuid/ab4c605cfa8755089d97be5363350001
- Vannarith, C. (2017). *The Political Economy of Chinese Investment in Cambodia*. Singapore: ISEAS Publishing. Retrieved from https://www.iseas.edu.sg/wp-content/uploads/pdfs/TRS16\_17.pdf
- Veettil, B. K., & Quang, N. X. (2019). Mangrove forests of Cambodia: Recent changes and future threats. Ocean & Coastal Management, 181. doi:10.1016/j.ocecoaman.2019.104895
- World Bank. (2023). *Building a Blue Economy Roadmap of Cambodia*. Washington, D.C.: The World Bank. Retrieved from https://documents1.worldbank.org/curated/en/099556207032341413/pdf/IDU0

0eec67aa0872b04096088cd02fda633553f1.pdf World Bank. (2023). Country Climate and Development Report. Washington, D.C.: The World Bank Group. Retrieved from https://documents1.worldbank.org/curated/en/099092823045083987/pdf/P178 87106c6c2d0e909aa1090f3e10505c1.pdf *For more information, please contact:* THE NGO FORUM ON CAMBODIA House # 9-11, Street 476, Toul Tompong 1, Phnom Penh, Cambodia

Telephone: 855 (0) 23 214 429/ (0) 23 994 063 Website: <u>www.ngoforum.org.kh</u>

## Supported By





Co-funded by the European Union

