|  |  |  |
| --- | --- | --- |
| **UNDP_Logo-Blue w TaglineBlue-ENG.png** |  | **GEF-notag-lowres_0** |

**United Nations Development Programme**

**Country: Thailand**

**PROJECT DOCUMENT[[1]](#footnote-1)**

|  |  |  |
| --- | --- | --- |
| **Project Title:** Sustainable Management Models for Local Government Organisations to Enhance Biodiversity Protection and Utilization in Selected Eco-regions of Thailand | |  |
|  | | |
| **UNDP Strategic Plan:** Inclusive Growth and Sustainable Development | | |
| **Expected CP Outcome(s):** Thailand is better prepared to coherently address climate change and environmental security issues through the enhancement of national capacity and policy readiness. | | |
| **Expected CP Output(s):**  Output 1: Enabling framework established for LGOs to plan, monitor and adopt land management for biodiversity conservation  Output 2: Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas | | |
| **Implementing Partners:**  Biodiversity-Based Economy Development Office (BEDO) (Public Organisation), Ministry of Natural Resources and Environment (MoNRE) |  | |
| **Responsible Party:** Department of Local Administration (DLA) Ministry of Interior (MoI), BEDO and UNDP   |  |  |  | | --- | --- | --- | | **Brief Description**  The objective of the project is to mainstream biodiversity conservation priorities into the performance management, development planning and budgeting systems of local government in Thailand.  Thailand is one of the most biodiverse countries in the world containing over 15,000 species of plant and 4,722 species of vertebrates. Many of these species are however threatened with over 555 species of vertebrates listed as endangered domestically and 231 classified as endangered by the IUCN. These species and the diversity they represent are being threatened by on-going urban, agricultural and infrastructure development that is resulting in extensive habitat destruction or degradation as well as increasing demand for natural resources which is resulting in their unsustainable use.  Thailand has taken steps to protect its biodiversity and has an extensive protected areas network covering over 20% of the country’s terrestrial and marine area. However much of the country’s biodiversity exists within areas that are not protected and will, if its survival is to be assured along with national develop, need to be able to coexist with on-going human development.  This project will support the realization of this by providing a framework for the inclusion of biodiversity into the development planning, management and performance assessment mechanisms of local government organisations (LGOs). This will be achieved through working on the development of a national level framework to guide LGOs as well as developing the tools (including a Biodiversity Health Index) and capacity to implement it.  The project will also demonstrate how this approach can be achieved within the two pilot locations of Don Hoi Lord (Ramsar No 1099) in Samut Songkram Province and Bang Krachao an “urban oasis” within Samut Prakarn Province. In doing so the project will enhance conservation management of 69,618ha of land and marine area, as well as supporting the conservation of the habitats of a number of threatened species including the Great Knot (*Calidris tenuirostris)* (IUCN – VU), Bar-tailed Godwit (*Limosa lapponica)* (IUCN – NT), Eurasian Curlew (*Numenius arquata*) (IUCN – NT) and Asian Dowitcher (*Limnodromus semipalmatus*) (IUCN – NT), as well as a locally endemic earthworm (*Glyphidrilus* sp). | | | | **Programme Period: 2015 to 2019**  **Atlas Award ID: 00086180**  **Project ID: 00093511**  **PIMS No.: 5271**  **Start Date: September 2015**  **End Date: August 2019**  **Management Arrangements: NEX**  **PAC Meeting Date: 2 December 2015** |  | **Total Budget: US$ 9,318,904**  **GEF: US$ 1,758,904**  **Government: US$ 7,530,000**  **CSO: US$ 0**  **UNDP: US$ 30,000** |   Agreed by (BEDO):  Mr. Veerapong Malai, Ph.D, Director General & CEO  Date/Month/Year  Agreed by (UNDP):  Mr. Luc Stevens, UNDP Resident Representative  Date/Month/Year | |  |

# Table of Contents

Table of Contents 3

Table of Acronyms 5

1 Situation Analysis 6

1.1 Thailand’s Biodiversity and its Global Significance 6

1.2 Legislative and Policy Context 7

1.3 Local Government - Decentralisation and Deconcentration 9

1.3.1 Structure of sub-national government 9

1.3.2 Roles and Responsibilities of Local Government Organisations 10

1.3.3 Planning within the deconcentrated and decentralised systems 11

1.3.4 Local Government Budgeting and Finance 13

1.3.5 Performance Management Arrangements 14

1.4 Project Localities 15

1.4.1 Tropical Subtropical Moist Broadleaf Forests: South-eastern Asia: Thailand 15

1.4.2 Inner Gulf of Thailand Important Bird Area 20

1.4.4 Socio-economic context within Don Hoi Lord and Samut Songkram 22

1.5 Threats to Biodiversity and Root Causes 25

1.5.1 Threats within Target Areas 26

1.6 Stakeholder Analysis 30

2 Long-term solution, Baseline Project and Barriers 35

2.1 Long term solution 35

3 Strategy 40

3.1 Project Rational and Policy Conformity 40

3.2 Fit with GEF Focal Area and Programme 40

3.3 Rational and Summary of GEF Alternative 40

3.4 Project Objective, Outcomes and Outputs 43

3.4.1 Project Objective 43

3.4.2 Project Outcomes 43

3.4.3 Project Outputs and Activities 44

3.5 Risks and Assumptions 53

3.6 Cost Effectiveness 56

3.7 Stakeholder Analysis 57

3.7.1 Mainstreaming Gender 60

3.8 Expected Global, National and Local Benefits 62

3.9 Project Consistency with National Priorities/Strategies 64

3.10 Sustainability and Replicability 67

4 Results Framework 69

5 Total Budget and Workplan 73

5.1 Summary of Funds in US Dollars: 74

5.2 Budget Notes 75

6 Management Arrangements 79

6.1 At Central Level 81

6.2 At Local Level 82

7 Monitoring Framework and Evaluation 83

7.1 The Inception Phase 83

7.2 Monitoring and Reporting Responsibilities and Events 83

7.3 Independent Evaluations and Audits 85

7.4 M&E Work plan and Budget 86

8 Legal Context 87

9 Audit Clause 87

Annex 1: ToR of Key Personnel 88

Annex 2: Capacity Assessment Score Card 95

Annex 3. Social and Environmental Screening Template 103

SESP Attachment 1. Social and Environmental Risk Screening Checklist 107

Annex 4: Sustainable Livelihood Support Feasibility Assessment 111

Annex 5: Stakeholder Engagement Plan 113

Annex 6: Stakeholder Engagement During Project Document Development 118

Annex 7: GEF Tracking Tool 121

Annex 8: Co-Financing Letters 122

# Table of Acronyms

APR - Annual Project Review

APRC - Asia Pacific Regional Centre (UNDP)

BCH - Bio-safety Clearing-House

BEDO - Biodiversity-Based Economy Development Office

BHI – Biodiversity Health Index

BMA - Bangkok Metropolitan Administration

BoB - Bureau of the Budget

BSC - Balanced Scorecard

CBD – (United Nations) Convention on Biological Diversity

CCD - Community Development Department

CHM - Clearing-House Mechanism

DLA - Department of Local Administration

DO – Dissolved Oxygen

DoF - Department of Fisheries

DoPA - Department of Provincial Administration

DPA - Department of Provincial Administration

DTCP - Department of Public Works and Town and Country Planning

EPA – Environmental Protection Area

GAP – Good Agricultural Practice

GDP – Gross Domestic Product

GI – Geographical Indicator

IP – Implementing Partner

LAC – Local Advisory Committee

LDD - Land Development Department

LGO - Local Government Organisations

LPD – Local Project Director

LPO – Local Project Officer

MoAC -Ministry of Agriculture and Cooperatives

MoI - Ministry of Interior

MoNRE - Ministry of Natural Resources and the Environment

NBSAP – National Biodiversity Strategy and Action Plan

NDC – National Decentralisation Committee

NESDP - National Economic and Social Development Plan

NIM - National Implementing Modality

NRCT - National Research Council of Thailand

ONEP - Office of Natural Resources and Environmental Policy and Planning

OPDC - Office of the Public Sector Development Commission

PAO - Provincial Administrative Organization

PART - Performance Assessment Rating Tool

PB – Project Board

PCD – Pollution Control Department

PIR - Project Implementation Review

PLCUMPs - Participatory Land/coastal use Management Plans

PM – Project Manager

PMQA - Public Management Quality Award

PMU – Project Management Unit

PONRE - Provincial Office of Natural Resources and Environment

RBM – Result-Based Management

RFD - Royal Forest Department

RP – Responsible Party

SAO – Sub-district Administrative Organisation

SEAs - Strategic environmental assessments

SPBB - Strategic Performance Based Budgeting

TAO – Tambon Administrative Organization

# Situation Analysis

## Thailand’s Biodiversity and its Global Significance

With a total area of 513,115 km2, Thailand is one of the most biodiversity-rich countries in Southeast Asia. The country is located within two major bio-geographical regions – the Indochinese region in the north and the Sundaic region in the south[[2]](#footnote-2). The 15 mountain ranges throughout the country are Thailand's primary watershed areas, and the main river basins connected to the Mekong River, the Gulf of Thailand and Andaman Sea form a juncture of distribution for various plant species, such as temperate plant species, sub-alpine flora species from China and the Himalayas, tropical plant species from Indo-China and tropical species from other parts of Asia. In consequence, this area is one of the most species-rich communities in the world.

Thailand has about 15,000 plant species, representing 8% of the world’s total with forest area still covering close to 31.57% of the country’s total area[[3]](#footnote-3), with at least 18% comprised of conserved forests. Based on the recent update on the status of vertebrates of Thailand (Thailand red data) by the Office of Natural Resources and Environmental Policy (ONEP), there are 4,722 species of vertebrates classified into 336 species of mammals, 1,010 species of birds, 394 species of reptiles, 157 species of amphibians, and 2,825 species and fish[[4]](#footnote-4).

Continued pressure on the country’s resources through an expanding population, industrialization and increased demand for land has, however, put pressure on many of these species. With ONEP classifying 555 species of vertebrates as threatened (118 species of mammals, 118 species of birds, 49 species of reptiles, 18 species of amphibians, and 202 species of fish)[[5]](#footnote-5). These pressures are also being felt by the country’s flora with at least 1,424 plant species identified as threatened and endangered, of which 757 are endemic species[[6]](#footnote-6).

Table 1: Threatened Species within Thailand[[7]](#footnote-7)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Classification** | **Vertebrate status** | | | | | | **Total IUCN Red List** |  |  |  | **Total** |
| **EX** | **EW** | **Threatened** | | | | **NT** | **LC** | **DD** |
| **CR** | **EN** | **VU** | **Total** |
| Mammals | 4 | 0 | 13 | 32 | 73 | 118 | 57 | 30 | 153 | 31 | 336 |
| Birds | 2 | 1 | 44 | 59 | 65 | 168 | 47 | 126 | 713 | 0 | 1,010 |
| Reptiles | 0 | 1 | 16 | 17 | 16 | 49 | 27 | 62 | 267 | 15 | 394 |
| Amphibians | 0 | 0 | 0 | 4 | 14 | 18 | 4 | 13 | 108 | 18 | 157 |
| Fish | 1 | 6 | 23 | 64 | 115 | 202 | 96 | 61 | 2,455 | 100 | 2,825 |
| **Total** | **7** | **8** | **96** | **176** | **283** | **555** | **231** | **292** | **3,696** | **164** | **4,722** |

## Legislative and Policy Context

Thailand’s biodiversity is protected by a number of laws and regulations. Key legislation related to biodiversity include the Constitutions, the National Park Act 1961, National Forest Reserve Act 1964, Wild Animal Reservation and Protection Act 1992, Plant Quarantine Act of 1964 and Plant Quarantine Act (second issue) 1994, Animal Species Maintenance Act 1966, Importing and Exporting of Goods Act 1979, Enhancement and Conservation of National Environmental Quality Act 1992, and Plant Varieties Protection Act 1999.

The Constitutions of Thailand have specified that the State and all have the rights to a healthy and balanced environment and the duty to defend and conserve it. The Thai Constitution of 2007 Article 67 stipulated the right of a person to participate with State and communities in the preservation and exploitation of natural resources and biological diversity and in the protection, promotion and conservation of the quality of the environment for usual and consistent survival in an environment which is not hazardous to his health, sanitary condition, welfare or quality of life, and shall be protected appropriately. These commitments are central to the majority of Thai environmental legislation and form the basis of commitments to undertake on going conservation and preservation activities.

Thailand signed the Convention on Biological Diversity (CBD) in 1992 and ratified the instrument on 31 October 2003, becoming the 188th Contracting Party to the Convention on Biological Diversity on 29 January 2004. In spite of many problems and obstacles that have been encountered, Thailand has since adopted and implemented various policies, projects and activities in support of the Convention, including the National Biodiversity Policy for protection and restoration of conservation areas in 2009, the Country Management Plan (2008-2011) for promoting the sustainable use of biodiversity, and four National Biodiversity Strategies and Action Plans (NBSAPs). Key achievements of the national policies on biodiversity conservation include an establishment of practical guidelines to facilitate activities related to biodiversity impact assessment, sustainable use and access and benefit-sharing; criteria and regulations to control and mitigate threats from invasive alien species through quarantine measures; establishment of the Biodiversity Bureau that serves as a national focal point for access to and transfer of biological resources; mechanisms in place for access and benefit-sharing; as well as implementation of provisions of relevant laws and policies such as the Plant Varieties Act, Fisheries Act, and the Protection and Promotion of the Thai Traditional Medical Intelligence Act.

Since 1998, Thailand has formulated three consecutive NBSAPs which serve as “national policies, measures and plans on the conservation and sustainable utilization of biodiversity.” The third and fourth NBSAPs cover the period of the year 2008-2012. Under the third and fourth NBSAPs, national policies, measures and plans are grouped into 5 strategies and 17 action plans, which serve as a framework for implementing the NBSAP over a five-year period (2008-2012)[[8]](#footnote-8). The five strategies aim to: 1) protect the components of biodiversity; 2) encourage the sustainable use of biodiversity; 3) minimize threat to biodiversity; 4) promote research, training, education and public awareness and networking on biodiversity; and, 5) strengthen national capacity for implementing biodiversity-related international agreements.

The Fifth NBSAP, which will cover a 7-year period from 2015 to 2021, is being developed based on the 11th National Economic and Social Development Plan (2012-2016), Environmental Quality Management Plan 2012-2016 and other relevant national policies, the United Nations Decade on Biodiversity (2011-2020), and the Aichi Biodiversity Targets, particularly aiming to address the underlying causes of biodiversity loss through conservation, restoration and maintenance, and enhancement of, the benefits from biodiversity and ecosystem services by the year 2020[[9]](#footnote-9). An on-going process initiated in May 2011 will further update the NBSAP, which will include national targets for integration of the Aichi Biodiversity Targets into Thailand’s 11th National Economic and Social Development Plan (2012-2016) as well as to complement the 12th National Economic and Social Development Plan (2017-2021).

According to Thailand’s Fifth National Report to the Convention on Biological Diversity, increased protected areas of the country's landscapes and seascapes are among the major achievements toward the 2020 Aichi Biodiversity Targets. At least 20% of the marine and coastal areas in Thai waters have been designated as protected areas and at least 5 areas of wetlands of international importance have been designated as Ramsar sites. Terrestrial protected areas in Thailand cover 20.26% of the country’s total areas including 127 national parks (a total area of 62,198.86 square kilometers), 58 wildlife sanctuaries (a total area of 36,578.72 square kilometers), and 67 wildlife non-hunting areas (a total area of 5,233.04 square kilometers). There are additional 25 conservation areas being reviewed for the establishment as national parks, wildlife sanctuaries, or wildlife non- hunting areas. In addition, the country has 111 forest parks, 71 arboreta and 1,221 national reserved forests (a total area of 230,280.65 square kilometers), various types of forests and mangrove forests, and 4,500 aquatic flora and fauna preserved areas (a total area of 800 square kilometers).[[10]](#footnote-10)

Regarding threatened species, at least 10 endangered endemic species have been protected and restored in situ and increased in population. In addition, 98 areas were identified as important plant areas. Awareness-raising campaigns through various activities and media have promoted knowledge on biodiversity challenges. The Biodiversity Clearing-House Mechanism (CHM) and the Bio-safety Clearing-House (BCH) are fully operational and linked to one another.

To further strengthen these latter mechanisms, a number of Thailand's current initiatives also focus on biodiversity research, database development and capacity development. During 2008-2012, many biodiversity-concerned agencies developed and applied biodiversity database and taxonomic biodiversity information to support their activities on conservation and use of biological diversity, which is accessible to other agencies and the public. A few examples include database on flora specimen and biological diversity in some certain areas under the responsibility of National Parks Department developed by Thailand's National Research Council (NRCT) and linked to the Sirindhorn Museum and Department of Agriculture, the management system of biological diversity knowledge and information on forest biological resources by the Thai Royal Forest Department (RFD), database on reference plants, invertebrates, insects, fishes, reptiles, amphibians, birds and mammals developed by National Science Museum and linked to the network of Biodiversity-Based Economy Development Office (BEDO), taxonomy information of certain families of plants by Chiang Mai University, database on marine animals and plants developed by DMCR, and database on aquatic animals developed by Department of Fisheries and linked to the aquatic animal museum of Kasetsart University's Fishery Faculty. In addition, the Eighth National Research Policy Framework and Strategy 2012-2016 prepared by NRCT[[11]](#footnote-11) has increased opportunities for Thailand to produce and utilize high quality research and database management for a balanced and sustainable national development as well as to provide a solution to biodiversity conservation.

The Cabinet Resolution on 4 September 2012 mandated the Ministry of Natural Resources and the Environment (MoNRE), in collaboration with other relevant organizations and committees, to formulate the *Strategic Plan on Biodiversity 2011-2020*, focusing on all aspects of access and utilization of biodiversity for all related stakeholders as well as local communities’ right and fair and equitable benefit sharing. In response to global targets set forth in the Strategic Plan and the Aichi Biodiversity Targets, the Office of Natural Resources and Environmental Policy and Planning (ONEP) developed a long-term plan, the *Integrated Biodiversity Management Plan 2015-2021*, which was approved in principle by the National Subcommittee on the Convention on Biological Diversity on 2 October 2013 and was approved by cabinet on the 10th of March 2015[[12]](#footnote-12). The Master Plan comprises 4 strategies and 11 measures:

**Strategy 1: Integration of biodiversity values and management with participation from all levels**

* Measure 1: Promoting sustainable utilization of biodiversity
* Measure 2: Protecting and sharing of benefits derived from biological resources and genetic resources in fair and equitable manners
* Measure 3: Promoting research and building capacities in development of biodiversity-based economy

**Strategy 2: Conservation and restoration of biodiversity**

* Measure 1: Promoting and developing management of knowledge on biodiversity
* Measure 2: Developing database systems on biodiversity, in consistent with internationally recognized standards

**Strategy 3: Building capacity for utilization and sharing of benefits derived from biodiversity in accordance to the principles of green economy**

* Measure 1: Strengthening awareness and education on biodiversity
* Measure 2: Enhancing capacity in administration and management of biodiversity, and in implementation of related international agreements
* Measure 3: Promoting participation of local communities and relevant sectors in the conservation, restoration and sustainable utilization of biodiversity

**Strategy 4: Developing knowledge and database systems on biodiversity, in consistent with internationally recognized standards**

* Measure 1: Conserving, restoring and protecting ecosystems, species and genetic resources
* Measure 2: Conserving and restoring biodiversity at provincial, local and community levels
* Measure 3: Reducing threats to biodiversity

To facilitate implementation of the Integrated Master Plan on Biodiversity Management 2015-2021, the National Biodiversity Targets (2016, 2020 and 2021) and the National Biodiversity Action Plan (2015-2016) have been formulated with specific targets and indicators. The National Targets are set in 3 periods to measure progress against the 12th National Economic and Social Development Plan (2017-2021), the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets: the immediate targets to be met by the year 2016 (18 targets), the intermediate target to be met by the year 2020 (9 targets) and the final targets to be achieved by the year 2021 (13 targets). The Action Plan comprises 4 strategies and implementation plans on: 1) integrated and participatory administration and management of biodiversity; 2) wetland management; 3) research and development of bio-based economy; and, 4) management of knowledge and database systems on biodiversity.

The implementation of many of these laws, policies and programmes is also linked to and must interact with a process of decentralisation and deconcentration that has been on-going in Thailand, moving power and control from the centre to agencies and authorities closer to the community level.

## Local Government - Decentralisation and Deconcentration

### Structure of sub-national government

Thailand has undergone a process of deconcentration and decentralisation reform since the early 1990’s with a significant number of responsibilities now delegated to local governments. The State Administration Act BE2534 (1991) establishes three layers of administration, national, provincial and local. Under supervision and direction of the cabinet, the central line ministries and departments play major roles in policy formulation and application at the national and provincial level with representatives of all line ministries present at provincial level. To facilitate coordination of these line ministries Provincial governors, civil servants, are appointed by the Ministry of Interior (MoI) to coordinate activities at provincial level and to provide approval for large scale private investments, such as industry and agriculture, with technical support from line agencies. This mechanism represents what is often referred to as the administrative line (or deconcentration) with provincial and in some cases district representatives having a direct line of command going back to ministries and agencies at the national level (see Figure 1).

In addition to this system there is what can be referred to as the autonomous line (or decentralisation), which consists of elected local officials with this line of government divided into general and specific units. Under the general classification there are the (i) Provincial Administrative Organization (PAO, seventy-five units), (ii) Municipality (1,136 units), and (iii) Tambon Administrative Organization (TAO, 6,740 units)[[13]](#footnote-13) collectively these latter two bodies (which are at the same administrative level) can be referred to as Sub-district Administrations (SAOs). In the specific form there are two special units of local governments governing specific areas; namely, Bangkok Metropolitan Administration (BMA) and Pattaya City. These bodies fall under the responsibility of the Ministry of Interior’s (MoI) Department of Local Administration[[14]](#footnote-14) (DLA), and are composed of an executive branch appointed by the MoI and a council elected from local representatives and with an elected leader.

The current project focuses on the autonomous line of government and within this the general classification (PAOs and SAOs) and these will be referred to collectively as Local Government Organisations (LGOs).

Figure 1: Central, Provincial and Local Government Structure Thailand[[15]](#footnote-15)



### Roles and Responsibilities of Local Government Organisations

Under the Constitution of 1997 and the Decentralization Plan and Process Act of 1999, several tasks and responsibilities are mandated to these local government units providing them with autonomy in accordance with the principles of self-government and the will of the people. Under the Decentralization Plan and Process Act 1999 municipalities, TAOs, and Pattaya City shall perform the following tasks:

1. Local and community planning and development.
2. Promotion of local economic development, investment, employment, trade, and tourism.
3. Local public services provision; including local roads, walkways, public transportation system and traffic light engineering, public markets, ports and docks, waste treatment, water drainage system, public utilities, parks and recreation, garbage collection, pet controls, slaughtering, public safety, natural resource and environmental protection, disaster control, sanitation and cremation services.
4. Social welfare services provision; including education, social welfare for children and for the elderly and disabilities, primary health care and medical services, housing and restoration, arts and cultures.
5. Promotion of democratic values, civil rights, public participation, laws and order, and conflict resolution.

The PAO should carry out these following tasks:

1. Provincial development planning with respect to the principle of economic growth and efficiency.
2. Large-scale public services provision; the services that cannot be executed by any other smaller localities within a provincial territory. Their benefits should accrue to communities in a province-wide area. For example; province-scaled infrastructures, waste water treatment, solid waste disposal, and large public transportation.
3. Human services provision of public education, public health, social securities, and social welfare at the provincial level.
4. Natural resource and environment protection in inter-local government activities.
5. Promotion of trade and investment in a province, tourism, culture and art.
6. Provision of technical and financial supports to lower-tier local authorities.

While the PAO is a higher tier of government it has limited authority over the lower SAO level administrations. Rather the PAO is responsible for addressing trans boundary issues across the different SAOs.

### Planning within the deconcentrated and decentralised systems

#### Development Planning

Development planning within Thailand occurs through a top down and bottom up process with the administrative line providing a top down approach, while the autonomous line provides a bottom up approach, with integrated Provincial Plans supposedly providing the meeting point of these approaches. Within each of these approaches participation is intended to form a key element of the development process from participation on development of local development plans within LGOs and participation in development of Integrated Provincial Plans. Such processes however remain weak in many areas and can present a limitation to the quality of planning and the ability of it to meet the needs to local communities.

Within the administrative branch of government national level planning is undertaken in line with the National Economic and Social Development Plan (NESDP), with different regions highlighted for key development activities. Regions then also develop their own strategic cluster plans identifying key economic and social development issues. These strategic plans are then used as a guiding framework at the provincial level for the development of provincial plans.

At the provincial level provinces are required to develop Integrated Strategic Development Plans on a four year cycle with more detailed annual plans developed yearly by the province as a legal entity to gain access to budget from the Budget Bureau. The planning process is led by the office of the provincial governor with plans needing to be in line with the NESDP and Regional Plans (top down) as well as drawing on local and district plans undertaken by the administrative branch and the development plans of the SAOs and PAOs within the province (autonomous branch - bottom up). Strategic and annual plans are submitted to the Office of the Public Sector Development Commission (PSDC) as secretariat for the National Policy Committee for approval. To gain approval, plans must meet criteria related to linkages with national policy and a balanced coverage of all elements of development, as well as showing evidence of public participation in their development, with the document and process of its development reviewed by the Provincial Good Governance Committee. The majority of the integrated plans are, however, dictated by the operation of line ministries, which submit their sector based plans for inclusion within the integrated plan and represent by far the largest portion of the integrated plans budget.

At the local level within the administrative pathway Community Development plans are developed and linked to District development plans with planning facilitated by the Community Development Department (CDD) of the MoI. This process is informed by meetings with village committees and SAOs as well as data collected from household surveys. At the district level planning occurs through the District Development Committee.

Within *the autonomous system of local government,* established over the past 20 years, planning occurs at the village, sub-district (Tambon) and Provincial levels, with the SAO forming the lowest level at which budgets are centrally allocated. Planning at all levels should be participatory involving consultation with local communities and key constituent groups. Plans should also cover five main areas including:

* Infrastructure Development
* Economic Development
* Human and Social Development
* Political and Administrative Development
* Natural Resource and Environmental Development

Local administrations have the authority to increase the number of areas covered but should ensure all elements are covered. While planning is intended to be participatory and multidisciplinary, a combination of capacity, budgetary and political factors can reduce levels of participation and the level of vision within plans. In terms of capacity, many LGOs have limited technical and administrative capacity to work across a range of issues and often have limited awareness of environmental issues or participatory processes. From a budgetary perspective while core operational budgets are guaranteed funds for additional development activities or new functions are dependent on grants and extensions in finance (see Section 1.3.4) as such these are often limited in number and in many cases are not implemented due to a lack of finance. Local development activities are often also highly politicised with elected officials keen to prioritise high profile infrastructure or development projects that can show results within an election cycle as opposed to longer term environment or development activities that may be less visible, take longer to see results or focus on protection of an existing status as opposed to driving change.

The PAO is responsible for developing a 3year Provincial Development plan (compared to the Provinces Integrated Plan which is on a 4 year cycle). These plans as well as the annual plans should present key activities across the province. As PAO’s have no immediate geographical area their plans focus on trans boundary issues that no individual SAO can address or issues that the SAOs have requested the PAO to address.

#### Land/coastal use and Spatial Planning within Thailand

Spatial planning within Thailand is led by the MoI’s Department of Public Works and Town and Country Planning (DTCP) and is guided by the Town and Country Planning Act 1975. At the national level a national spatial plan is developed based on the National Economic and Social Development Plan. Plans are then developed for each administrative area including regions, provinces, and districts with Town and specific plans then developed for key areas. These plans provide guidance on types of development permitted within different areas and can set regulations for management of urban development. The process is however still in development with information from the DTCP indicating that detailed plans for only 26.6% of the country had been developed by 2013 although this is a marked increase from the reported 2.8% in 2001[[16]](#footnote-16) with the majority of this covering the main urban areas within Thailand.

Table 2: Spatial Planning Hierarchy in Thailand[[17]](#footnote-17)

|  |  |  |
| --- | --- | --- |
| **Stages of plan** | **Plans** | **Responsible authorities** |
| National | **Policy Plan**: National Economic and Social Development Plan | National Economic and Social Development Board (NESDB) |
| **Spatial Plan**: National Spatial Development Plan | Department of Public Works and Town &  Country Planning, Ministry of Interior (DTCP) |
| Regional | Regional Spatial Development Plan (6 regions) | Department of Public Works and Town &  Country Planning, Ministry of Interior (DTCP) |
| Sub-regional | Sub-regional Plan | Department of Public Works and Town &  Country Planning, Ministry of Interior (DTCP) |
| Provincial | Comprehensive Plan | Department of Public Works and Town &  Country Planning, Ministry of Interior (DTCP) |
| Town | Comprehensive Plan | Department of Public Works and Town &  Country Planning, Ministry of Interior (DTCP) |
| Specific area | Specific Plan | Department of Public Works and Town &  Country Planning, Ministry of Interior (DTCP) |

### Local Government Budgeting and Finance

Revenue for local government comes from three main sources, locally levied revenues, shared taxes and grants (see table 2 for further information on these). The Determining Plan and Process of Decentralisation Act 1999 originally stated that by 2001 20% of government revenue should go to local government and that this should increase to 30% by 2006[[18]](#footnote-18). This target was not achieved with revenue plateauing at approximately 26%. Revisions to the act increased the target share to 35% and the minimum to 25% but did not specify a date by which the upper target should be met.

In order to gain access to these funds LGO plans must be reviewed, initially by the District Chief then by the Provincial Governor’s office and subsequently must pass through the MoI’s DLA, which, is responsible for budget allocation. While basic administrative budgets are assured (estimated to account for approximately 40% of local government allowance) funds to undertake specific projects (related to Grants in Table 2) are based on a more discretionary process. These discretionary funds fall under specific and general grants. The general grant is available for local government spending in line with its own priorities. Specific grants relate to areas, which are defined by the National Decentralisation Committee (NDC) in consultation with line ministries and are set areas in which money must be spent. Efforts are currently being made to reduce the size of these contributions relative to general grants to further reduce central control of budget expenditure and provide local governments with more autonomy. Opportunities do, however, exist for such special funds to be available on a voluntary basis to address issues that or of national or regional importance such as watershed management or environmental conservation.

Within the grants there are higher levels of discretion within how much will be allocated to each SAO and allocations can be revised based on performance of LGOs as well as political reasons.

Table 3: Local Authority Sources of Funds[[19]](#footnote-19)

|  |  |  |
| --- | --- | --- |
| **Source of Income** | **Description** | **Average % of Annual Budget** |
| Locally levied revenues | Includes property and land development tax the unit values of which are controlled centrally as well as license fees, fines and income from assets. | 9% |
| Shared Taxes | Proportion of some taxes collected by central government (e.g. Value added Tax) are returned to local administrations – based on their contributions to their collection. | 51% |
| Grants | Allocated based on population size and need for specific services. There are also specific grants allocated by DLA for specific purposes and are approved following parliamentary debates. | 40% |

### Performance Management Arrangements

Performance management systems have gained increasing prominence within Thailand since the establishment of the Office of the Public Sector Development Commission (OPDC) in 1999, the State Administration Act of 2002, and the Royal Decree on Good Governance in 2003. The OPDC established a results-based management (RBM) approach, in 2003, to measure and drive performance within government ministries, departments and the 75 provincial administrations. At the beginning of the 2004 fiscal year, all government agencies were required by the Cabinet to join in the system of the performance agreement and measurement from which a series of key performance indicators were used to set target goals.

Performance within these systems is measured through a balanced scorecard (BSC), which includes four elements: effectiveness of strategic plan implementation, efficiency of public work, quality of service delivery, and organization development as a tool. In addition, the Cabinet also approved the principle and procedures for using incentive schemes to stimulate improvement of public sector performance.

These efforts have shown results, despite encountering a wide range of challenges[[20]](#footnote-20). These successes have resulted in further efforts to develop integrated performance management systems with efforts being led by central government. The OPDC has continued its work on annual performance agreements across various levels of government based on the balanced scorecard (BSC) approach and Public Management Quality Award (PMQA). The Bureau of the Budget (BOB) has implemented Strategic Performance Based Budgeting (SPBB), including a Performance Assessment Rating Tool (PART). In addition, the new Civil Service Act has provisions relating to the merit principle through performance management (including appraisal) of individual civil servants and the development of an HR scorecard for individual ministries and agencies increasingly reflects an adoption of results based approach. Individual ministries, agencies and sub-national governments also have their specific internal RBM performance indicators and criteria in achieving sectoral targets with a mapping study undertaken in 2010 identify 11 different RBM mechanism in place[[21]](#footnote-21).

While environmental issues do feature within many of these assessments it most commonly falls within a broader category related to service delivery and forms only a small element of the assessment process. This only differs in areas where provinces or agencies set specific environmental targets against which they will be assessed.

LGOs have remained outside of this system to a large degree as their autonomous nature has decoupled them from the linear hierarchy of the civil service. The DLA has, however, established an annual performance assessment process for LGOs. Through this an annual monitoring team assesses the performance of each LGO across four criteria 1) administration and management 2) personnel and council administration 3) finance administration, and 4) public services[[22]](#footnote-22). Within the Public Services component of this assessment there are 16 criteria covering all elements of public service delivery from water and electricity to education and tourism. One of these criteria is Environmental and Natural Resource Management under which there are indicators relating to the *development of knowledge on environment* and the *protection of natural resources*. LGOs can add additional element to these assessment processes linked with objectives set within their development plans and the objectives of the Provincial Development plan. Scores achieved from assessment of each of the four components and their criteria and indicators are used to assess performance of LGOs and provide a basis for allocation of discretionary budgets as well as bonus allocations for staff within both the executive and administrative arms of the local administrations[[23]](#footnote-23).

LGOs also have performance management agreements with the Office of Provincial Governor within their province regarding efforts to achieve the Provincial Integrated Development Plan[[24]](#footnote-24) through delivery of their own Local Development Plans. These agreements along with the requirements of alignment of development plans, present a two way link to ensure that the two lines, and levels of government are working towards common goals and are undertaking mutually supporting activities.

Work has also been conducted on developing performance assessment mechanisms within LGO management systems in particular with regard to the implementation on infrastructure projects that represent large proportions of LGO budgets. These approaches are intended to improve the capacity of LGOs and other stakeholders to identify both the effectiveness of implementation of infrastructure projects and to identify the economic, social and environmental benefits and impacts that they create. Research in this area has shown LGOs are keen to engage in such systems but they remain under development[[25]](#footnote-25).

## Project Localities

### Tropical Subtropical Moist Broadleaf Forests: South-eastern Asia: Thailand[[26]](#footnote-26)

The tropical and sub-tropical broadleaf forest eco-region of Thailand, stretches from the freshwater swamp forest in the lowland alluvial plains of the Chao Phraya River in the south, some 400km north through the river’s major tributaries[[27]](#footnote-27). The area can be roughly divided into two main areas - the Lower Central Plain, which extends north as far as the province of Ang Thong, consists of Quaternary deposits of silt, of 15-30 m depth, overtopping the soft marine clays laid down when the area was once a huge bay of the South China Sea, about 6,000 to 8,000 years b.p.. The area is flat and low lying with an average elevation of about 2 m above mean sea level. To the north of this is the Upper Central Plain which extends north up the Chao Phraya River and lower parts of the valleys of the Ping and Nan rivers and lies at >20 m above sea level. This plain was never subject to significant tidal flooding.

The area has a moist monsoonal climate, receiving approximately 1,400 mm rainfall per year. Mean maximum and mean minimum temperatures are around 33°C and 24°C, respectively, for Bangkok.

The lower plain has seen extensive conversion and alteration beginning from the establishment of Bangkok within the area by the Siamese King in 1782. It is now characterized by extensive paddy cultivation and urban and industrial developments with only small pockets of remnant forest or non-hunting areas remaining. Habitat conversion has resulted in declines or extinctions in key mammal and bird species endemic to the region although some migratory or large range species still pass through the eco-region particularly within its coastal areas including the globally near-threatened Asian openbill (*Anastomus oscitans*), currently scattered in four or five colonies in the ecoregion and thought to number more than 10,000 pairs. Other large water birds including painted stork (*Mycteria leucocephala*), spot-billed pelican (*Pelecanus philippensis*), and black-headed ibis (*Threskiornis melanocephalus*), which probably formerly bred, are annual visitors, probably entering the country from Cambodia. Rarely adjutants (*Leptotilos spp*.) also occur as nonbreeding visitors. The area supports significant concentrations of the globally near-threatened grey-headed lapwing (*Vanellus cinereus*) and significant wintering and breeding populations of water birds including egrets (*Egretta spp*.).

#### Bang Krachao

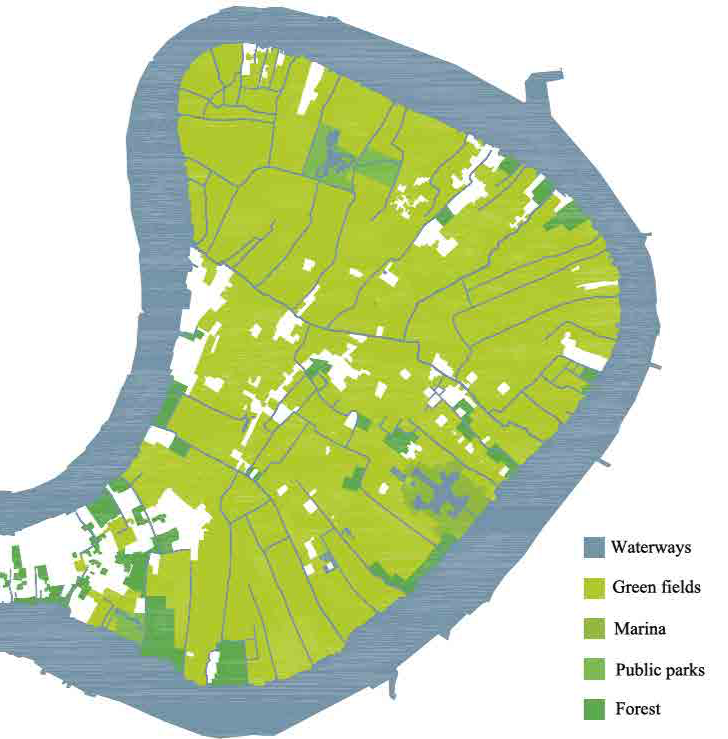
*Bang Krachao*, located in Phra Padaeng District, of Samut Prakarn Province, is a wetland area, covering 6 sub-districts (or Tambons) with areas of 11,819 rai (1,819 ha). Lying within a bend of the Chao Phraya River it is considered the last of the remaining green belt of the Greater Bangkok Metropolitan Area. The area contains traditionally farmed wetland areas as well as small pockets for flooded forest representative of the broader eco-region.



Figure 2: Location of Bang Krachao within Samut Prakarn

Preservation of the ‘green nature’ and biodiversity of the area has been supported by a number of conservation efforts with the area declared an area of green space by Cabinet in 1977. To support this a strict local planning and building code was introduced and ONEP embarked on a land acquisition program that eventually resulted in the acquisition of about 204 ha (or 1,275 rai; about 10% of the total area of Bang Krachao). Since 2005, these lands have been under the care of the Royal Forest Department (RFD). A part of the conserved areas (200 rai or 32 ha) is the Si Nakhon Khuean Khan Public and Botanical Park established in 2006 as a public park for recreational and exercise as well as for studying the ecological system of the local flora and fauna. The Park is a protected area under the royal initiative of His Majesty the King Bhumibol Adulyadej and has become a model of integrating conservation and public access, based on the Royal thought of HRH Princess Maha Chakri Sirindhorn, and support from local communities and local governments. In addition, the Chaipattana Foundation (by H.R.H. Princess Maha Chakri Sirindhorn), which is one of the most influential organizations for sustainable development in Thailand, has been continually involved in the park conservation and operation. These conservation and management efforts have helped maintain a high level of green area (forest, agriculture, and vacant plots) with this covering 74% of the Bang Krachao area in 2010[[28]](#footnote-28).

**Figure 3: Bang Krachao Tambons and Green Spaces**

The maintenance of, relatively, high levels of forest cover and persistence of more traditional and low impact agricultural techniques has helped the area to maintain a high level of biodiversity including 366 flora species and 53 bird species, 6 mammal species, 36 reptile species, 10 amphibian species, 67 freshwater fish as well as a high diversity of invertebrates including 62 species of butterfly, 10 of dragonfly, and 58 other insect species[[29]](#footnote-29). Recent assessments have also highlighted the potential unique make up of some of the invertebrate species with a species of earthworm (*Glyphidrilus* sp) thought to be locally endemic recently identified[[30]](#footnote-30). Further assessment may also identify more unique species with the area located on the transition between fresh and brackish water and maintaining a salinity gradient from the outer edges of Bang Krachao (adjacent to the river) to the central areas that leads to a high diversity of environmental conditions for invertebrates. Equally the area’s location as a key point of forest cover on a major flyway for migratory birds makes the use of the area by rare species such as the Fairy Pitta (*Pitta nympha*), and Siberian Thrush (*Geokichla sibirica*) not unlikely[[31]](#footnote-31).

Due to tidal effects from nearby Gulf of Thailand, the banks of the ‘island’ consist mainly of mangrove and mangrove-associated species including *Sonneratia caseolaris*, *Hibiscus tiliaceus*, *Thespesia populnea*, and *Acanthus ebacteatus*. The inner part of the island, with limited influence from seawater, is dominated by freshwater swamp forest. Dominant tree species of this type of forest are *Xanthophyllum lanceatum*, *Cretera magna*, *Lagerstroemia speciosa*, *Elaeocarpus hygrophilus*, *Minagyna diversifolia*, *Syzygium spp*., *Barringtonia aculargula sp*. *spicata*, *Erythrina variegata* and *Saraea indica*. The area is renowned for its birdlife and the following rare species are found: Pink-necked Green Pigeon (*Trenon vernans*), Stork-billed Kingfisher (*Pelargopsis capensis*), Greater Rachet-tailed Drongo (*Dicrurus paradiseus*), Green-billed Malkoha (*Phaenicophaeus tristis*), Laced Woodpecker (*Picus vittatus*), Malayan Night Heron (*Gorsachius melanophus*), Narcissus Flycatcher (*Ficedula narcissina*), Ruddy Kingfisher (*Halcyon coromanda*), Northern Boobook (*Nixon japonica*), Yellow-rumped Flycatcher (*Ficedula zanthopygia*), Mugimaki Flycatcher (*Ficedula mugimaki*), Forest Wagtail (*Dendronathus indicus*) and Black Baza (*Aviceda leupholes*).

* + - 1. ***Agriculture***

Agriculture within Bang Krachao is a mixture of subsistence and commercial agriculture that forms part of community members’ livelihood strategies. Assessments of levels of land ownership indicate that the majority of participants own their land with a smaller number cultivating land on a verbal or formal lease agreement often on a three yearly cycle. While only 10% rely purely on agriculture the remainder utilize agriculture as one of a number of income options within the household[[32]](#footnote-32).

Within the commercially focused production fruit trees are the dominant crop with over 240ha utilised for fruit tree cultivation with mango (covering 77ha, and engaging over 600 households) and coconut (covering close to 100ha, and engaging over 445 households) being the most popular species[[33]](#footnote-33). Mango production is of a local variety ‘Nam Doc Mai’ (*Mangifera indica*) which is considered to be of high quality.

BEDO has also worked to support development of a premium mango product from Bang Krachao. Working with farmers and the Ministry of Agriculture and Cooperatives (MoAC) they have trained a number of mango producers in improved techniques including organic production and fruit crop quality control with nine farmers obtaining the MoAC’s Good Agricultural Practice (GAP) certificate. In combination with this efforts have been made to raise the profile of the product and are working to identify how to obtain a Geographical Indicator[[34]](#footnote-34) for the mangos. At present this has resulted in demand outstripping supply for the premium mangos and prices increasing by approximately 30%. Coconut production conversely is suffering a downturn with many trees infected with a parasite that is killing large stands of coconut trees within the area.

More intensive ornamental plant production, for the cosmetics industry as well as specific florists within Bangkok, is also popular within the area although this covers a much smaller area of just over 55ha with Codyline the most popular species with over 37ha in cultivation by 110 farmers[[35]](#footnote-35) (see **Table 4** on areas of agricultural cultivation.

**Table 4: Agriculture in Bang Krachao 2012-13[[36]](#footnote-36)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sub-district | Total area (ha) | Agricul- tural area (ha) | No. of house- holds | Agricultural area (ha) | | | | | | |
|
| Mango | Coconut | Banana | Rose apple | Betel nut | Lemon | Ornamen- tal plants |
|
| Bang Krachao | 289.4 | 79.52 | 87 | 8.8 | 25.76 | 8.48 | 6.08 | 3.52 | 4.32 | 23.52 |
|
| Bang Kor Bua | 248.8 | 115.7 | 187 | 17.6 | 18.24 | 7.2 | 3.04 | 3.84 | 3.2 | 11.36 |
|
| Bang Krasob | 236.2 | 106.6 | 219 | 10.88 | 23.84 | 4.8 | 1.92 | 0.32 | 3.36 | 11.52 |
|
| Bang Nam Phueng | 310.1 | 49.92 | 125 | 20.48 | 11.52 | 8 | 1.76 | 0.32 | 1.6 | 5.6 |
|
| Bang Yor | 361.6 | 60.32 | 187 | 16.16 | 19.04 | 12.96 | 6.88 | 0.48 | 3.68 | 4.48 |
|
| Song Kanong | 188 | 10.24 | 15 | 3.2 | 2.24 | 2.24 | 0.32 | 0.32 | 0.96 | 0.32 |
|
| **Total** | **1634** | **422.1** | **820** | **77.12** | **100.6** | **43.68** | **20** | **8.8** | **17.12** | **56.8** |

All agricultural activities are, however, currently under pressure from continued urbanization and poor management of the hydrological system within the area. Challenges with regard to water management are multiple including poor management of flood gates which is preventing the flow through of fresh water during times of high river flow, infilling of canals by residents resulting in reduced water flow, and increased discharge of waste water into the water ways by residents (as population density and levels tourism increase) resulting in increases in the levels of dissolved oxygen in the water. These challenges are making increasing areas of land marginal for agriculture reducing yields from fruit trees and in some areas killing the trees.

A recent assessment of the potential for farming within the area identified a number of strengths and weaknesses within the sector within Bang Krachao:

Table 5: SWOT Analysis of Agriculture in Bang Krachao[[37]](#footnote-37)

|  |  |
| --- | --- |
| **Strengths:**   1. *High quality product* – due to species selection and unique growing conditions, many farmers also practice traditional techniques with low chemical inputs. 2. *Highly committed farmers* – those that are engaged in agriculture have specifically chosen to maintain this lifestyle, as due to their proximity to Bangkok multiple other employment options are available. As such they are committed to ensuring good standards and a good product 3. *Access to markets* – with proximity to Bangkok there is excellent market access particularly for ‘premium’ products. | **Weaknesses**   1. *Ageing population of farmers* – the majority of the farmers in the area are over 50 and have been farming all their lives. There is limited uptake from the young generation. 2. *Relatively unknown location for products* – limited recognition of the “Bang Krachao” brand reduces ability to maintain a price premium. 3. *Limited organization and networks with government* – few farmers are effectively networked with each other, NGOs or government officials and as such do not receive training or support and have limited impact within local level decision making. 4. *Marginal conditions make production vulnerable* – the marginal conditions that provide unique flavours require careful maintenance are require other groups to ensure that they maintain water quality within the area |
| **Opportunities**   1. *Increasing national and global concern about environmental protection* – Bang Krachao is a high profile area with Royal interest and close proximity to decision makers. Further support from senior figures will help to ensure that the area is protected allowing agriculture to continue as well as increasing the profile of agriculture products from the area. 2. *Diversification on agriculture related income* – there is on-going interest from urban population to gain a taste of the rural life. Provision of opportunities for urban groups to visit and work on the farms would support income generation as would providing access to universities and schools for education and research visits. 3. *Strengthening of certified farming* – development of certifications for environmental standards will help to develop a price premium for goods. 4. *Development of tourism* – the area is unique in its biodiversity, cultural practices and proximity to Bangkok, and Royal support making an excellent tourism destination for international and domestic visitors. Helping to also raise the profile of agriculture in the area and help ensure the areas protection from urban development. | **Threats**   1. *Urbanisation* – increasing land prices are putting pressure on farmers, increasing lease costs for those that rent land and putting pressure on options to sell. Increasing urbanisation is also changing the environmental considerations within the areas and putting further pressure on the hydrological system. 2. *In effective application of planning laws* – this is resulting in declines in agricultural area and increased urbanization with the associated challenges noted above. 3. *Climate change* – the marginal farming conditions within the area are vulnerable to extreme weather events. 4. *Declining affinity to farming* – a reduction in interest amongst the local population as well as Thailand more widely is putting increasing pressure on the sector, to maintain participant levels and commitment to protect farming systems. |

#### Tourism

Tourism and eco-tourism within Bang Krachao has been a growth area over the past decade but remains an industry in development. Efforts to promote tourism have focused on development of bicycle tours, home stays and arguably most effectively the establishment of a floating market in Ban Nam Pheung in 2003. Development of these activities have also been linked with an increase in public, particularly international tourist, awareness of Bang Krachao as an urban oasis that makes a good day trip when in Bangkok. The combination of increased facilities and increased publicity has led to a rapid increase in tourism numbers particularly within the past couple of years with numbers increasing from over 93,000 in 2013 to over 190,000 in 2014[[38]](#footnote-38). While the majority of these visitors travel to the floating market and thus their engagement in Bang Krachao is limited, only purchasing products rather than utilising the areas resources, there remains a risk that the expansion of tourism if not well managed will result in degradation of the area, while also noting that current day tripping tourists often do not spend much within the area rather utilising transport and guides provided from Bangkok and returning home in the evening. This latter issue can also be exemplified by the number of tourism operators offering bike tours with the majority (in the region of 10) operating from Bangkok and only a small number (two) based within Bang Krachao itself[[39]](#footnote-39).

As such tourism currently represents a potential area for income growth for local residents as well as a potential threat should further development not be sustainably managed.

### Inner Gulf of Thailand Important Bird Area

The Inner Gulf Important Bird Area (IBA) comprises a 195 km-long section of the coastal zone of the Inner Gulf of Thailand, from Laem Phak Bia in the west to Chonburi in the east. Four major rivers, the Mae Klong, Tha Chin, Chao Phraya and Bang Pakong, discharge into the Gulf of Thailand along this stretch of coastline creating extensive areas of intertidal habitats. It is estimated there are 23,000ha of intertidal mudflats within the area, which extends over 2km from the shoreline in places. The area had previously supported significant areas of mangrove although these have be extensively converted to other land/coastal uses, and, currently, less than 1,600 ha of mangroves remain, much of which consists of regenerating Avicennia-dominated scrub. Conversion has been to anthropogenic habitats, including at least 10,600 ha of saltpans and from 40,000 to 80,000 ha of shrimp ponds, many of which are abandoned. While the saltpan areas present a modified habitat they also play host to a range of wading and migratory species who use the flats for foraging during periods of high tide.

The high population densities for the area make strict conservation unrealistic with efforts being made to integrate conservation and continued livelihood development through preservation of key habitat areas, maintenance of land/coastal uses that are in line with species conservation (such as traditional salt farming) and reductions in further habitat destruction. The Khok Kham Nature Conservation Community, supported by Bird Conservation Society of Thailand (BCST), has implemented on-going initiatives and outreach programmes to encourage nomination of wetlands in the Inner Gulf of Thailand at Khoke Kham Sub-district in Samut Sakorn Province to be designated as Ramsar Site. Meanwhile, ONEP has promoted conservation of biodiversity and ecosystems in the designated Don Hoi Lord Ramsar Site (2001), which covers the estuary of the Mae Klong, in Samut Songkram Province. The areas fertile mud beaches provide a habitat for various species, especially razor clam (*Solen regularis*) and a wide range of wading bird species.

* + 1. **Don Hoi Lord**[[40]](#footnote-40)

Don Hoi Lord, located in Muang Samut Songkram District, is a rare type of natural wetland for Thailand, comprising sandbars at the mouth of the Mae Klong River with a vast area of intertidal mudflats, an extremely productive location for the Hoi Lord (*Solen regularis*), an economically important mollusc unique to the area. The name of the area actually comprises of two Thai words “Don” which means high land and “Hoi Lord” which means razor clam. The characteristics of Don Hoi Lord are large sandbars, which are made by natural sedimentation. Within the main river mouth area there are 5 sandbars aggregated as Don Hoi Lord (Figure 4).

The sandbars are characterized by dynamic coastal features of the Bight of Bangkok in the Gulf of Thailand, formed from river, and marine sediments, extending 8 km from the shore with a 1% slope. Mangroves are present along the shoreline on the east side. A variety of shellfish are found in the area of the bar including Hoi Lord (razor clam), Hoi Lai (undulated surf clam), Hoi Puk (Ridged Venus clam), Hoi Pak Pet (tongue shell), Hoi Khraeng (cockle).

In 2001 the site was designated as a Ramsar site (number 1099) due to its importance as a unique wetland within Thailand and due to the presence of threatened species. Despite this designation there remains no comprehensive biodiversity information on the area with assessments of bird species focused on specific sites with the key species identified below coming from assessments within one specific sub-district while reports from other sub-districts add other species including sightings of Asian Dowitcher (*Limnodromus semipalmatus*) (IUCN Near Threatened):

Table 6: Key Bird Species Don Hoi Lord[[41]](#footnote-41)

|  |  |  |
| --- | --- | --- |
| **Species** | ***Scientific Name*** | **IUCN Status** |
| Bar-tailed Godwit | *Limosa lapponica* | *Near Threatened* |
| Black-capped Kingfisher | *Halcyon pileata* | *Least Concern* |
| Black-eared Kite | *Milvus lineatus* | *Least Concern* |
| Brown – headed Gull | *Larus brunnicephalus* | *Least Concern* |
| Caspian Tern | *Hydroprogne caspia* | *Least Concern* |
| Common Greenshank | *Tringa nebularia* | *Least Concern* |
| Common Kingfisher | *Alcedo atthis* | *Least Concern* |
| Common Redshank | *Tringa totanus* | *Least Concern* |
| Common Sandpiper | *Actitis hypoleucos* | *Least Concern* |
| Eastern Black – tailed Godwit | *Limosa melanuroides* | *Near Threatened* |
| Eurasian Curlew | *Numenius arquata* | *Near Threatened* |
| Great Knot | *Calidris tenuirostris* | *Vulnerable* |
| Lesser Sand Plover | *Charadrius mongolus* | *Least Concern* |
| Little Ringed Plover | *Charadrius dubius* | *Least Concern* |
| Pacific Golden Plover | *Pluvialis fulva* | *Least Concern* |
| Red-necked Stint | *Calidris ruficollis* | *Least Concern* |
| Western Osprey | *Pandion haliaetus* | *Least Concern* |
| Whimbrel | *Numenius phaeopus* | *Least Concern* |
| Whiskered Tern | *Chlidonias hybrida* | *Least Concern* |

### Socio-economic context within Don Hoi Lord and Samut Songkram

Don Hoi Lord is situated within Samut Songkram province. The province, 63 km southwest of Bangkok along Highway No. 35, is a coastal province at the mouth of the Mae Klong River. It is the smallest of all Thai provinces and occupies an area of 416 km2 (41,600 ha) and is administratively divided into 3 districts: Muang Samut Songkram (pop 103,000), Amphawa (pop 55,000), and Bang Khonthi (pop 34,000). The area is a low lying and characterized by a high number of canals with over 300 natural and manmade canals connecting with the river[[42]](#footnote-42).

The main careers of people (approximately 80%) are agriculture and fishery as well as labour in industry. Agricultural products include grapes, lychee, pomelo, guava and coconuts, white rice and salt farming are also common on low-lying land. The area has also seen an increase in levels of aquaculture with levels fluctuating over the past decade due to varying levels of efficiency and economic planning. These aquaculture projects have been responsible for significant conversion of mangrove areas as well as high levels of pollutant discharge into the canal and estuary system.

The province has undertaken a number of environmental reforms with UNDP citing Samut Songkram as a “showcase of the sufficiency economy.” The province has also become a prominent tourism destination, capitalizing on its well-preserved natural and cultural heritage and proximity to Bangkok.



Figure 4: Sandbars of Don Hoi Lord (adapted from DoF (1995) and Suwanna (2003)

#### Razor Clam Fisheries in Don Hoi Lord

The razor clam fisheries of Don Hoi Lord play an important part in the local economy, with a large number of community members engaging in razor clam collection at different points. One study suggested as many as 2,000 fishermen are engaged in the collection of razor clams[[43]](#footnote-43) on a part time and full time basis with as many as 260 fishermen harvesting razor clams each day during favourable tidal stat[[44]](#footnote-44). While traditionally harvested on a subsistence basis harvesting has become increasingly commercial focused on supplying the growing tourist industry within the area (see Figure 5) as well as supporting a growing trade in razor clam to restaurants in Bangkok and the surrounding provinces[[45]](#footnote-45).

While there are large number of fishermen who may engaging in harvesting on an ad hoc basis the number of regular participants has been seen to decline over recent years, potentially in line with decreasing clam numbers, with reports showing the average number dropping from 150-200 in 1996, to 80 in 2005 to numbers between 20 and 30 in 2010[[46]](#footnote-46). These smaller numbers are mainly based locally to the mud flats with many also having strong social links as well as regular contact[[47]](#footnote-47).

There are five main methods used by fishermen to harvest the Razor clams (shown in Box: 1). LGO regulations in 1987 however outlawed two of these methods (method three and four) due to their detrimental impacts on the razor clam population as well as broader shellfish stocks. While this has resulted in a significant reduction reports indicate that these techniques are still used intermittently by some fishermen when operating at night or at times when there is a low density of razor clams[[48]](#footnote-48).

Box: 1: Methods of Collecting Razor clams (adapted from Worrapimphong 2005)

**Method I: Dipping lime;** this method is the original and traditional method. Local fishermen search for razor clam hole by using fingers to knock on sand dune surface. If a razor clam is near by, it will eject water from siphon thorough the hole then local fishermen has known its location. Consequently, a small bamboo stick dipped in lime is use to poke into the razor clam hole. The razor clam will react and jump up from its hole, and therefore it is caught by fishermen.

**Method II Applying lime**; local fishermen apply lime on the wet ground where razor clams live around 1 m2 Every razor clam in that area will react and jump up from their holes.

**Method III Applying lime solution**; local fishermen dissolves 1-2 kg of lime in water and apply the solution on the ground more than 2 m2. Every razor clam in that area will react and jump up from their holes. This method is similar to method II but it can cover much more area and effectiveness.

**Method IV Applying acetylene solution**; local fishermen apply acetylene solution on the ground then every razor clam will react and jump up from their holes. This method is similar to method II and Method III but is much more effective. However, acetylene solution has more impact to other species than lime methods.

**Method V Digging**; this method is the best method for collecting razor clam because no chemicals are involved. However, digging method is unfavorable because it uses more labor and the production is not as high as the other methods.

The productivity of the Razor clam harvest has been studied over a number of years and has shown a decline in the density of Razor Clams per m2 with numbers falling from 4.6 (+/- 3.7) clams/m2 in 1996-7, 5.71 clams/m2 in 2004/2005[[49]](#footnote-49), and to 0.51 (+/- 0.31) clams/m2 in 2008/9[[50]](#footnote-50). Numbers have also been shown to vary over the course of a year with harvests per day of effort decreasing considerably around the beginning and end of the calendar year and with harvests highest during the middle of the year. Prices gained for clams also vary inversely with supply resulting in a smoothing of income across the year with average incomes falling in the region of 400 baht per day although variations do range from around 250 to 520 baht per day[[51]](#footnote-51).

The on-going reductions in razor clam numbers are however creating a varied market with traders starting to import razor clams from outside the area to meet demand when supply is low. This is resulting in a reduction in price peaks for the razor clam but is also due to insufficient supply of ‘authentic’ Don Hoi Lord razor clams, which are seen by many as superior. Over harvesting of razor clams has also resulted in reductions in the size of clam harvested, which, can be seen as reducing the quality of the clam provided and thus the willingness of traders to provide a premium price. Such changes are impacting the livelihoods of some of the most resource poor and vulnerable members of the community in the form of local clam harvesters.

#### Tourism

The province of Samut Songkram has been developing a tourism industry based on its ‘traditional lifestyle’ (rural communities, traditional houses, floating markets, traditional agriculture and seafood) and natural beauty (fireflies, canals, mangrove forests, birdlife and monkeys). Much of this development has been centred around community tourism with operators in the area winning awards for the Most Outstanding Community-based Tourism Award (Ban Bang Phlap Agrotourism Center, Ban Hua Hat Tourist Center, Klong Khlon Ecotourism Community Enterprise, and Tha Kha Home Stay)[[52]](#footnote-52).

The most prominent attraction is currently the Amphawa floating markets, which combined with the fire fly populations of surrounding areas, is said to attract in the region of 100,000 tourists every weekend. These increasing numbers have also been supported by increases in the levels of facilities available with the number of resorts and homestays in the area increasing from 30 to over 270 in recent years. While these numbers represent a success for the area and have been promoted by both local authorities and the Tourism Authority of Thailand there are also indications that the area has become a victim of its own success with increased development creating a number of urban issues (such as pollution) traffic jams (and boat jams) noise pollution and degradation of the environment that many visitors have come to see – for example cutting of river bank vegetation to make way for restaurants resulting in reductions in the numbers of fireflies[[53]](#footnote-53). These upstream developments are also having an impact down stream with increased run off of pollutants reaching the estuary as well as changes in sediment dynamics as upstream channels are eroded following cutting back of long standing vegetation as well as construction activities.

The area surrounding Don Hoi Lord is also facing similar challenges with numbers of tourists rapidly increasing along with expansion of tourism infrastructure but with few effective measures to manage the impact of these increases on the environment of the area (for example see Figure 5 on number of restaurants within the area).

Figure 5: Restaurants Surrounding Don Hoi Lord Estuary[[54]](#footnote-54)



All these activities are linked to efforts to more effectively secure economic growth within what are extensively rural areas. Such approaches can provide a significant income particularly given the increasing levels of domestic tourism and the area’s proximity to Bangkok. Further work is however required between private sector operators, communities and local governments to ensure that tourism levels do not degrade the resources visitors have come to see and that they are able to capture revenue for local communities without becoming overly commercialized.

## Threats to Biodiversity and Root Causes

Thailand has undergone a rapid process of development within the past three decades that has put increasing pressure on the country’s natural resources and environment. Rapid developments have either resulted in the degradation of areas through urbanisation, industrial development and associated rises in pollution, which in some areas has also impacted local communities and public health, or have shifted agricultural practices to be more intensive and detrimental to the environment, from increasingly intensive maize cultivation in the north to destruction of traditional salt pans for aquaculture throughout the gulf of Thailand. These threats have been exacerbated by limited on the ground capacity of government officials to address challenges due to a lack of personnel, a lack of technical capacity and limited political will as local and national governments have focused on economic growth over longer-term sustainable development goals.

This situation has resulted in a wide number of threats to biodiversity that can be classified under two main headings: habitat loss and degradation and over exploitation of the resources that exist.

**Habitat loss and degradation** results from a growing population with expanding demands for resources and infrastructure as well as an economy that is increasingly export focused. Thailand’s agriculture sector has expanded rapidly and has been seen as a major driver of development, however, as this expansion has been partially driven by its expansion into previously high biodiversity habitats. While this expansion has now slowed it remains on-going[[55]](#footnote-55) and is coupled with an increased focus on intensification which in many areas is removing the potential for key biodiversity to live in harmony with farming systems. For example, changes from low intensity salt production to aquaculture ponds in coastal areas is reducing areas for wading birds, while changes from traditional rice cultivation to more intensive (chemical heavy) production or shifts to vegetable farming is resulting in the degradation of or removal of many wetland areas still frequented by wetland species.

Similarly industrialisation has had a significant impact on changes in land/coastal use and environmental quality more broadly. Weak regulations on planning, development and monitoring of pollution standards has resulted in industrial development in environmentally vulnerable areas as well as increasing levels of pollution causing environmental degradation within surrounding areas. Such impacts have also resulted in economic impacts with the World Bank noting that by 2004 - 2005 levels of air and water pollution were significantly serious to be identified as costing the country between 1.6 and 2.6% of GDP per year[[56]](#footnote-56) while damage, during the 2011 floods, to industrial sites built, without full environmental assessment, on the Chao Phraya flood plain being estimated to have cost 1.2 trillion baht[[57]](#footnote-57).

Expansion of tourism has also had a significant impact within many areas with mass tourism contributing to the clearance of coastal mangrove forests, as well as inland forest areas. The Department of National Parks (DNP) estimate that forestland cleared for other uses other than agriculture especially tourist resorts ranged from 7,386 ha in 2004 to about 2,841 ha in 2007.

Rapid expansion and intensification of industry and agriculture has also resulted in increasing demands on and resultant, **unsustainable use of natural resources**. Unsustainable harvesting of target species with fisheries has reduced fishing yields by 90%[[58]](#footnote-58), while hunting and collection of wild animals has resulted in significant declines in bird species as well as a range of mammals.

These threats are currently being exacerbated by a changing climate, which is predicted to exacerbate periods of severe weather including rainfall, drought and extreme weather events. Reductions in the resilience of environmental systems through losses in biodiversity and degradation of key ecosystem services is likely to increase the impact of such events and in turn cause them to further exacerbate the losses that are already occurring.

### Threats within Target Areas

#### Bang Krachao

The main threats to the Bang Krachao area fall under the heading of habitat loss and degradation with the area under high levels of pressure for development as well as salt-water intrusion and water pollution within its waterways damaging the potential for agriculture and the maintenance of natural habitat.

* *Habitat loss* – Bang Krachao is located very close to Bangkok with the river front areas looking out over the city. The on-going expansion of Bangkok has resulted in increasing pressure within the area to convert agricultural and natural habitats to residential or business developments including the expansion of tourism activities within the area. Despite tight building regulations at district and provincial level there has been on-going encroachment with green areas declining from 85% of the area in 1990 to 72% of the area in 2001 (see **Table** 7). Changes from 2004 to 2010 (see **Table 8**) indicate a slight increase in green area although much of this is associated with land purchases by government and reforestation of a number of these areas.

**Table 7: Land cover change in Bang Krachao 1990-2001 (Krul 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Land/coastal use** | **Coverage Ration** | | |
|  | **1990** | **1993** | **2001** |
| Green areas (agriculture, parks, forest, empty plots, succession areas) | 85.00% | 85.83% | 72.56% |
| Urban areas (communities, living spaces, infrastructure, temples, schools) | 11.32% | 12.36% | 24.34% |
| Industrial areas | 2.53% | 1.72% | 2.98% |
| Governmental areas | 0.15% | 0.09% | 0.12% |

Table 8: Land cover change Bang Krachao 2004-10[[59]](#footnote-59)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Urban Area (ha)** | **%** | **Green Area (ha)** | **%** | **Total (ha)** |
| **2004** | 431.63 | 28.32 | 1,092.75 | 71.68 | 1,524.37 |
| **2010** | 389.83 | 25.95 | 1,112.43 | 74.05 | 1,502.26 |

These figures also do not show the true scale of the threat with a significant number of vacant plots now present which have been purchased by developers who are anticipating changes in legislation to allow for further urban development. A new city plan has also reduced constraints on development in the area allowing for increased development within plots and it remains unclear how even these regulations can be enforced particularly given an ever increasing population within the area (increasing by over 17% in just under 20 years - see **Table 9**). Shifts in population dynamics and traditional practices are also exacerbating this situation with the majority of farmers over 50 years old and approaching the end of their careers there is currently no new generation in place who are prepared to manage these areas and fight for their protection[[60]](#footnote-60).

**Table 9: Population increase Bang Krachao (Krul 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| Sub-districts of Bang Krachao | Population | | |
|  | **1991** | **2004** | **2009** |
| Bang Nam Phueng | 4674 | 4610 | 4848 |
| Bang Kobua | 7746 | 7311 | 7142 |
| Bang Krasop | 2676 | 2407 | 2858 |
| Bang Yor | 5165 | 10817 | 11045 |
| Bang Krachao | 4873 | 5292 | 5313 |
| Song Kanong | 8341 | 8554 | 8250 |
| Total | **33475** | **38991** | **39456** |

* *Habitat degradation* – the habitat of Bang Krachao is characterised by a large number of canals that channel water through the area from the Chao Phraya River. These canals provide an importance source of irrigation for agriculture as well as maintaining water flow through the natural wetland forest areas that are under protection. This delicate hydrological system is, however, under threat from a number of sources.
* Salt intrusion – poor maintenance of the dykes and sluice gates that surround the Bang Krachao area is resulting in increased levels of salt-water intrusion into the canal system. This is damaging agricultural activities (making conversion to other uses more likely) and has the potential to cause damage to natural forest areas.
* Intensive farming practices – a shift to more intensive farming practices, often linked to shifts to vegetable or flower cultivation) in some areas has resulted in increases in the use of fertilisers, herbicides and pesticides. This has resulted in higher levels of nutrient and chemical run off into, what is a relatively closed, hydrological system. As such eutrophication in some areas is high resulting in a degradation of the habitat for aquatic species.
* Infilling of canals – the above issues have been exacerbated by on-going infilling of canals by some residents and developers keen to maximize the land area available for development or agriculture. This process has resulted in a reduction in water flow through the canals allowing for pollutants to build up within key bottleneck areas.
* Wastewater discharge – the population of Bang Krachao is increasing, as are numbers of visitors in terms of tourists. Traditionally wastewater has been discharged into canals with little treatment or management. This has resulted in increasing pollution within many channels. Initial work has been undertaken to encourage household and business water management but further work is required to prevent on-going degradation.

Due to these impacts water quality within the canal system is extremely poor with results for water quality within three canals assessed in February 2014 falling within the category of ‘Damaging’ on the Thai water quality standards – the second lowest category[[61]](#footnote-61).

#### Don Hoi Lord

The main threats to the Don Hoi Lord environment are a combination of habitat loss and degradation and the unsustainable use of natural resources. These threats result from direct actions resulting in the immediate unsustainable use of biodiversity (over harvesting of razor clams) or cutting of mangrove areas and indirect threats resulting from management of surrounding districts and sub-districts (resulting in water pollution both within canals and the major water ways, and shifting patterns of coastal erosion and sedimentation). These threats are outlined in more detail below:

* *Over-harvesting of key species* – the mudflats of the Don Hoi Lord are exploited for molluscs, and the coastal waters support inshore fisheries for fish, molluscs and crustacean, and plankton. The mollusc fisheries, focused on the Razor Clam (*Solen regularis*) are of high economic importance to the area but are not effectively managed. High levels of clam collection as well as more destructive collection practices[[62]](#footnote-62) have been linked to the decline of the razor clam population, with population densities dropping to 0.51 (+/- 0.31) clams/m2 in 2008/9[[63]](#footnote-63) compared with reported levels of, 5.71 clams/m2 in 2004/2005[[64]](#footnote-64), 4.6 (+/- 3.7) clams/m2 in 1996-7, and 49 (+/- 37.38) clams/m2 in 1994/5[[65]](#footnote-65). This significant drop can be seen as linked to inappropriate harvesting although some caution in direct comparison of numbers due to each study sampling different areas of the Don Hoi Lord mud flats. This decline in numbers has been identified as opening up the potential for both a future dominance of invasive species such as the horse mussle and a long-term degradation of the overall ecology of the habitat resulting in reductions in species higher in the food chain including a number of wading birds[[66]](#footnote-66). These species are also impacted by the high levels of collection pressure on the area with high levels of disturbance resulting in declines in the number of wading birds within the area including several threated migratory species.
* *Habitat degradation –* the conversion of mangrove areas to aquaculture, and infrastructure development (for example access roads or the development of tourism facilities – see expansion in number of restaurants Figure 5) has been prevalent within the coastal areas of Thailand and the areas surrounding Don Hoi Lord are no exception. These developments reduce habitat areas for key species, can result in higher pollution levels and caused shifts in sediment flows along the coastline (see next point). These shifts cause additional challenges to the Razor Clam population with assessments of the relationships between sediment and Razor Clam densities showing a negative correlation between species number and the presence of soil organic matter and silt and clay within the sediment. As such upstream and coastal erosion related to degradation of mangroves and release of organic matter from shrimp ponds have negative impacts on the survival of the Razor clam population[[67]](#footnote-67).
* *Shifting coastal sediment patterns* - A significant indirect threat is the high coastal erosion rates experienced in the Inner Gulf of Thailand. Responses to erosion include ad hoc mangrove plantings on mudflats (which may exacerbate the loss of stretches of shorebird feeding areas), and the construction of concrete sea-walls or boulder embankments on some stretches of shoreline, which may alter tidal flow patterns and worsen erosion on unprotected sections of coast, as well as have a negative effect on mudflat biodiversity. In other areas mangrove planting programmes have been initiated and while these have the potential to retain sediment and protect against further coastal erosion they also change the nature of the sediment flows potentially causing erosion of other mud flat areas, decreasing the feeding habitats for shore birds as well as the habitat for mussle species.
* *Water Pollution* – the Don Hoi Lord mud flats are at the mouth of one of Thailand’s largest rivers the Mae Klong River. The river flows through a number of areas of high development and as such is vulnerable to increased levels of pollution due to run off and waste water discharge shifting in some cases the pH of the water system. Similarly increasing tourism development adjacent to waterways within Samut Songkram and the continued development of aquaculture ponds within the area present the potential for local level pollution particularly of organic nutrients resulting in shifts in levels of dissolved oxygen (DO). Studies of levels of both pH and DO over the course of a year noted that while they were predominantly within the parameters set by the Pollution Control Department, seasonal fluctuations did occur and that these corresponded with falls in the level of Razor Clam population[[68]](#footnote-68).

## Stakeholder Analysis

The Project Identification Form (PIF) includes key parties who will be responsible for project implementation. This core group of project stakeholders comprises the Biodiversity-based Economy Development Office (BEDO), the Office of Natural Resources and Environmental Policy and Planning (ONEP), the Department of Local Administration (DLA), the Royal Forest Department (RFD), the Department of Marine and Coastal Resources (DMCR), the Department of Provincial Administration (DPA), and the target local government organizations. Table 10 describes the role and function of these stakeholders in project implementation.

Table 10: Project Stakeholders

| **Stakeholders** | **Project Implementation Role** |
| --- | --- |
| Biodiversity-based Economy Development Office (BEDO), Ministry of Natural Resources and Environment (MoNRE) | BEDO will be a key Implementing Partner of the project. Established in 2007, as a Public Organization under the Ministry of Natural Resources and Environment (MoNRE), it has the mandate to promote sustainable utilization and biodiversity-based economic development. It is well placed to coordinate activities with key line agencies under MoNRE including ONEP and the PCD as well as with other stakeholder groups bringing both technical expertise and a focus on the links between conservation and development.  It will play a leading role in coordinating and supporting the local government organizations in the selected sites, in close collaborations with the Department of Local Administration (DLA), as well as ensuring the development and application of Biodiversity Health Index in the demonstration sites. |
| Department of Local Administration (DLA), Ministry of Interior | The DLA is mandated to provide support to local authorities within both the administrative and autonomous lines of government to deliver their mandates. They help to provide a guiding framework for the operation of the LGOs under the National Commission on Decentralisation and have staff at provincial level to support the work of LGOs. They also undertake reviews of LGO performance through specific indicators, and channel the budget allocation from the Decentralization Committee to the local government organization. In the project the DLA will be responsible for developing guidelines for and policy statements on the mainstreaming biodiversity into local development and land/coastal use plans and the integration of biodiversity into performance management systems. |
| Office of Natural Resources and Environmental Policy and Planning (ONEP), MoNRE | ONEP has planned to submit for Cabinet approval a national biodiversity conservation master plan that includes initiatives to mainstreaming of biodiversity into LGO management. ONEP will support BEDO and DLA in defining the Biodiversity Health Index (BHI) for integration into performance management systems. ONEP will be involved in the development of guidelines on the development of a BHI that will assist LGOs to define the biodiversity that requires consideration within its development planning and management activities. ONEP will also provide technical support in the process of Biodiversity Health Index development for the Bang Krachao and Don Hoi Lord pilot sites.  They will work with the project in integrating BHI into management systems for Environmentally Protected Areas (EPAs) as well as working with the project through their efforts to designate the two pilot sites as EPAs. |
| Department of Marine and Coastal Resources (DMCR), MoNRE   * Marine and Coastal Resources Conservation Center 2 (Samut Sakhorn) * Marine and Coastal Resources Research and Development Center (Upper Gulf of Thailand) * Mangrove Forest Resource Development and Learning Support Center 2 (Samut Songkram). | The DMCR is responsible for the sustainable management of the country’s marine and coastal resources. They are mandated to formulate coastal and marine policies and strategies, conduct research and development, and oversee resource use.  The DMCR will be responsible for implementing the new law, Promotion of Marine and Coastal Resources Management Act 2015 that empowers local authorities and coastal communities to conserve and manage coastal and marine resources, as well as to provide guidelines for formulating marine and coastal resources policies at national, provincial, and local levels for implementation.  They will work closely with the project at site level within the Don Hoi Lord area providing technical advice and logistical support for project implementation, as well as policy integration. |
| Royal Forest Department (RFD), MoNRE | The RFD is mandated to oversee government forestlands excluding protected areas. The agency manages approximately 200 ha of forest in Bang Krachao and will be involved in the development of land/coastal use plans for the six sub-districts. |
| Ministry of Interior (MoI) and the Department of Provincial Administration (DPA), MoI  \*Bureau of Provincial Administration Development and Promotion, Office of the Permanent Secretary, MoI is as parent ministry/department to which provincial governors are attached. | The provincial government follows the traditional structure of the central system. The governors are appointed by the Ministry of Interior\*, whereas the district chiefs (and district clerks) are appointed by the Department of Provincial Administration. The deconcentration process means the functions of various ministries and departments are delegated to the regional or provincial level, under the supervision of the provincial governor with assigned officials from various central administrative agencies (including DLA and MoNRE). Certain functions are carried out only by provincial level officials with delegation from the central administration. Such functions, however, are subject to scrutiny and revision by relevant central level agencies that have the final decision-making authority. Kamnan (District Leaders) and Village Headmen (under the Local Administration Act of 1914)[[69]](#footnote-69) serve as agents of the central government and will communicate central government orders to the residents.  In this project, the governor of the two demonstration provinces will provide necessary support on policy formulation, planning coordination, and capacity development to ensure smooth operation at both provincial and local levels. |
| Local government organizations (Sub-distrit -Tambon and municipality) Administrative Organizations - SAOs and Provincial Administrative Organizations - PAOs), Ministry of Interior | Local government organisations (LGO) and local administration in Thailand refers to the autonomous administrative branch (as noted in Section 1.3).  SAOs in the demonstration areas (Don Hoi Lord and Bang Krachao) will be focal points for mainstreaming biodiversity conservation their planning, development and performance management processes. As the local government units, SAOs are responsible for local sustainable development. They also coordinate the actions of different agencies and facilitate the resolution of land/coastal use conflicts; they will need to be involved in the process of land/coastal use planning, and oversee and allocate budgets that communities may access for funding livelihood projects and other development work.  PAOs of the two demonstration provinces (Samut Songkram and Samut Prakarn) will work with the provincial government (governors and district chiefs) and the target SAOs to ensure mainstreaming Biodiversity Health Indices into the provincial development plan of the target provinces.  The DLA will support the work of PAOs and TAOs under their jurisdiction and monitor their work towards achieving the specific performance indicators as defined in the Ministry’s orders and the local development plans.  Bang Krachao (Samut Prakarn Province):   1. Bang Krachao Sub-district (SAO) 2. Bang Gor Bua Sub-district (SAO) 3. Bang Yor Sub-district (SAO) 4. Bang Nam Pheung Sub-district (SAO) 5. Bang Krasorb Sub-district (SAO) 6. Zongkanong Sub-district (SAO) 7. Samut Prakarn PAO   Don Hoi Lord (Samut Songkram Province):   1. Laem Yai Sub-district (SAO) 2. Bang Chakreng Sub-district (SAO) 3. Bang Kaew Sub-district (SAO) 4. Klong Kone Sub-district (SAO) 5. Samut Songkram PAO |
| Community based enterprises | The project will work closely with community based enterprises and individuals within the two pilot locations. Key groups for engagement will include:   * Fishermen within Don Hoi Lord * Mango farmers within Bang Krachao * Tourism operators in both Bang Krachao and Don Hoi Lord |
| Bang Krachao conservation groups | Locally formulated groups of community members and supporting partners with the aim to conserve the areas and biodiversity resources, including the Green Area Protection Network (Song Kanong), Lumphu Bang Krasorb Conservation Group (Bang Kasorb), and others. |
| Small and micro community enterprise groups in Bang Krachao | BEDO-supported Biodiversity-based community enterprise groups such as local flower gardeners group, the Nam Dok Mai Khung Bang Krachao Mango plantation group, coconut palm sugar production group, and other green products. |
| Green World Foundation and BioBlitz Initiative | Founded under the Royal Patronage of H.R.H Princess Galyani Vadhana Kromluang Naradhivas Rajanagarindra in 1991 as a non-profit organization, which collaborates closely with youth, educators, practitioners, and community leaders throughout Thailand to inspire the development and adoption of environmental ethics, and strengthen the capacity for proactively contributing to the sustainable care of the local environments. The Foundation organized a biological surveying effort, called BioBlitz, participated by local residents, experts, and youths in Bang Krachao in November 2014. In 24 hours, they found 675 species of plants and animals in the area including a new species of *Glyphidrilus* earthworms. |
| Joint Operational Committee on Tourism and Recreational Promotion in Bang Krachao Areas | Established by Ministry of Tourism and Sports (Order 852/2014), aiming to ensure integration of public-private initiatives in the Bang Krachao areas toward participatory, green and sustainable tourism. |
| Committee on Management of Don Hoi Lord Ramsar Site and Working Group on Demarcation of the Don Hoi Lord Ramsar Site Boundary | Established by Samut Songkram Province (Order 845/2005 and 604/2013) to oversee and manage the areas in accordance to the action plans, and to review the boundary of the site. The committee is currently focused on undertaking the boundary revision. |
| The Don Hoi Lord Conservation Group | The Don Hoi Lord Conservation Group was established by local people in 2009 aiming to conserve the site and the clams through awareness raising and community involvement. These activities included monitoring the status of Don Hoi Lord, and organizing study tours to other communities to exchange experiences regarding the management of natural resources. |
| Coastal Community Network along the Gulf of Thailand | The network brings together a number of CBOs working for the conservation of biodiversity and livelihoods within the Inner Gulf of Thailand. The group has a strong focus on conservation of bird life but also works on coastal erosion and other issues. |
| Relevant regulatory and executive agencies | These are government agencies with statutory authority or designated public authority to perform their functions including:   * Provincial Natural Resources and Environment Offices (PONRE) in three provinces: Samut Songkram, Samut Prakarn, and Samut Sakorn (for sources of river pollution in Don Hoi Lord) – responsible for providing technical support at the provincial level as well as developing provincial environmental management plans. * Tourism Authority of Thailand (TAT) – responsible for the development of tourism activities within Thailand with a strong component on sustainable tourism. * Pollution Control Department (PCD) – responsible for setting environmental standards and addressing pollution within Thailand. They provide guidance to local authorities on levels of pollution acceptable from different forms of development. * Department of Public Works and Town and Country Planning (DTP) – responsible for spatial and land/coastal use planning within Thailand as well as oversight of large infrastructure projects. * Royal Irrigation Department (RID) (MoAC) – responsible for managing irrigation infrastructure they have funding to upgrade the levees and canals within Bang Krachao   Land Development Department (LDD) (MoAC) – responsible for landuse planning within MoAC and identifying different classifications of land. |
| Research and academic institutions | A number of R&D institutions have conducted research activities and/or community-based initiatives in both demonstration sites during the past decades, including:   * Faculty of Science, Chulalongkorn University * Division of Environmental and Urban Planning, Faculty of Architecture, Kasetsart University. (Developing Master plan for Bang Krachao) * Department of Marine Science, Faculty of Fisheries, Kasetsart University * Centre of Excellence in Biodiversity, Faculty of Science, Prince of Songkhla University (PSU), Songkhla Campus * Thailand Environment Institute (TEI)   Faculty of Architecture and Planning, Thammasat University |
| Private sector | In addition, there are companies, industries, SME business, and industry that conduct CSR programs in the demonstration sites, including PTT Exploration and Production (PTTEP), IUCN-Marriott partnership, and local business. |
| Bang Krachao conservation groups | Locally formulated groups of community members and supporting partners with the aim to conserve the areas and biodiversity resources, including the Green Area Protection Network (Song Kanong), Lumphu Bang Krasorb Conservation Group (Bang Kasorb), and others. |
| Small and micro community enterprise groups in Bang Krachao | BEDO-supported Biodiversity-based community enterprise groups such as local flower gardeners group, the Nam Dok Mai Khung Bang Krachao Mango plantation group, coconut palm sugar production group, and other green products. |
| Green World Foundation and BioBlitz Initiative | Founded under the Royal Patronage of H.R.H Princess Galyani Vadhana Kromluang Naradhivas Rajanagarindra in 1991 as a non-profit organization, which collaborates closely with youth, educators, practitioners, and community leaders throughout Thailand to inspire the development and adoption of environmental ethics, and strengthen the capacity for proactively contributing to the sustainable care of the local environments. The Foundation organized a biological surveying effort, called BioBlitz, participated by local residents, experts, and youths in Bang Krachao in November 2014. In 24 hours, they found 675 species of plants and animals in the area including a new species of *Glyphidrilus* earthworms. |
| Joint Operational Committee on Tourism and Recreational Promotion in Bang Krachao Areas | Established by Ministry of Tourism and Sports (Order 852/2014), aiming to ensure integration of public-private initiatives in the Bang Krachao areas toward participatory, green and sustainable tourism. |
| Committee on Management of Don Hoi Lord Ramsar Site and Working Group on Demarcation of the Don Hoi Lord Ramsar Site Boundary | Established by Samut Songkram Province (Order 845/2005 and 604/2013) to oversee and manage the areas in accordance to the action plans, and to review the boundary of the site. The committee is currently focused on undertaking the boundary revision. |
| The Don Hoi Lord Conservation Group | The Don Hoi Lord Conservation Group was established by local people in 2009 aiming to conserve the site and the clams through awareness raising and community involvement. These activities included monitoring the status of Don Hoi Lord, and organizing study tours to other communities to exchange experiences regarding the management of natural resources. |
| Coastal Community Network along the Gulf of Thailand | The network brings together a number of CBOs working for the conservation of biodiversity and livelihoods within the Inner Gulf of Thailand. The group has a strong focus on conservation of bird life but also works on coastal erosion and other issues. |
| Relevant regulatory and executive agencies | These are government agencies with statutory authority or designated public authority to perform their functions including:   * Provincial Natural Resources and Environment Offices (PONRE) in three provinces: Samut Songkram, Samut Prakarn, and Samut Sakorn (for sources of river pollution in Don Hoi Lord) – responsible for providing technical support at the provincial level as well as developing provincial environmental management plans. * Tourism Authority of Thailand (TAT) – responsible for the development of tourism activities within Thailand with a strong component on sustainable tourism. * Pollution Control Department (PCD) – responsible for setting environmental standards and addressing pollution within Thailand. They provide guidance to local authorities on levels of pollution acceptable from different forms of development. * Department of Public Works and Town and Country Planning (DTP) – responsible for spatial and land/coastal use planning within Thailand as well as oversight of large infrastructure projects. * Royal Irrigation Department (RID) (MoAC) – responsible for managing irrigation infrastructure they have funding to upgrade the levees and canals within Bang Krachao * Land Development Department (LDD) (MoAC) – responsible for landuse planning within MoAC and identifying different classifications of land. |

# Long-term solution, Baseline Project and Barriers

## Long term solution

The **long-term solution** lies in reforming the manner in which local government organisations plan and manage development activities so as to meet biodiversity conservation and sustainable use objectives for important eco-regions. This will avoid, reduce and mitigate the current pressures that lead to biodiversity loss. This solution will be brought about by mainstreaming biodiversity conservation priorities into the development planning, performance management and budgeting systems of local governments in Thailand.

At the national level the project will emplace the necessary planning and policy framework to incentivise, guide, capacitate and enforce the mainstreaming of biodiversity conservation priorities into the development planning, performance management and budgeting systems of local governments. This will be done through the issuing of a clear policy statement, developing guidance on its implementation and strengthening the capacity of key stakeholders within government to both integrate biodiversity conservation into development planning and to monitor the performance of local governments in achieving this. An approach that will be strengthened by the development of a Biodiversity Health Index (BHI) for key habitats to ensure that there is a standardised and operational measure against which biodiversity conservation efforts can be assessed.

At the site level, the project will demonstrate the application of this approach through the development of participatory land/coastal use plans for two pilot areas, and their integration into the development plans of local government organisations (LGOs). These plans will be based on comprehensive and participatory assessments of existing biodiversity values within the target areas that inform local stakeholders of the existing biodiversity and the risks posed to it by development and empower them to develop plans that reduce the risks and monitor their on-going impacts. The performance of LGOs in delivering on development plans and commitments to conserve biodiversity will be assessed through the use of Biodiversity Health Indicators (BHIs), while further support will also be provided to local communities in the innovative development of biodiversity friendly goods and services and the integration of their production within site level management plans. These will provide case study examples of how biodiversity conservation and production can be effectively linked. These lessons will not only provide valuable examples for similar locations within Thailand but will also provide insight for regional and global efforts to integrate biodiversity conservation within local level planning and income generating activities.

The current baseline investments are described below at the national and site level as part of a business as usual scenario. Accompanying these is a description of the barriers impeding effective biodiversity management. The project is designed to remove these barriers.

* + 1. **National Projects**

The Ministry of Natural Resources and Environment (MoNRE) spends approximately US$44million per annum on nature conservation activities. Much of this is focused on protected area management funds are however also used to support a range of other activities including policy work undertaken by ONEP which has been developed a long-term plan, the *Integrated Master Plan on Biodiversity Management 2015-2021*, which was approved in principle by the National Subcommittee on the Convention on Biological Diversity on 2 October 2013 and includes activities on the integration of biodiversity conservation into local development planning. ONEP are also working to support the application of Environmental Protection areas within key areas of biodiversity importance within Thailand with the office undertaking activities to designate both target areas (Bang Krachao and Don Hoi Lord) as EPAs.

The Pollution Control Department, under MONRE, provides guiding parameters to local governments for monitoring environmental standards within their jurisdictions and to the Provincial Offices of Natural Resources and Environment which work with local and provincial partners in the development of Provincial Natural Resource and Environmental Management Plans which form part of the integrated planning process as well as providing technical support to local governments in the design, development and implementation of environment and natural resource related projects.

BEDO as a public organisation, also under MONRE but outside of the central MONRE structure, is implementing the 5-year Biodiversity-based Economy Development Action Plan (2012-2016), which is in line with the National Economic and Social Development plan, for which an approximate US$ 20 million is budgeted for the project period. The plan’s objective is to promote and enhance economic activities based on the sustainable use of biodiversity for community security and green growth. The agency are also working with other agencies within MoNRE, other line ministries and universities in efforts to integrate a range of biodiversity related data bases to develop a more comprehensive data set on the value of Thai biodiversity and to ensure that this is accessible to a wide range of actors.

The DLA has developed a 4-year Action Plan – 2014 -2017 to support the local government organizations in their local conservation and sustainable use, with the green growth theme as the priority. The department will also be working with LGOs to further strengthen their performance through the performance assessment process as well as working with LGOs in on-going efforts to increase levels of public participation in development planning and service delivery.

* + 1. **Barriers at National Level**

There are two main barriers to achieving the long-term solution: (i) absence of enabling framework and capacity in order for LGOs to integrate biodiversity into development decisions and (ii) absence of successful demonstration experiences of LGOs integrating conservation of biodiversity-rich areas into their development planning and budgeting.

*Absence of enabling framework and capacity in order for LGOs to integrate biodiversity into development decisions*

An important barrier for mainstreaming biodiversity and ecosystem values into local land/coastal use and development planning is the absence of a legal requirement for the LGOs to undertake such integration. While Thailand has a long history in the development of biodiversity conservation through the protected areas system efforts to integrate it into planning processes at the local level are still at an early stage. As a result local governments have prioritized economic development over environmental protection or the maintenance of environment services.

Further, no standardized and formalized procedure is in existence on how SAOs and PAOs could, if they chose to, integrate biodiversity considerations or manage potential environmental impacts within the planning processes. This is combined with a lack of understanding within the government units responsible for planning, of the importance of biodiversity in generating and maintaining wealth and income as well as the potential costs of the degradation of the environment. This is partially due to a lack of available data for planners, and the existence of effective tools to integrate biodiversity considerations into the development planning process – with much of this data being held within research groups and universities, who are not effectively placed to engage within local level planning processes. Similarly there is currently limited capacity to assess the performance of LGOs in their inclusion of biodiversity in development planning and budgeting. With no standardized assessment of performance on biodiversity conservation at the LGO level and with local government officials having limited capacity to identify and develop indicators of biodiversity conservation or to implement monitoring processes to assess performance.

This lack of legal requirement or incentive combined with, a lack of applicable format, limited awareness and understanding of biodiversity and its value, and the absence of an effective monitoring and compliance system for its effective management within planning processes has resulted in a lack of recognition of the value of biodiversity within planning processes and in some cases the active degradation and loss of these potentially valuable resources through selection of alternate and often short term development pathways.

There is thus a need to strengthen the way in which LGOs include biodiversity conservation elements within their development plans. This can be achieved through increasing incentives and demands for the management of biodiversity both from their constituents and from central and provincial level government systems through further development of biodiversity elements of performance management assessment processes, increasing commitment to, and accountability for, biodiversity conservation within provincial government and increasing links between improved biodiversity conservation and access to finance. For this to be effective it will also require the development of easy to use and objective tools to measure and monitor the status of biodiversity within target areas – a Biodiversity Health Indices would provide this role providing an easy to measure standard against which performance can be assessed.

*Absence of successful demonstration experiences of LGOs integrating conservation of biodiversity-rich areas into their development planning and budgeting.*

A significant barrier to the adoption of approaches to mainstreaming biodiversity into the development planning processes is the absence of replicable examples of areas in which LGOs have been able to implement this effectively. The paucity of examples has resulted in many LGOs being unwilling to take the first steps to achieve this due to concerns about the potential tangible benefits available, how such measures will be addressed within the planning process, and how such measures will impact on a representative’s future within the election cycle, or central government assessment process (measures of progress within both of these areas are currently commonly linked to economic growth). These barriers are all exacerbated by difficulties in coordinating planning across local authorities and between different stakeholders (civil society, private sector), with difficulties in ensuring effective multi-stakeholder engagement in development planning processes and challenges in addressing cross border issues between SAOs (with many environmental challenges existing at the landscape as opposed to highly localized level). Similarly communities concerned about the environmental wellbeing and biodiversity value of areas within their constituencies have no clear examples of a different approach around which to garner further local support or to utilize as an example to their LGOs when calling for change and no nationally accepted way to assess the quality of biodiversity and demonstrate its vulnerability or decline.

These barriers are exacerbated in many areas by limited awareness and understanding of the potential and actual economic, social and environmental benefits of biodiversity, amongst both local communities and local level decision makers within LGOs. Where information on these points does exist it is often not held by groups effectively engaged within the planning processes. A lack of effective information on biodiversity and its benefits also reduces the activity of communities in developing, implementing and monitoring community based approaches to natural resource management, such as agreed sustainable utilization quotas for open access resources or measures to protect specific species or habitats. The absence of such tools limits the capacity for central government to reward and penalise LGOs on the actions towards biodiversity conservation as well as preventing local communities from holding LGOs to account in this area.

More effective engagement of communities and local authorities in the collection and monitoring of biodiversity and its value would help to increase awareness of the value of biodiversity to sustainable development and local level resilience to environmental shocks, and a changing climate. This information can be utilised to support more effective planning processes at the local level while also helping to foster cooperation between different groups and between local administrative areas to help strengthen environmental management. Clearer information on the condition of biodiversity will also provide a basis for developing clear indicators on the status of biodiversity and the success and failings of LGOs to protect these resources.

* + 1. **Site Specific Projects and Barriers:** 
       1. ***Bang Krachao***

Efforts to strengthen the management and conservation of the Bang Krachao area are being supported by a number of actors. The BEDO will be investing US$600,000 over the project period (based on the 2014 budget of US$ 170,000) in the promotion of biodiversity and ecotourism in the six sub-districts of Bang Krachao. These funds will be directed mainly to increasing the quality and quantity of ‘Nam Doc Mai’ mangoes (as per Good Agricultural Practice (GAP)), encouraging the participation of the private sector in conservation schemes e.g. CSR schemes, promotion of eco-agriculture, establishing an organic farming group to reduce chemical fertilizer and pesticide use, increasing the use of innovative waste management and waste water treatment systems and promotion of ecotourism.

The Royal Forestry Department (RFD) will support the conservation of the 200 ha under their tenure with an investment of US$ 0.5 million over the project period. This will be complemented by US$ 130,000 by the Asia Pacific Network for Sustainable Forest Management and Rehabilitation channelled through the RFD for the promotion of eco-tourism.

Kasetsart University will also be working with SAOs, Provincial government and the other stakeholders within the area to develop a Master Plan for Bang Krachao. The plan will focus on setting a clear strategic direction for the area, identifying key areas for economic development and to link this with strategic planning both within Samut Prakarn province and the Bangkok Metropolitan Area. Close synergies between these activities and the current project will also be feasible with the university seeking supporting in gaining clear environmental targets for the area as well as supporting the bringing together of different stakeholders at the local level.

At the district level the SAOs and the district authorities have been working to coordinate in key areas of environmental management. Regulations issued by the district to restrict heavy goods vehicles within the area have been widely enforced and the district will also lead in implementing the town plan for the area with regard to restrictions on new developments. The district administration has also worked with the SAOs to gaining funding and support from the Department of Irrigation to undertake improvement work on the river dyke system around Bang Krachao and the canals within it.

The SAOs of the area also remain committed to further supporting planning, environmental management and biodiversity conservation activities within the area. As an example of locally launched initiatives Bang Num Phueng has initiated regulations to prevent the cutting of any tree without authorization from the local administration. Linked to such activities as well as broader work programmes the six TAOs will invest US$600,000 in environmental management including biodiversity management over the project period.

Within the area there are also a number of small-scale community projects led by civil society organisations in action. For example as the “Clean Water – Beautiful Canal” project which was implemented between as part of the "Water for People Partnership Small Grant Programme," in collaboration with Thailand's Metropolitan Water Works Authority, UNDP Thailand through GEF Small Grant Programme, engaged local groups in (i.e., Lamphoo-Bang Krasorb Environmental Conservation Group) to conserve the 6.56 ha of community area, through improved water management schemes.

Barriers within Bang Krachao

* *Lack of coordination* – the area is administered by six Tambons, however, coordination between these groups is limited resulting a lack of clear vision for the area presented by local authorities. This lack of coordination also presents significant challenges for cross boarder issues in particular the management of the canal system and other infrastructure projects. The same is true across different stakeholder groups with different groups having different visions for the land area and with limited coordination resulting in conflicts over land/coastal use in some areas.
* *Limited participation in planning* – weak linkages between local government and other groups active within the area have resulted in research and biodiversity conservation efforts not being effectively communicated with local government or transferred into local development plans. The most recent city plan issued by the province rezoning some areas was developed with limited consultation with relevant stakeholders resulting in considerable criticism of the plan and changes in levels of development allowed.
* *Lack of economic alternatives* - communities living within the area have limited livelihood opportunities with restrictions on many development activities being seen as prohibitive and with few effective alternative income sources provided. Poor management of dykes and canals has also inhibited agricultural activity resulting in loss of income within these areas and causing community members to seek other forms of income and to put pressure on local governments to allow further development of industry and infrastructure projects.
* *Lack of quality environmental information* – while many stakeholders within the area have an interest in maintaining the green area or traditional agriculture few have sufficient information to develop effective environmental plans. Similarly few stakeholders have information on the true nature and quality of biodiversity within the area that can be used to lobby for stronger protection.
  + - 1. ***Don Hoi Lord***

Efforts to manage the Don Hoi Lord area form part of the DMCR’s and DoF’s mandate within the area with the two departments committed to investing US$ 2.4 million over the project period to (1) enhance local participation in sustainable harvesting of razor clams; (2) provide artificial reefs to rehabilitate spawning ground for marine species; (3) and support local and provincial regulations to enforce sustainable use. This work will also form a key element of the DMCR’s work under the new law, Promotion of Marine and Coastal Resources Management Act 2015 that empowers local authorities and coastal communities to conserve and manage coastal and marine resources, as well as to provide guidelines for formulating marine and coastal resources policies at national, provincial, and local levels for implementation.

Each of the four local government organisations in the area (Laem Yai, Klong Kone, Bang Jakreng, Bangkaew) will allocate approximately 7,000 USD per year (total US$ 112,000 over the project period) to promote eco-tourism and environmental rehabilitation in Doi Hoi Lord. These efforts will also build on initial efforts by local conservation groups within the area to establish no take areas for the Razor clams based on research undertaken by Chulalongkorn University.

These efforts however face a number of significant challenges in achieving effective conservation of the areas biodiversity. These are:

Barriers Don Hoi Lord:

* *Lack of coordination* – There are four Tambons that directly surround the Don Hoi Lord area. Coordination between these Tambons on management of the mudflat areas has, however, been limited resulting in challenges to development of holistic management approaches. Similarly coordination between different stakeholders from the private sector (tourism, fishing, shellfish harvesting, aquaculture), government, and civil society across the entire province has also been limited resulting in a lack of clear vision of the development of the area and the management of the natural resources within it, as well as allowing for on-going uncoordinated developments that may damage the long term sustainability of key livelihoods within the area, by allowing of upstream erosion and pollution as well as degradation of the natural environment that many tourists visiting the area wish to see.
* *Lack of participation in local planning* – while development of Tambon Plans are intended through decentralisation to provide a mechanisms to represent the interests of communities, limited capacity and experience within Tambon offices of participatory planning processes has resulted in many plans being developed by local officials only with limited consultation. As such the interests and concerns of many local stakeholder groups, in particular that more marginal groups that are directly dependent on natural resources for their livelihoods, is not well represented within plans.
* *Open access to resources* – the harvesting of Razor clams and other shellfish is undertaken by a relatively small number of full time participants with a far larger number of periodic or opportunistic harvesters coming from surrounding Tambons to capitalise on the resource during periods when populations of clam increase or there are limited alternative work opportunities. These fluctuations have made management of the resource difficult and require stronger local and provincial level management.
* *Limited knowledge on the biodiversity, biodiversity management and relevant management strategies* – while knowledge on the status of Razor Clams through studies undertaken by universities this information or approaches to addressing the problems has not been widely distributed or understood. Equally information on the wider biodiversity of the area is not broadly available and there is limited understanding of the economic benefits of key species in relation to tourism (for example bird watching), or the value of ecosystem services to existing activities (such as maintenance of water quality and sediment size for razor clams or hydrological regime within canals for aquaculture). As such this information has not be incorporated into development planning and decision making at the sub-district and Provincial Level.

# Strategy

## Project Rational and Policy Conformity

## Fit with GEF Focal Area and Programme

The project supports strategic objective 2 of the GEF biodiversity focal area (BD-2) – Mainstreaming biodiversity conservation and sustainable use into production landscapes, seascapes, and sectors.

More specifically, the project will contribute to Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation. It will do this through the development of effective management approaches for two areas of high biodiversity, directly impacting the management of 69,618ha[[70]](#footnote-70). Broader policy engagement and support, combined with these practical demonstration areas will result in full integration of biodiversity conservation commitments into the planning processes, and performance management systems of 10 sub-district administrations and the two provincial governments within which they occur, while also improving the capacity of local and national government more broadly to integrate biodiversity considerations into local government planning.

The project will also contribute to Outcome 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks, through the development and adoption of a new policy statement and guidance documents on the inclusion of biodiversity concerns within local government planning to be issued by the Ministry of Interior. This will provide clear guidance on how local governments should include biodiversity considerations within their planning as well as providing incentive and enforcement mechanisms to ensure this is achieved through the inclusion of biodiversity considerations with performance management mechanisms for local government.

The project also advances the strategic targets of the UNCBD Strategic Plan for Biodiversity 2011 – 2020, in particular under strategic goal B: Reduce direct pressure on biodiversity and promote sustainable use, Target 5) By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced. Target 7) By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity. Target 8) By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity and Target 12) By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained. These will be addressed by increasing the number of hectares of production landscape managed sustainably to ensure the conservation of biodiversity and through mainstreaming biodiversity conservation into the development planning processes of two provinces.

## Rational and Summary of GEF Alternative

In the **baseline scenario**, at national level the BEDO will continue to work on development of biodiversity based economy and the conservation of biodiversity and the local wisdom of communities as well as providing support to wider management of information on biodiversity, while also working to undertake monitoring of different agencies and their engagement with biodiversity[[71]](#footnote-71). This work will however be conducted with a limited tool set and limited mandate to engage with local governments within their planning and budgeting cycles. The DLA will also continue its work to support the operation of LGOs and conduct assessment of their performance. This will be done with a limited focus on environment or biodiversity related issues and without the capacity to integrate environmental and biodiversity consideration into planning or management processes.

At the same time Thailand’s growing population and economy will continue to put increasing pressure on natural resources resulting in further degradation and fragmentation of key habitat areas as well as overall reductions in levels of biodiversity. Land/coastal use management and development planning processes will also remain focused on economic development with many environmentally based businesses struggling to maintain operation as their resources are either over harvested or degraded by the actions of others. Efforts to address these challenges through community action or other bottom up mechanisms will be hindered by a lack of information on the environmental situation, low levels of coordination between different stakeholder and decision making groups and the absence of any standardised measure of biodiversity. Efforts to develop environmentally friendly goods and services will continue in some locations but will focus on high profile target areas or species located in or surrounding protected areas with the broader potential of this approach within other production landscapes not being fully realised.

Scenarios for site level situations are provided below.

The **GEF alternative** at national level will be to have biodiversity conservation mainstreamed into development planning and management practices at sub-district and provincial level, with local level actions and plans feeding up and guiding provincial level planning as part of Thailand’s bottom up and top down planning system[[72]](#footnote-72).

It will do this by developing the policy requirements, institutional tools and institutional capacity to support mainstreaming. It will work closely with the BEDO and DLA in developing a policy framework and guidance on the application of this framework that will require integration of biodiversity into LGO development planning and budgeting, as well as LGO performance assessments increasing the importance of biodiversity within the planning and budget allocation processes of LGOs. To ensure that these requirements are realised, the project will also work to develop the tools and capacity to implement these requirements through the development of an approach to developing Biodiversity Health Indices (BHI) at the local level, establishing effective data management systems and building the capacity of key agencies to utilise these within development planning, management and monitoring activities. These achievements will be made through developing closer coordination and cooperation between environmentally focused agencies, predominantly within the MONRE and those responsible for supporting and overseeing LGO planning, management and administration, predominantly the MoI with coordination efforts led by the DLA and BEDO.

The project will also work across two pilot sites and at national level to help catalyse a paradigm shift within the production sector to focus more on environmental standards within production techniques. Through development of two clear pilots that develop environmentally friendly goods the project will provide a base for further advocacy and awareness raising of the value of these approaches. Through working with the BEDO as well as other project partners including government offices, civil society groups and networks such as the Gulf of Thailand Coastal Community Network, and the private sector the project will help share these lessons and develop best practice that can be promoted within sector ministries to support improved extension support to farmers, budget allocations and policy reforms.

The implementation of the proposed project will have an immediate global environmental benefit through improved land/coastal use planning and management approaches that take into account the importance of key habitats and species and the development of integrated management plans to protect these areas. This will lead to strengthened biodiversity conservation across Thailand with LGOs working to ensure the protection of a wide range of habitats and species maintaining national levels of biodiversity and increasing the resilience of the nation and its biodiversity to environmental and human stresses, as well as maintaining important environmental services and biodiversity related businesses that will continue to support economic and social development. As a result of the significant effort that the project will make on institutional capacity building and the mainstreaming of biodiversity conservation into the development planning process, these benefits will be sustainable.

Further information on the GEF alternative at site level is provided in the table below.

|  |  |  |
| --- | --- | --- |
| **Pilot Area** | **Current Situation** | **GEF Alternative** |
| Bang Krachao | Area managed by RFD remains intact but surrounding areas undergo a transition from forest and agricultural land to urbanisation and industrialisation with increasing population pressure from surrounding areas.  On-going population pressure leads to gradual urbanisation and degradation of the fragile hydrological system associated with agriculture in the area. Removal of trees and degradation of forest areas will lead to reduction in habitat for resident and migratory bird species, as well as resident mammal species. Changes in the hydrological regime combined with increased fertiliser and pesticide use in intensive agriculture plots will result in damage to the ecology of the waterway reducing species diversity and potentially causing the extinction of the locally endemic species of *Glyphidrilus*. Efforts to enact conservation by individual groups is unable to gain coordination across the six sub-district areas or between private sector and civil society and as such is unable to require the enactment of further protection measures by local government. | Detailed information on the biodiversity health of the area is developed with local stakeholders engaged in information collection. Increased awareness of the biodiversity quality and its potential economic value increases interest in strengthened protection measures. Coordination efforts bring together groups from across the area to develop a land/coastal use plan that forms the basis for planning within individual tambons. SAO’s empowered through capacity building on the inclusion of biodiversity conservation within planning processes are able to identify key areas for conservation and appropriate development approaches.  Development and expansion of environmentally friendly certification standards for mangos and increased tourism based on the natural beauty of the areas increase local livelihoods and further demand for conservation, as well as increasing broader public awareness of the area and its value. Local regulations on environmental protection and control on development are strictly enforced and management of hydrology of area is prioritised by LGOs. |
| Don Hoi Lord | Harvesting of Razor Clams continues unmanaged and at an unsustainable rate resulting in the eventual local extinction of the species. High harvesting pressure on the estuary continues to damage the local ecology as well as disturbing migratory and resident bird species.  Localised pollution worsens as shellfish harvesters use higher levels of lime and sodium chloride solution to capture declining shellfish numbers. On-going degradation of mangrove areas by poorly regulated tourism and aquaculture developments result in run-off of pollutants as well as erosion of mud banks changing the relative composition of the mudflats and further hampering the survival of the razor clam, as well as degrading the habitat and potential food sources for native and migratory birds. | Biodiversity of the area is assessed and potential threats to its survival from local (adjacent four tambons) and upstream (remainder of Samut Songkram) identified. Biodiversity Health Index developed to facilitate planning and communication of results. Approaches to biodiversity conservation and management developed through participatory processes covering four tambons adjacent to the area as well as areas of principle upstream threats. Participatory land/coastal use and management plan elements integrated into local tambon development plans with government staff capacitated to record, and integrate biodiversity into development plans and monitor progress against them. Planning and management approaches expanded through work with PAO to cover all provincial waterways helping to ensure protection of downstream sites.  Simultaneously support is provided to local communities to develop sustainable livelihood approaches related to tourism development and shellfish harvesting. Local management agreements strengthen management of tourism, aquaculture and fisheries with communities and local authorities working together to enforce management commitments. Improved branding and marketing of shellfish from sustainable source provides a price premium helping to strengthen livelihoods as well as increase tourism. |

## Project Objective, Outcomes and Outputs

In order to achieve the project objective, and address the barriers, the project’s interventions have been organised into two outcomes (this is in line with the components presented at the PIF stage):

### Project Objective

The objective of this project is to **mainstream biodiversity conservation priorities into the performance management, development planning and budgeting systems of local government in Thailand**.

### Project Outcomes

Two components were identified during the initial PIF stages; each component has given rise to an outcome that will be targeted as a means through which the objective will be reached. The two outcomes are:

**Outcome 1: Enabling Framework established for LGOs to Plan, Monitor and Adapt Land Management for Biodiversity Conservation.**

Outcome 1 focuses on strengthening the institutional framework for the inclusion of biodiversity conservation priorities into the performance management, development planning and budgeting systems of local government within Thailand. The outcome is targeted at strengthening the policy framework and institutional capacities of key ministries and agencies as well as local governments to integrate biodiversity in local development plans and the adoption of the decision making hierarchy to avoid, mitigate, and offset, with regard to impacts on biodiversity during the planning process.

The approach will establish clear requirements for the inclusion of biodiversity within local development and land/coastal use plans that will be expressed through a policy statement delivered by the MoI. This will be supported by clear guidelines and training provided to national and local governments and other agencies on how to operationalize these guidelines.

The outcome will also strengthen compliance to new and existing guidelines through enhancing the management, monitoring and enforcement capacity of key government agencies at national, provincial and local levels. This will be achieved through the development of a Biodiversity Health Index (BHI) and its inclusion along with other environmental indicators in the performance assessment processes of local governments and the performance management agreements between provinces and LGOs. A process that will increase the importance of biodiversity within planning and budgeting processes, resulting in corresponding increases in the allocation of resources, to environmental management issues at the LGO level. This process will be linked with capacity building support to key agencies to monitor the status of biodiversity within areas and to manage the data produced from these monitoring and planning activities. Activities within this area will be focused within the provinces of Samut Songkram and Samut Prakarn.

The outcome will be led by the DLA with BEDO providing technical support in the development of biodiversity indices.

Estimated cost for the Outcome is $3,600,000 of which the GEF contribution is $600,000.

**Outcome 2: Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas**

Work under this outcome will focus on the conservation of two key areas of high biodiversity importance – the Don Hoi Lord Ramsar Area and Bang Krachao. This will be achieved through strengthening understanding of the biodiversity of the area and its value to the local economy and livelihoods as well as the threats that it is currently facing (through use of Strategic Impact Assessments), and ensuring that this information is available through an effective data management and spatial planning system. This information will be utilised to develop a participatory land/coastal use management plan that will provide the basis for adaptation of local government development plans and the building of support to sustainable environmentally friendly livelihoods that will help to secure long term environmental protection. This process will be linked to the development of specific BHI values for the areas as well as strengthening of the capacity of local government, communities and BEDO to manage, monitor and ensure compliance to environmental commitments that will be formalised through community agreements, local and provincial government decrees and product specific certification standards as well as increased resource allocations by LGOs.

The capacity of local communities to develop environmentally friendly livelihoods will also be supported through training and capacity building on environmentally friendly production techniques and the development of environmentally friendly branded and certified products. Achievements within these areas will also be used as learning and demonstration activities for both the integration of biodiversity conservation into local government development plans and the integration of biodiversity into sustainable business practices particularly within agriculture and fisheries.

The outcome will be led by BEDO in close collaboration with the DLA, Provincial and local government bodies, the private sector, NGOs and communities within the target areas.

Estimated cost for the Outcome is $4,871,731 of which the GEF contribution is $999,004.

### Project Outputs and Activities

Each outcome will be achieved through a portfolio of outputs, which in turn will be achieved through a number of activities. Further detail on these is provided in the text below:

**Outcome 1: Enabling framework for LGOs to plan, monitor and adapt land management for biodiversity conservation.**

Output 1.1: LGO decision-making processes on development planning and infrastructure placement integrate biodiversity conservation considerations.

This output will focus on providing clear policy guidance on the integration of biodiversity considerations into the development planning and budgeting processes of local and provincial governments. It will be achieved through a number of steps including:

* *Establishment of cooperation mechanisms on biodiversity mainstreaming.*

The effective integration of biodiversity into development planning mechanisms as well as performance assessment processes is limited by a lack of cooperation and coordination between and within key agencies and organisations. The project will establish a national level cooperation mechanisms that will bring together key stakeholders to strengthen dialogue and coordination over the integration of biodiversity conservation into development planning and performance assessment processes.

At the national level the DLA will bring together stakeholders engaged within the local and provincial planning processes to review existing approaches for development planning. This working group will be formed under the National Committee on Decentralisation and will focus on identifying existing limitations within the integration of biodiversity into planning processes and options for improvement. It will then work with partners through the project on the development of new guidance on inclusion of biodiversity in local and provincial planning, budgeting and monitoring processes. It will then work to identify how best linkages between different institutions can be optimised and operationalized to ensure that they are effective and able to provide the necessary technical support to local and provincial governments within the planning and monitoring processes.

Key members of the committee will include: Department of Local Administration (DLA) (chair), Community Development Department (CDD), Department of Provincial Administration, Department of Public Works and Town and Country Planning (DTP), Office of Natural Resources and Environmental Policy and Planning (ONEP), Royal Forest Department (RFD), Department of Marine and Coastal Resources (DMCR), Department of Fisheries (DoF), Biodiversity and Economy Development Office (BEDO), Ministry of Agriculture and Cooperatives (MoAC), Land Development Department (LDD), as well as representatives of Provincial Office of Natural Resources and Environment (PONRE) and other provincial agencies.

* *Review of existing process of developing Local Development Action Plans, Provincial Development Plans, performance management mechanisms and the inclusion of biodiversity consideration within these.*

Linked with activities described above the project will undertake a comprehensive review of the existing planning and performance management processes at local and provincial level and how biodiversity is considered within these, to identify the areas in which most support is required and where changes in planning and budgeting processes as well as performance agreements can be most effective in increasing resource allocation and commitment to biodiversity conservation. The work will look at existing limitations with regard to levels of participation from different stakeholders, existing data availability and data needs, as well as levels of capacity and understanding within government of the importance of biodiversity and its value.

Through this process the potential for inclusion of Biodiversity Health Indices (BHI), updated performance assessment, incentive and enforcement mechanisms into existing systems will be considered. The assessment will also identify areas of strength that can be further catalysed such as performance management systems and simplified formats for reporting as well as how the on-going evolution of the decentralisation and deconcentration process is likely to impact on planning processes[[73]](#footnote-73). The assessment will draw on key case studies and information on international best practice to ensure that recommendations and assessments are based on awareness of both domestic and global challenges and success stories.

The assessment will provide concrete recommendation on both the development of improved approaches to the inclusion of biodiversity, including use of BHIs, in planning processes and the mechanisms to monitor and enforce them (linked to work under output 2). Consideration will also be given of how any guidance will interact with existing requirements under the Town and Country Planning Act, as well as the National Environmental Quality Act to identify how best to integrate the different requirements and to identify where any potential amendments would be required.

* *Issuance of a clear policy statement on the integration of biodiversity concerns into local development plans.*

The project will develop a clear policy statement to be issued by the MoI that will outline requirements for local and provincial governments to include biodiversity considerations within the development, implementation and monitoring of their development plans. The statement will be based on recommendations from the reviews above and the consensus of the cooperation working group and will provide a clear set of requirements for LGOs. The approval and issuing of the policy statement by the MoI in partnership with MONRE will provide additional strength and increase its uptake with the MoI being responsible for local and provincial planning processes and the distribution of central revenue to local governments.

* *Issuance of guidance on implementation of the policy statement on inclusion of biodiversity concerns into local development plans*

Linked to the policy statement a guidance manual will be developed and issued to inform LGOs and line agencies operating at the provincial and local levels on how to apply the policy statement to incorporate biodiversity and BHIs into their development planning and monitoring activities. The manual will be developed following a documenting of best domestic and international practices within the area with case study information included within the manual to support understanding. This process will be closely linked to activities undertaken under output 1.2. and will include guidance both on measures to strengthen inclusion of biodiversity into the development planning process at local level and how those measured will be monitored and enforced.

The manual as well as a number of additional guidance tools will be developed through a collaborative process across government agencies and key stakeholder groups and will involve a number of planning and consultation workshops as well as field visits within and outside Thailand. This process will develop a core team of stakeholders within the DLA, BEDO and other key agencies who not only have a detailed understanding of the manual and its development but also have ownership of the process it presents. This team will also then be instrumental in the wider distribution of the manual running training events, workshops and field visits to other provinces and regions to increase understanding of and uptake of the manual (see below).

* *Capacity building of regulatory agencies to integrate biodiversity into their policy and planning processes.*

Training will be provided to central regulatory agencies and local governments on the application of the guidelines developed above. This process will be closely linked with capacity building under Output 1.2. and Outcome 2. It will focus initially on building understanding of the value of biodiversity within local economies and how the maintenance of key environmental services are important. It will then transition to more detailed operational elements about how to integrate biodiversity into planning and performance management targets at the SAO and PAO level as well as mechanisms to support enforcement and compliance. The capacity building process will be initiated within Samut Songkram and Samut Prakarn which will operate as demonstration sites for the guidance (see Outcome 2) but will also be undertaken in a broader range of provinces will a focus on those covering the Inner Gulf IBA where many of the recommendations, requirements and guidance will be immediately applicable.

Output 1.2: Increased management and compliance monitoring capacity of DLA and LGOs

Output 1.2 focuses on building the capacity of government agencies to fully operationalize and enforce requirements for the inclusion of biodiversity into local planning processes and PAO and SAO management. This will be achieved through supporting the development of a methodology for the use of biodiversity heath indices (BHIs), and strengthening information management systems as shown below:

* *Development of a methodology for the use of biodiversity health indices within Provincial and LGO planning and management*

The project will work with key stakeholders across government (through coordination mechanisms identified within Outputs 1.1 and in cooperation with development of guidance materials also under Output 1.1), the private sector and civil society to develop a baseline methodology for developing Biodiversity Health Indices (BHI) for inclusion in the development planning, implementation, monitoring and enforcement processes.

Past experience on the integration of environmental indicators into local development planning processes highlighted the need for those indicators to be clear, objective and measurable as well as being related to issues that link environmental, social and economic development in-order for them to be both effective for monitoring and gain sufficient buy in from local stakeholders[[74]](#footnote-74).

With this considered the approach will focus on developing a systematic methodology that links national and international priorities with local level requirements. At the national level a mapping process will be undertaken to identify priority habitats and areas where enhanced biodiversity conservation is needed. This will then be linked to development of standardised methodologies to development of BHIs for these areas noting key indicator species and biophysical indicators. At the same time work will be done with LGOs, BEDO and the DLA to identify how social and economic issues (such as maintenance of economically important species e.g. shellfish, or maintenance of key environmental services e.g. clean water), can be effectively linked with these biophysical elements to present a more robust and multi-disciplinary basis for the BHIs to help increase LGO and community buy into their use. These approaches will be linked at the provincial level through integration of BHI’s within provincial development plans and Performance Management Agreements between the office of the Provincial Governor and LGOs.

The development of the approach will be closely linked to and coordinated with the development and testing of BHIs within the two pilot locations within Samut Songkram and Samut Prakarn (under Outcome 2). Lessons from this will be combined with lessons from inclusion of biodiversity and other related indicators within other local government management systems internationally to develop a comprehensive approach to integration of BHI into performance management systems at the local and provincial level with guidance closely linked to policy and guidance documents developed under Output 1.1.

* *Integration of biodiversity indicators into performance assessment and management processes at local and provincial level*

The project will work with key stakeholders to integrate biodiversity-based indicators into local and provincial performance assessment processes as well as performance management agreements between the offices of the Provincial Governors and LGOs.

The focus of this process will be on the integration of key BHIs within the development plans of LGOs, and the performance management agreements and performance assessment process undertaken by the DLA of the offices of the SAO and PAOs. The approach will be built on assessments undertaken under output 1.1.; and will be in line with the policy guidance issued by the MoI. These approaches will be tested within Samut Prakarn and Samut Songkram and linked with activities under Outcome 2, with BHI scores identified for the two target locations with SAO and PAO performance assessed against changes within these indices.

Particular attention will be paid to integrating effective performance management indicators into agreements within Samut Songkram with a focus on indicators relating to river and canal channel health to help ensure that there are no upstream activities that cause damage to the Don Hoi Lord target area. Attention will also be paid to how these indicators are integrated throughout the management systems to ensure processes such as the screening and assessment of infrastructure or other development projects include consideration of their impacts on the BHIs with coordination between provincial level and local government in achieving shared objectives within these areas. This process within the two pilot locations will identify how resources, tools and policies can be utilised / assigned effectively to increase both the focus on, and the effectiveness of delivering improved biodiversity conservation.

Testing in these areas will be utilised as a training and experimentation process for full integration of BHI requirements into the performance assessment of LGOs, which include areas of important biodiversity that are not currently protected by the protected areas network as well as integration of BHIs within Provincial and Local Development Plans. This process will build the capacity of DLA staff locally as well as nationally to understand the importance of biodiversity assessment and its integration into performance management. These skills will then be shared through training workshops and field visits by other Provincial DLA offices.

This process will also identify how to link requirements under EPAs and performance assessments to provide a more coherent set of requirements and enforcement procedures for LGOs within EPA areas. The approach developed will form part of the policy statement and requirements developed under Output 1.1 incentivising all SAOs and PAOs with biodiverse areas within their jurisdictions to be assessed against BHI criteria developed within their area.

Consideration will also be given to the most effective approach to integrating biodiversity considerations into the performance management agreements between the Provincial Governor’s office and the LGOs with regard to the implementation of integrated provincial plans. The exact approach adopted within this area will be identified following assessments undertaken under Output 1.1. and will also be affected by potential changes in the role and existence of the PAOs[[75]](#footnote-75).

* *Establishment of data management systems to provide tools for planning at national, provincial and local levels*

There are currently limited systems to, integrated biodiversity information from local levels into national, regional and provincial spatial planning processes or to allow local authorities to access information on both the ecological and economic value of biodiversity and ecosystem functions and to store and manage information on the status of biodiversity within their jurisdictions. This reduces the capacity of LGOs to effectively include biodiversity within planning, management decision-making, and enforcement activities as well as reducing the effectiveness and sensitivity of spatial planning processes to biodiversity considerations.

BEDO have taken the lead on the integration of a number of biodiversity related databases to establish a more comprehensive data management system for biodiversity information at the national level[[76]](#footnote-76). The existing systems are not, however, linked to planning and monitoring activities at the provincial or tambon level and there is no mechanism for the integration of information on BHIs into provincial or national level reporting.

The project will work with BEDO acting as a coordination point to provide linkages between the establishment of local and provincial level data management systems (under Outcome 2) and national systems for managing information on biodiversity that they are currently working on. This process will allow better identification of priority areas for adoption of BHIs as well as supporting more effective feedback loops between different institutions on the performance of LGOs in protecting key habitats and species (something of interest to ONEP in tracking national biodiversity health). It will also facilitate easy access to information on key species at the provincial level increasing the data available to decision makers on biodiversity and its value in their area.

This will be achieved by creation of a coordinated mechanisms for data recording that can be operationalized across provinces and projects to allow information from different biodiversity assessments to be integrated into existing data sets on land/coastal use planning that are held by the DTP, LDD and the CDD within the MoI as well as spatial information help by the MoAC. The system will be developed through a collaborative process across agencies to facilitate a shared understanding of its use as well as ensuring compatibility of information. Training will be provided to staff within the agencies on its application, with a process of live development and testing being undertaken within Samut Songkram and Samut Prakarn where the system will be utilised as part of activities under Outcome 2.

As part of this process the use of the system will be linked to the integration of performance management agreements between DLA and PAOs regarding the biodiversity indicators.

**Outcome 2: Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas**

This outcome will focus on operationalizing the mainstreaming of biodiversity conservation into local development planning in two key locations as well as supporting the sharing of lessons learned and opportunities for scaling up of activities. The two target locations are:

* The Don Hoi Lord Ramsar area
* Bang Krachao

Outputs focus on addressing the major threats to the areas (identified in Section 1.5.1) by increasing information and knowledge on biodiversity within target areas and establishing mechanisms to monitor it (Output 2.1), strengthening coordination, information availability and management practices (Output 2.2), building capacity for the on-going implementation of management practices that conserve biodiversity (Output 2.3) and supporting livelihoods that both exemplify the links between biodiversity and economic growth and further strengthen the contribution of livelihoods to the conservation of key species including the Eurasian Curlew (*Numenius arquata*) and Razor clam (*Solen regularis*) (through sustainable shellfish harvesting) and the Flying Earthworm (*Glyphidrilus sp.*) (through sustainable mango production (Output 2.3)).

Output 2.1. Development of Biodiversity Health Indices for Bang Krachao and Don Hoi Lord

Despite a number of studies within Don Hoi Lord and Bang Krachao there is limited comprehensive information on the biodiversity value of these two areas and crucially how that biodiversity is threatened by different development activities. The absence of comprehensive information, combined with the limited availability of what information does exist means that communities have insufficient knowledge and information to lobby for further environmental protection and decision-makers have insufficient information and capacity to effectively, justify or develop mechanisms to support conservation or monitor their performance. As such the project will undertake a full biodiversity assessment, strategic environmental impact assessment and develop Biodiversity Health Indicators for the two areas through a fully participatory process. This participatory process will increase local capacity for on-going monitoring as well as building local demand for, and understanding of the need for appropriate conservation activities. Once developed BHIs will be integrated into Participatory Land/coastal use Management Plans (PLCUMPs), SAO Development plans and PAO development plans as well as Integrated Provincial Development plans (Output 2.2), providing a clear indicator against which environmental performance of SAOs and PAOs can be measured. Key elements of this process will include:

* *Undertaking of a comprehensive biodiversity and environmental parameters assessment for the target areas:*

A comprehensive biodiversity assessment of each target area will be undertaken to provide information on the nature of biodiversity within the area, and the environmental parameters in which it lives (water quality, sediment size (Don Hoi Lord), forest cover, etc). The information will be used to provide a baseline of the biodiversity and environmental health within the area and will help to inform local communities, and authorities of the existing status and value of the biodiversity that surrounds them. The assessment will build on existing knowledge (including tradition knowledge) and information and will be undertaken through participatory processes to ensure full engagement of local communities and key stakeholders[[77]](#footnote-77). Within Samut Songkram this process while focusing on the Don Hoi Lord area will also cover the wider drainage basin to identify links between different elements of the hydrological system.

* *Undertaking of Strategic Environmental Assessments:*

Strategic environmental assessments (SEAs) will be undertaken within each location in order to identify the key risks to biodiversity. These assessments will provide solid recommendations on how best to avoid negative impacts on biodiversity from development and planning related activities and how any unavoidable impacts should be mitigated or offset. SEAs will be conducted through participatory processes to ensure local stakeholders have a full understanding of and buy in to findings. Within Samut Songkram this process will also engage stakeholders outside the immediate four Tambons adjacent to Don Hoi Lord to strengthen understanding throughout the province of the impacts of upstream activities on the Don Hoi Lord area.

* *Development of a Biodiversity Health Index*

Based on the information collected above BHIs will be developed, identifying a number of key parameters against which environmental performance within the target areas can be assessed. This information can then be utilised as a measure of environmental performance at local government and provincial level with declines indicating poor environmental management. The process of integrating this into local planning processes will occur through Output 2.2. Work in the area of BHI developed will also be linked with activities under Output 1.2.

* *Development of a biodiversity database:*

Information from both assessments and the BHI will be utilised to create a database that is able to provide information on biodiversity values and threats and to display this information visually through GIS aiding planners in identifying areas for development and conservation. This process will be closely linked with activities under Output 2.2. and will allow for the zoning of different land management practices, and the effective locating of infrastructure to reduce environmental harm. This process will be integrated with systems utilised for town and country planning as well as LGO development planning.

Output 2.2 Local development plans that incorporate conservation values are implemented for Bang Krachao and Don Hoi Lord.

There are currently no land/coastal use plans in place within Don Hoi Lord and its surrounding area or Bang Krachao. The project will work with local stakeholders to develop participatory land/coastal use management plans (PLCUMPs) for the areas based on assessment work undertaken within Output 2.1. The project will then work closely with local authorities to integrate the key elements of these plans into local development plans, to help ensure their effective enforcement. In doing so the output will address a number of the primary threats to the areas by increasing information and awareness of biodiversity, enhancing coordination and providing the tools and the capacity to implement management plans. Key elements of this process will include:

* *Establishment of a coordination and cooperation mechanism across Tambons, Municipalities and the Provinces*

The project, through BEDO, will establish coordination committees within both pilot locations. Within Bang Krachao this will be at the District level, chaired by the District Chief. The committee will consist of representatives of the relevant SAOs as well as key civil society and line agency representatives. In Samut Songkram the committee will be at provincial level, chaired by the Provincial Governor, (with BEDO working in close collaboration with DMCR, the PONRE and the committee on natural resources and environment). This committee will consist of representatives from key districts and SAOs impacted by the project as well as private sector and civil society representatives. Below this sub-district committees will also be established to cover key target areas. These will be chaired by the relevant district chiefs and include relevant SAO representatives, community members and NGOs. These sub-district committees will focus on more operational and site specific issues – e.g. management of Razor Clam fisheries). The difference in scale of operation of the committees between the two pilot sites is based on the scale of intervention when compared to the scale of the province, with interventions required across Samut Songkram to manage the watershed, whereas in Bang Krachao interventions are focused on approximately a 50th of the provincial area and as such require a more focused coordination structure that can then engage with provincial level actors when required.

These committees will work on how to best apply and enforce guidelines on integrating biodiversity into the planning, implementation, monitoring and enforcement of local and provincial plans. In each case BEDO will act as secretariat, and they will work to operationalize models of cooperation horizontally across elected and administrative elements of government at provincial and local levels as well as between representatives of central agencies. They will also work on vertical cooperation between provincial and local government and between provincial and national government to identify best practice in coordination between agencies and levels of government. Key approaches that will be tested will include, mechanisms for effective stakeholder engagement and integration of environmental information into planning processes, participatory approaches to setting environment based performance indicators and development of provincial and local government decrees that require specific land/coastal use practices to be undertaken. These approaches will then be integrated into guidance and training issued by the DLA to other provinces and local governments.

* *Development of Participatory Land/Coastal Use Management Plans (PLCUMP):*

Utilising information on the value of biodiversity within the area, combined with existing social and economic activities (developed under Output 2.1.), participatory land/coastal use management plans (PLCUMP) will be developed by communities and local officials for Samut Songkram and Bang Krachao. These plans will provide a comprehensive management approach across the geographical area and will thus be cross cutting across local administrative boundaries to provide a more coherent approach to environmental management. Plans will include zoning areas for different development and economic activities as well as areas for conservation. Guidance will also be developed on the nature of activities within different areas and the environmental measures used to monitor and ensure performance including specific requirements for different development activities or practices including industry and tourism development. Within this process community agreements will also be developed regarding land/coastal use management practices within key areas with community groups committing to undertake specific practices to maintain the environmental quality of the area. These agreements will include monitoring and enforcement activities to ensure that compliance can be monitored and enforced. In some areas these approaches will also be linked with certification schemes for environmentally friendly production with certification status (output 2.4.) being revoked in the case of producers who violate the agreed methods.

* *Integration of plans into local development plans and regulations*:

The project will then work with local officials to integrate these plans with local development plans at the Tambon level and subsequently into provincial development plans with linkages formalised through the performance agreements between the office of the provincial governor and relevant LGOs (as discussed under Outcome 1). Key elements of this process will be the development of regulations that control activities within different areas and the provision of adequate resources to the enforcement of these regulations. This process will be supported by activities under Output 2.3. which will help to provide capacity to local communities to effectively monitor key environmental variables and as such provide information to enforcement agencies on any violations of the regulations. These elements will also be supported by community-based agreements at the local level of land/coastal use management practices agreed under the PLCUMPs. Within Samut Songkram this process will cover the provincial level engaging both the PAO and a higher number of Tambon’s to address potential upstream threats to the Don Hoi Lord area identified in the steps above. In each case regulations will address key threats to biodiversity including habitat degradation and destruction from infrastructure, tourism and urban development and the pollution of waterways from wastewater discharge.

Output 2.3: Capacity building support to implement participatory land/coastal use plans

There is currently limited understanding of, and capacity to, support, develop, implement and enforce biodiversity based management plans and approaches at the local level. This output will provide capacity building support to the development and on-going management of biodiversity based development and management plans for LGOs. It will be undertaken in parallel with the development of plans within the target areas (under output 2.2) to facilitate operational learning but will also be provided to agencies and stakeholders within other Tambons and provinces to broaden understanding of the process. Similarly training materials and best practice cases studies developed as part of the process, and emerging from its implementation, will also be designed in such as way as to be transferable to other areas of the country to ensure that approaches can be rolled out to other locations following testing within the project. Training will be developed through a number of steps including:

* *Assessment of existing capacity and awareness*

Understanding of links between biodiversity and development, the potential impacts of unsustainable development and the capacity to manage and enforce environmental regulations vary across stakeholder groups and locations. As such an initial assessment of capacity and understanding will be undertaken to ensure that training can be developed to match and strengthen capacity levels.

* *Awareness raising on the links between biodiversity and economic development*

Initial training will focus on raising awareness and understanding of the links between biodiversity and development to ensure that key stakeholders see the potential value of biodiversity conservation in terms of economic and social value as well as its intrinsic value.

* *Training on integrating planning, biodiversity and enforcement regulations*

Training will be provided on how to integrate biodiversity into the local planning processes and how to develop enforcement mechanisms linked with this to ensure plans are achievable. This will include technical elements of biodiversity assessment, the process through which planning is undertaken and different stakeholders are engaged to ensure that different livelihoods are considered, and the development of regulations through consultation to ensure that they are implementable.

* *Training on monitoring, measuring and enforcement techniques and establishment of network of stakeholders to engage in the process.*

Training will also be provided on how to measure and monitor change within the environment and to enforce violations of regulations. This will be initiated as part of the process of assessing existing biodiversity levels but will also look at how monitoring responsibilities can be allocated across stakeholder groups to ensure cost effectiveness of the process and facilitate community based enforcement. It will also provide case study examples of enforcement approaches utilised in different areas of Thailand as well as providing training to staff on engaging with violations and supporting future compliance.

Output 2.4. Sustainable livelihood activities that support conservation of biodiversity supported

There is currently limited understanding of the value of biodiversity within the two pilot areas and hot to effectively develop and manage businesses that both rely on biodiversity and environmental quality and can play a role in conserving that biodiversity and its environment. The project will work with local communities and relevant government authorities to support the development of livelihood activities that support conservation of biodiversity. Key activities for which capacity will be supported are shown below with more information on the feasibility of these approaches provided in Annex 3:

*Don Hoi Lord:*

* *Sustainable Harvesting of shellfish*

Existing harvesting of shellfish (in particular the Razor Clam) within the Don Hoi Lord mudflat areas is unsustainable with razor clam numbers in particular in rapid decline – resulting in increased harvesting effort for local communities (and thus higher disturbance levels) and highly variable market prices. Unsustainable harvesting practices are also causing increasing ecological damage to the sensitive ecosystem, with high disturbance levels resulting in reductions in the numbers of globally important bird species utilising the mudflats.

To address these challenges the project will identify the sustainable yield level from the estuary and work with local communities to develop sustainable harvesting and management practices, including quota systems to ensure this yield is not exceeded. These approaches will be linked with a certification system at local level to provide increased recognition of the sustainability of harvesting approaches and will also form part of BEDOs work to gain a Geographical Identification for the Don Hoi Lord Razor clam. This duel certification approach will help to attract a price premium in the market for the Razor clam of 30%[[78]](#footnote-78) that will offset additional management costs. These approaches will also help recovery of species numbers, reduce harvesting efforts required and supporting the increased use of the mudflats by a range of species including rare and endangered bird species such as the Eurasian Curley, Great Knot and Asian Dowitcher. Reduced harvesting effort and increased income will directly benefit fishermen within the area many of whom are members of the most vulnerable groups within society with limited resources and who are currently subject to variable pricing for Razor clams and varied market demand controlled by local traders.

* *Expansion of certification scheme and levels of cultivation of certified crops -*

Work has been undertaken by BEDO to support the sustainable production of mangos from the Bang Krachao area focusing on an area of 3.5ha. This work has involved developing links with the MoAC who have provided training and certification of farmers in Good Agricultural Practices as well as working towards developing a Geographical Indicator for the mangos. Current market price for the species of mango is 100-120 Thai Baht per kg, but with these additional certification levels prices of 160bhat per kg are achieved[[79]](#footnote-79). The project will work to expand the number of producers and the area utilising these techniques to cover 70ha of Bang Krachao. This will significantly increase the income of farmers producing mangos, will improve the ecology of the soils and waterways by reducing the use of chemicals and will also help to prevent a shift to more damaging production methods.

Within each area capacity building and support activities will include a number of assessment and training activities (noted below) as well as support to coordinating, networking and building the capacity of producer groups to work together to both gain economies of scale and increase their voice within planning and land management decision-making. These network, facilitation and capacity building elements will be linked with the following steps:

* *Provision of training on development of biodiversity-friendly product marketing, management and promotional plans*

While many of the communities are highly skilled in the production of their product experience of developing and promoting those products is limited. As such training will be needed to build the capacity of key stakeholders to develop both longer-term business plans and develop marketing and promotional activities. BEDO have considerable experience in supporting producers in taking new environmentally friendly products to market and will be able to support local producers in developing more advanced business strategies. Within Bang Krachao this approach will focus on development of cooperatives to facilitate certification of production and marketing of mangos within Bangkok and other markets. Within Don Hoi Lord the focus will be on development of supply chains between local producers, local traders and buyers from Bangkok and other locations as well as local restaurants.

* *Developing and certification of environmental standards for local agricultural products and tourism enterprises.*

BEDO are currently working with producers in Bang Krachao on establishing a Geographical Indicator (GI) for mangos from the area. They are also working with the MoAC in the provision of training of farmers and certification of producers under the MoAC’s Good Agricultural practice certification. The project will work with MoAC as well as producers to develop specific guidance under this certification for production with Bang Krachao focusing on low levels of chemical use and sustainable management of waterways within the area. Completion of the process of GI certification and certification of producers under the GAP certificate will provide for increased market value of products thus helping to support local livelihoods.

Within Don Hoi Lord there are currently no certification efforts in place. Razor clams from the area are however recognised of being of high quality and can attract a premium market price. BEDO will work to obtain a Geographical Indicator for Razor clams coming from Don Hoi Lord. They will also work with producers to develop an agreed set of standards and certification system for harvesting of Razor Clams (linked to methods, size of clams harvested and quotas) that can be locally issued this will be linked to management plans developed under Output 2.2. but will also provide a mechanism to further highlight the sustainability of the product supporting producers in gaining a further price premium for their harvests.

Within both locations BEDO will also work with the TAT and tourism operators to develop and apply sustainable tourism standards focused on the good environmental practices. Of particular attention within both areas will be no habitat degradation in the development of tourism businesses (e.g. clearing of mangroves) and high quality waste management approaches to ensure that increased tourism numbers do not result in increases in water pollution.

Within each case BEDO will work with other relevant authorities and local stakeholders in the clarification of certification requirements and will then support the process of capacity building and training to local producers to implement these standards.

## Risks and Assumptions

The project strategy is based on the **assumption** that by *mainstreaming* biodiversity conservation into the performance management, development planning and budgeting systems of LGOs in Thailand, providing guidance on how these processes should be achieved and support to building the capacity of LGOs to implement them stakeholders will uptake the approach. Mainstreaming requires the following ingredients –

* Effective policy and procedural framework
* Capacity to implement and manage the process
* Awareness, sensitivity, understanding.

In addition, it has been assumed that increased capacity in BEDO and the DLA, in particular, will facilitate the mainstreaming of biodiversity and that communities, who are informed of the value of biodiversity goods and services, and provided with the skills to develop them will chose to pursue these approaches.

These assumptions have given rise to the project design which will put in place the guiding framework for integrating biodiversity conservation into the development planning and budgeting processes of LGOs as well as providing support to the production of environmentally friendly goods and services in-order to strengthened livelihoods and increase demand for effective environmental management. The risk that these basic assumptions will fail is very low. However, there are other less fundamental risks, some of which were identified in the PIF and these are considered as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Rating** | **Likelihood** | **Mitigation** |
| The political situation in Thailand becomes unstable preventing the development of any new policies or legislation and their mainstreaming. | Moderate | Low | During this period of reform under the military government, there are still a number of uncertainties in terms of national policy frameworks and direction once the country return to the democratic system. The project will work to mitigate the uncertainties by developing effective advocacy strategies to engage key decision makers with regard to policy development and formation of policy guidance. As such the approval of such documents should be possible within the MoI and other key bodies. The project will also work to operationalize these approaches at the site level. Should full approval of them thus be impossible the project will still be able to work to establish the technical capacity to implement them within areas of particular importance as well as working with local partners to develop site level interventions that will conserve the identify focus areas and can form the basis of future policy and legislative development. |
| Weak coordination and cooperation between different stakeholders and between different levels of government. | Moderate | Moderate | A number of government agencies working on water resources, agriculture, and local development will need to be involved in achieving coordinated management planning at the sites, which can be time-consuming. There will also be requirements for coordination between different agencies at the national level and between national and local levels.  The project will establish coordination groups at national, provincial and local levels, which will provide a mechanism to bring different stakeholders. The combination of BEDO and the DLA as implementing and responsible parties will also provide a high level of convening power cutting across different branches of government as well as links with the private sector and civil society groups. LGOs also have a specific mandate for coordination within their areas and as such will be key partners in bringing different stakeholders together as will existing networks such as Provincial and local chambers of commerce, and NGO networks such as the BCST, or Wetlands Foundation Thailand. |
| LGOs may change priorities and shift support from the project to other commercial approaches. | Moderate | Low | The targeted LGOs have a track record of positive environmental management but currently lack the mechanisms, incentive structures and capacity to follow up on many of their objectives. As such it is predicted that they will remain committed to the project’s objectives.  The project will also engage the constituencies of each LGO building understanding of biodiversity conservation, its benefits and the risks associated with its degradation. This combined with further support to environmentally sustainable biodiversity based businesses that will rely on effective environmental management at the local and provincial level also means that there will be significant demand within constituencies for the project’s objectives to be taken seriously. This will increase the likelihood of the LGOs (as elected bodies) remaining engaged. Similarly by working across a number of LGOs the project will be able to utilise a shared responsibility between all groups to help ensure that no one group decides to move away from the project. |
| Economic development approaches developed as part of the project do not generate sufficient return to keep local stakeholders engaged. | Moderate | Low | BEDO have a track record of developing effective environmentally friendly products that attract a price premium within the Thai market – a market in which demand is currently increasing. Within each case careful assessment of the potential economic benefits will also be made to ensure that the new approaches adopted are economically viable and will deliver sufficient returns.  Even if the economic benefits of each approach are not in excess of existing livelihoods the approaches will be designed in such a way as to deliver other livelihood benefits helping to ensure the sustainability of approaches. Within Don Hoi Lord, approaches to managing the shellfish harvesting process should reduce pressure on the fishery helping participants to gain a higher return on effort in the medium to long term as well as reducing conflict between groups, motivating participants to remain engaged in the approach even should there be a fall in immediate financial returns. Within Bang Krachao existing trials of sustainable mango production have shown significant financial benefits to farmers. However if prices were to fall the sustainable farming techniques will also be delivering reductions in the required costs of inputs thus reducing financial pressure on farmers and allowing them to maintain their livelihoods.  Within each case approaches to sustainable production will also be linked to development of strict land management plans and regulations (issued at local and provincial level) as such producers will be discouraged from rapid shifts in land management approach and will also not be able to adopt quick return, high impact land use practices. As such producers are likely to take a more long-term view of potential returns or work with the project to review alternative approaches that are equally environmentally friendly. |
| Successes of the project may be undermined by external (upstream) impacts within waterways. | Moderate | Low | Within each site there is a vulnerability to environmental impacts coming from upstream locations. The project will work to mitigate these impacts by working with national level regulators and agencies to ensure that no high impact developments occur within these areas. This mechanism will also be maintained after the projects end with the project leaving more environmentally aware and capable constituencies within each location that will be capable of identifying potential threats from upstream developments and campaigning against them. Similarly work through the project on the development of planning guidance will also help to reduce the potential for such developments to occur. |
| Changes in climate adversely impact target species. | Low | Moderate | Changes in climate within Thailand have the potential to put additional pressure on the target habitats, from changes in river channel dynamics and flow regimes to more direct extreme weather events that cause flooding and increased salt water inundation. In developing appropriate management and enforcement strategies for these areas however the project will help to reduce the impacts of any changes in climate by both reducing direct impacts (for example by preserving areas of mangrove in Don Hoi Lord), as well as improving the overall resilience of the targets habitats to recover from disturbances. |
| Changes in administrative structure within the decentralised planning process | Low | High | There are currently discussions underway within the Thai government as to changes within the set up of the autonomous branch of LGO with the proposal for PAOs to be disbanded in preference for inclusion of their role within the mandate of the Provincial Governor’s office. While this would change one focus area of the project it will not impact on the core approach or theory of change within the project design. Tambon administrations will remain in place and there will still be a mechanism to link Tambon and Provincial planning with a need for provinces to take account of Tambon level plans while also forming part of the performance management structure for them. Assessment of the planning processes to be undertaken under Output 1.1. would allow for changes in administrative structure to be accounted for. |

Further consideration of risks will be carried out by the project during the Inception Phase.

## Cost Effectiveness

The project provides a cost effective approach to mainstreaming biodiversity conservation into the performance management, development planning and budgeting systems of local government in Thailand.

The project’s design is inherently cost effective focused on both the mainstreaming of approaches to integrating biodiversity conservation into development planning, budgeting and performance management as well as providing clear examples of how these approaches can be operationalized to be both financially sustainable and promote green growth.

At the national level the mainstreaming approach provides a cost effective mechanism to conserve significant areas of habitat across Thailand without the development of new and costly PAs or new management systems. The process will also integrate biodiversity considerations into the development planning process more broadly helping communities, government officials and other stakeholders to identify, value and more effectively manage biodiversity within their areas of responsibility. This process will help to conserve significant biodiversity as well as helping to maintain levels of habitat health and the abundance of species increasing the resilience of the environment within Thailand to unplanned direct human impacts as well as climatic impacts such as increased drought or extreme weather events. Linking data management systems with existing systems held by MONRE (for biodiversity) and the MOI (for Land) will also help to reduce transaction costs within the planning processes and ensure more cost effective use of data.

The cost effectiveness of this project will be further ensured by the following elements that have been included in project design.

* *Combination of national and site level activities* – the project combines support to addressing policy direction and guidance on inclusion of biodiversity conservation within planning, budgeting and performance management processes across the country with site level support to demonstrate how these approaches can be operationalized. The development of site and national level activities will also be complimentary enabling learning at site level to inform national level approaches and for capacity building at national level to be linked to practical activities at the provincial and site level.
* *Range of site level examples with potential for shared learning* – the pilot site locations encompass different species, different habitats and different socio-economic conditions that are representative of a range of environments within Thailand. As such case study examples from these locations will be able to be utilized by a wide range of locations throughout Thailand. This is particularly true within the Gulf of Thailand where lessons from Don Hoi Lord will have strong resonance within all provinces around the gulf, particularly those within the Inner Gulf IBA. Within this area there is significant potential for shared learning to strengthen existing interests in conservation activities with an initial NGO network already in place. Similarly experiences from Bang Krachao will provide an example of how areas in close proximity to urban centers can be conserved – something that is of increasing importance within Thailand and the region more widely.
* *Development of approaches to the production of environmentally friendly goods and services* – by focusing on developing biodiversity based, environmentally friendly products the project will establish financially sustainable approaches to land/coastal use management. These approaches will provide a cost effective approach to conserving habitats as well as providing clear case studies of how environmental sustainability can be linked with economic production and business development that is highly relevant in the current Thai economy and national development context. The use of biodiversity based businesses will also be important in increasing demand for effective environmental management within surround land areas helping to increase pressure on LGOs to ensure effective environmental management and planning.
* *Development of incentive based approaches to habitat conservation* - the project will place equal emphasis on assisting compliance with new requirements for critical habitat management as well as approaches to enforcement. Development of biodiversity based indicators within LGO performance assessments will help to motivate LGOs to prioritise biodiversity conservation with effective efforts resulting in higher budget allocations. At the same time local mechanisms within communities will also be trialled to both incentivise and support compliance to environmental standards to help maintain common environmental assets such as waterways or open access resources such as shellfish. The project will work effectively with local communities and stakeholders to share management responsibilities and costs, as well as to develop sustainable economic activities that can benefit these partners and generate revenue streams for areas within increased conservation status. This is more cost effective than an exclusionary strategy aimed solely at biodiversity conservation, which is likely to be costly to enforce and unlikely to be sustainable.

The financing of this project is also cost-effective in that the GEF contribution has leveraged a significant level of resources as co-financing from the Government of Thailand. The project will also work closely with existing networks and programmes at site level and national level to help share experiences and broaden the impacts of the projects across Thailand.

## Stakeholder Analysis

The project has been developed through consultations with a number of key stakeholder representatives at national and site level. A national expert was recruited to prepare a number of background studies and consulted more broadly with national stakeholders on the validity of the project strategy.

Taking an adaptive and collaborative management approach to execution, the project will ensure that key stakeholders are involved early and throughout project execution as partners for development. This will be achieved through the central project management structures as well as the proposed Technical working groups as well as through both formal and informal consultation meetings with government, non-government and private sector representatives. The project will also run a number of awareness raising, training and consultation workshops to help increase engagement from a broader range of stakeholders and promote learning around the projects activities and outcomes. Within the project management arrangements (see Section 3) different stakeholder groups will also be engaged in the Project Board, the review of project outputs, as well as participating in monitoring activities. At site level land/coastal use zoning and planning activities will be undertaken through a participatory approach to ensure that all relevant stakeholders are engaged and that management approaches do not result in relocation of communities.

The background studies prepared as part of the development of the project included assessments of Thailand’s current institutional arrangements for biodiversity conservation, LGO planning, management, and performance assessment and the different stakeholders roles within these processes. Important consultations were also held with various government representatives and focal points to ensure that the project was appropriately designed and its implementation arrangements suitable.

A stakeholder analysis has also been included within the project development process (see Section 1.6) and outlines key stakeholders groups and their relevance to the project. **Table 11** below provides a more focused breakdown of these stakeholders by project output focusing on key lead agencies and mechanisms for engagement of other key supporting stakeholders. Further information on how different stakeholder groups will be engaged is included within Annex 6.

**Table 11: Stakeholder Roles Outcome 1**

| **Outcome 1: Enabling framework for LGOs to plan, monitor and adapt land management for BD conservation** | | |
| --- | --- | --- |
| Project Outputs | Lead agencies | Key Supporting agencies |
| Output 1.1. LGO decision-making processes on development planning and infrastructure placement integrate biodiversity conservation considerations. | DLA: Developing policy statement for MoI developing guidelines for LGOs | Supporting agencies will be engaged through the Technical Working group formed under the National Committee on Decentralisation. This working group will provide a key coordination mechanism across government agencies (within MoI) as well as across ministries with important inputs being sought form:  Department of Public Works and Town and Country Planning – responsible for spatial planning.  Department of Provincial Administration – supporting the integration of BHIs into Integrated Development Plans.  MONRE – with inputs from ONEP on links with national and international biodiversity targets  MoAC – for inputs on links with agricultural planning systems.  In addition the DLA will work across its own offices with a focus on the Office of Evaluation as well as the Bureau of Social Economic and Public Participation Development. |
| Output 1.2 Increased management and compliance monitoring capacity | DLA: Development of BHI methodology, training of government agencies on monitoring and enforcement. | Work will be led by BEDO on the technical development of the BHI methodology as well as the establishment of an information management system. The DLA will lead on linking these technical elements into performance management processes as well as coordinating LGOs and provincial authorities to participate in training and capacity building activities. |

**Table 12: Stakeholder Roles Outcome 2**

|  |  |  |
| --- | --- | --- |
| **Outcome 2: Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas** | | |
| Project Outputs | Lead agencies | Key Supporting agencies |
| Output 2.1: Development of Biodiversity Index for Ten SAOs | BEDO:  1) Lead the coordination of biodiversity assessments across the 10 SAOs,  2) Lead the implementation of SEAs,  3) Lead the development of BHIs for the two target areas  4) Lead the establishment of local level biodiversity database | The assessment processes will require close collaboration with LGOs local community groups as well as scientists who have already undertaken elements of the assessment process. This collaboration will help to increase buy in to the results of the assessments and the BHI as well as understanding of the utility of the biodiversity database. Key stakeholders within the process include:   * PONRE: the Provincial Office of Natural Resource and Environment will provide a key technical resource in undertaking the assessments as well as providing a link with provincial and national monitoring approaches. * LGOs: LGOs will be engaged in the assessment process to ensure they have a clear understanding of the existing biodiversity, the potential risks to it through different development activities and the utility of the BHI. * NGOs: conservation NGOs will be able to provide technical input as well as supporting monitoring through the year for example: the BCST, Inner Gulf Community Conservation Network. * Community groups: a number of local community groups have been engaged in biodiversity conservation within the areas and can provide support to assessments as well as gaining capacity through participation including: the Don Hoi Lord Conservation Group, Green Area Protection Network (Song Kanong), Lumphu Bang Krasorb Conservation Group (Bang Kasorb), and others. * Academic and research groups: these groups have some existing data against which baselines can be assessed and methodologies developed. Researchers may also have interest in on-going studies. Key universities include:   + Faculty of Science, Chulalongkorn University   + Division of Environmental and Urban Planning, Faculty of Architecture, Kasetsart University. (Developing Master plan for Bang Krachao)   + Department of Marine Science, Faculty of Fisheries, Kasetsart University   + Centre of Excellence in Biodiversity, Faculty of Science, Prince of Songkhla University (PSU), Songkhla Campus   + Thailand Environment Institute (TEI)   + Faculty of Architecture and Planning, Thammasat University |
| Output 2.2: Local development plans that incorporate conservation values are implemented for Bang Krachao and Don Hoi Lord. | BEDO: will lead the development of participatory land/coastal use plans that cover the Bang Krachao and the Don Hoi Lord area. | Land/coastal use planning will require the engagement of key line agencies, LGOs, District and Provincial Authorities, NGOs and community groups. These include:   * Ten SAOs: Ten SAOs – six in Bang Krachao and the four coastal SOAs of Don Hoi Lord. * PAOs: Two PAOs of Samut Songkram and Samut Prakarn. Rice Department: Provide advice on Organic Rice certification criteria and process, including market feasibility for the ES friendly products. * Other relevant SAOs: Within Samut Songkram SAOs form across the province will be brought together as part of the planning process to look at management of the whole Mae Klong river basin. * Key provincial government departments: Including the Department of Irrigation (Bang Krachao), Department of Marine and Coastal Resources (DMCR) (Don Hoi Lord), Department of Agriculture (Bang Krachao). * NGOs and Community groups: will provide key support in the planning processes and will represent key interest groups. * Chamber of Commerce: will provide representation of business interests. * Tourism Authority Thailand: provide information on existing tourism levels and potential tourism opportunities for inclusion within management plans. |
| Output 2.3: Capacity building support to implement participatory land/coastal use plans | BEDO: Lead on the provision of training to LGOs as well as community groups in the implementation of management plans. | Capacity building support will be provided to key stakeholder groups with a focus on LGOs within the target areas. This will partially be through enhanced linkages between key line agencies and LGOs. Capacity support will also be provided to key community groups as well to support their capacity to be engaged with monitoring and enforcement activities. |
| Output 2.4: Sustainable livelihoods activities that compliment biodiversity conservation supported | BEDO: Lead in the development of sustainable livelihoods. | Development of sustainable livelihoods will require close links to be developed with producers as well as with key government agencies that can support sustainable production approaches:   * Department of Agriculture: providing training to farmers in GAP and supporting cooperative development. * TAT: support to the development of sustainable tourism operations. * Chambers of commerce: support to the development of local markets and businesses. * Local businesses: a number of local business already exist working within the targets areas. Developing partnerships with them to enhance cooperation and networking will be a key step to strengthening sustainable production. * Academic institutions: a number of academic institutions have looked at sustainable tourism development within the areas (Kasetsart University), as well as the potential harvest yields of key species (Chulalongkorn University – razor clams). |

### Mainstreaming Gender

The project will play particular consideration to the potential for activities to have both positive and negative impacts on different genders. Continual review of gender considerations, combined with adaptive management will help to ensure positive impacts are maximized and the project is able to support the country’s movements towards a ‘just society’[[80]](#footnote-80) by increasing income generating potential for women and also ensuring that women are effectively engaged in decision making bodies. To achieve this gender will be mainstreamed throughout all project activities with key elements of this process outlined below.

Project Inception period

During the inception stage, the concepts of gender analysis and the gender disaggregation of project activities will be introduced to all stakeholders. This will be achieved by ensuring that the Project Manager, and Field Coordinators are fully versed with gender considerations within the project. A session of the Inception Workshop will focus on gender issues with a gender expert from UNDP providing support to this session.

Project Implementation stage

During project implementation, gender-specific issues will be mainstreamed into all project activities and project outputs. The Table below shows the specific project Outputs where gender will be mainstreamed in project implementation this process will be lead by the Project Management Unit with backstopping provided by UNDP.

**Table 13: Gender Mainstreaming within Project**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Output** | **Process** | **Activities** | **Timeframe** |
| ***Outcome 1: Enabling framework for LGOs to plan, monitor and adapt land management for BD conservation*** | | |  |
| Output 1.1. LGO decision-making processes on development planning and infrastructure placement integrate biodiversity conservation considerations. | - Consideration given to how guidance on integration of biodiversity consideration into planning processes will affect genders differently (e.g. guidance should ensure potential enhanced dependents of women on biodiversity when undertaking planning and management processes) | - Initial assessment of potential impacts of changed requirements for biodiversity conservation across genders as well as other vulnerable groups.  - Draft guidance reviewed to assess potential differential impacts across gender as well as other vulnerable groups.  - Inclusion of gender considerations in training and guidance materials. | Months 4 - 24 |
| Output 1.2: Increased management and compliance monitoring capacity of DLA and LGOs | - Potential differential impacts of framework across genders is considered | - Guidance on enforcement activities considers different impacts of enforcement across genders as well as other vulnerable groups. | Months  4 - 18 |
| ***Outcome 2: Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas*** | | |  |
| Output 2.1: Development of Biodiversity Index for Ten SAOs | - Women are engaged in assessment of biodiversity and development of indicators. | * Women engaged in assessment processes to ensure understanding of biodiversity information. * Women engaged in SEAs to support assessment of potential risks and impacts on livelihoods. * Women engaged in development of BHI to ensure buy in from women’s groups as well as understanding of potential conservation commitments. | Months 10-30 |
| Output 2.2: Local development plans that incorporate conservation values are implemented for Bang Krachao and Don Hoi Lord. | - Consideration given to supporting income-generating activities that are relevant to both genders. | * Women engaged in participatory land/coastal use planning activities. * Women engaged in management committees and decision-making bodies. | Months 10-40 |
| Output 2.3: Capacity building support to implement participatory land/coastal use plans | * Gender mainstreamed into extension activities. | * Gender considered during development of training activities as well as identification of participants. | 10-40 |
| Output 2.4: Sustainable livelihoods activities that compliment biodiversity conservation supported |  | * Gender considered in identification of sustainable livelihoods * Gender considered in provision of training and extension work. | 10-40 |

Project monitoring/ review/ evaluation

The project monitoring and evaluation process will mainstream gender issues by ensuring that gender considerations are included within all monitoring, review and evaluation activities. This will include both technical review of project outputs and review and evaluation of project management structures and operational practices.

## Expected Global, National and Local Benefits

The project is designed to strengthen and complement on-going efforts in Thailand to conserve globally significant ecosystems and biodiversity within production landscapes. As a result the project will deliver a number of positive impacts within at the national and local scales within Thailand and will also be carefully designed to ensure that potential negative impacts are either avoided or where unavoidable are mitigated for. In addition through conserving globally important biodiversity the project will also deliver global benefits in the form of conservation of the habitats of endangered migratory species.

At the **site level** the project will help to secure the conservation of areas of high biodiversity while also strengthening livelihood opportunities for local communities. Enhanced management of target areas guided by the national policy guidelines on integration of biodiversity conservation into local development planning, developed through the project will, help to address conflicts over land/coastal use and sustainable development planning within target areas, while also strengthening mechanisms for public participation in local and provincial decision making with a particular focus on the engagement of women and other vulnerable groups within communities. Support to the development of integrated management plans at the landscape level, their integration into local development plans, and the establishment of enforcement mechanisms will ensure that areas are effectively managed and key biodiversity it conserved.

The project will also support the development of sustainable biodiversity related livelihoods which will help to link biodiversity and development within local level planning and development processes ensuring the long term sustainability of conservation activities and the use of biodiversity. These livelihood approaches will also focus on reductions in chemical use and increases in the price per unit form existing livelihoods thus helping to both reduce exposure of participants to harmful chemicals and help to alleviate poverty by increasing and stabilising incomes over the annual cycle.

At the **national level** the project will deliver benefits through the provision of clear policy statements and guidance on the inclusion of biodiversity conservation within local development planning. It will also strengthen the capacity and the incentives of relevant institutions to apply these guidelines through the development of a biodiversity database and the integration of biodiversity based indicators into performance management and budgeting mechanism within provincial and local government levels.

These outcomes will deliver increased protection for the biodiversity of Thailand including a large number of the 555 vertebrate species identified as threatened on the National Red List and whose habitats remain outside protected areas. Strengthened environmental management will also help to reduce habitat degradation, which is currently the biggest threat to biodiversity within the country helping to prevent the movement of any other species towards the vulnerable or threatened status. Reductions in habitat degradation and maintenance of a more diverse production landscape, including key wetlands, will also help to improve Thailand’s capacity to adapt to a changing climate and make the country less vulnerable to environmental shocks.

Through the development of a number of environmentally friendly products and services the project will also build experience in developing and implementing environmental certification schemes that will provided a basis for further expansion of environmentally and socially certified production within Thailand. In developing linkages between private sector groups, NGOs, and government officials the project will also help to support innovative approaches to environmental and land management and their integration into local and provincial planning processes.

The **global environmental benefits** of this project derive from the fact that the project is addressing the direct and indirect threats of globally significant biodiversity caused by current land/coastal use practices. The immediate global biodiversity benefit is the stabilization of areas of globally significant habitats and the threatened species they contain outside protected areas covering 69,618ha. Enhanced management in these areas will help to conserve globally threatened species and ecosystems.

Within the Don Hoi Lord area the project will reduce human pressure on an internationally recognised RAMSAR site, which also forms part of the Inner Gulf of Thailand IBA. In conserving this important area the project will reduce disturbance to areas utilised by the Great Knot (*Calidris tenuirostris)* (IUCN – VU), Bar-tailed Godwit (*Limosa lapponica)* (IUCN – NT), Eurasian Curlew (*Numenius arquata*) (IUCN – NT) and Asian Dowitcher (*Limnodromus semipalmatus*) (IUCN – NT), as well as expanding the continuous habitat available for key species within the IBA including the Painted Stork (*Mycteria leucocephala*) (IUCN – NT), Spot-billed Pelican (*Pelecanus philippensis*) (IUCN – NT), Spoon-billed Sandpiper (Eurynorrhynchus pygmeus) (IUCN – CE), Black-tailed Godwit (*Limosa limosa*) (IUCN – NT). It will also conserve the area for species that are regular visitors to the wider IBA area and rely on these areas with significant numbers being present equating to over 1% of their population including the: Brown-headed Gull (*Larus brunnicephalus*) and Whiskered Tern (*Chidonias hybrida*), Lesser Sand Plover (*Chatadrius mongulus*), Lesser Sand Plover (*Charadrius leschenaultia*), Common Redshank (*Tringa guttifer*), Spotted Redshank (*Tringa guttifer*), Long-toed Stint (*Calidris subminuta*) and the nationally near threatened Little Tern - *Sterna albifrons*, - (Thai – NT). It will also help to maintain the environment for birds of prey both recorded within the area and present within the surrounding areas including the Greater Spotted Eagle (*Aquila clanga*) (IUCN – VU), the Black Kite (*Milvus migrans)* (Thai – E) and Brahminy Kite - *Haliastur indus*.

Within Bang Krachao the project will support the protection of remnant areas of flooded forest associated with the Chao Phraya Lowland Tropical and Subtropical Moist Broadleaf Forests. The habitat, consisting within the lower reaches of the Chao Phraya river of swamp forest has been extensively modified with high levels of urbanization and industrial development. Bang Krachao provides one example of an area still maintaining traditional agricultural techniques with natural forest covering 30% of the area and Sri Nakhon Kuenkhan Park providing formal protection for an area of remnant wetland forest. While many of the large mammal species are no longer present the habitat continues to maintain a rich biodiversity much of which is yet to be fully assessed with recent rapid assessments identifying a probable new species of earthworm (*Glyphidrilus sp.*). The species represents the high diversity of amphibian and insect species present within the river basins of Thailand with many yet to be fully identified and described. The area also plays host to a wide range of migratory and resident birds including the; Ink-necked Green Pigeon (*Trenon vernans -* LC), Stork-billed Kingfisher (*Pelargopsis capensis* - LC), Greater Racket-tailed Drongo (*Dicrurus paradiseus* - LC), Green-billed Malkoha (*Phaenicophaeus tristis* - LC), Laced Woodpecker (*Picus vittatus* - LC), Malayan Night Heron (*Gorsachius melanophus* - LC), Narcissus Flycatcher (*Ficedula narcissina* - LC), Ruddy Kingfisher (*Halcyon coromanda* - LC), Northern Boobook (*Nixon japonica*), Yellow-rumped Flycatcher (*Ficedula zanthopygia*), Mugimaki Flycatcher (Ficedula mugimaki), Forest Wagtail (Dendronathus indicus) and Black Baza (Aviceda leupholes) as well as providing a habitat in which a number of important species may well be found including Fairy Pitta (*Pitta nympha*), and Siberian Thrush (*Geokichla sibirica*)[[81]](#footnote-81). Protection of the habitat area will also provide a global example of how biologically diverse and important areas within close proximity to cities can be conserved and effectively with Bang Krachao representing one of the largest inner-city green areas within the SE Asia region.

The project’s approach will also provide a clear model of the integration of biodiversity conservation into local planning across Thailand. This approach combined with work on the legislative framework and capacity building through the project will help to support the conservation of the 575 IUCN Red Listed species[[82]](#footnote-82) within Thailand as well as increasing capacity for environmental management more broadly to secure the conservation of a wide range of habitats and environments helping to maintain the country’s biodiversity and its natural resilience to environmental shocks including those associated with on-going climate change.

## Project Consistency with National Priorities/Strategies

The project is in line with national and sectoral plans as well as with the objectives of existing provincial and local development activities as well as being consistent with on-going support activities provided by UNDP.

At the national level the project is fully aligned with the objectives of the Eleventh NESDP, which further develops the concepts of the sufficiency economy and focuses on the need to restructure the economy towards inclusive growth (including a move towards environmentally friendly production) and to move the management of natural resources and the environment further towards a position of sustainability[[83]](#footnote-83). In particular the project will help contribute to achieving the following objectives and indicators:

Under the Strategy to Strengthen Food and Energy Security and the Agricultural Sector

* 4.2.2 Ensure that agricultural products and food will meet market demands. Continually develop the quality and standards of commodities and food by expanding sustainable agricultural areas by at least 5 percent per year, and provide consumers access to safe and healthy food at fair prices. Including the need to *increase in the number of agricultural farms with accreditation per year and the increase in the area practicing sustainable farming* and e*ncourage production that supports basic biodiversity in accordance with climate and environmental conditions***.**

Under the Strategy for Managing Natural Resources and the Environment to Achieve Sustainability

* 4.2.1 Enrich the abundance of natural resources and biodiversity so that conservation lands occupy at least 19 percent of total area, expand forest reserves up to 40 percent, and attain at least 5,000 rai per year of mangrove coastal reforestation.
* 4.2.3 Create a more pleasant environment by reducing the pollution and threats to health from development. Regulate water quality in at least 80 percent of the main water sources and major rivers, restore coastal water quality in the inner Gulf of Thailand,
* 4.2.6 Increase efficiency in the management of natural resources and the environment such that communities can coexist in harmony with the forests.

The project is also fully aligned with the recently developed and preliminarily approved by the NEB, Integrated Master Plan on Biodiversity Management 2015-2021 with activities corresponding with almost all of the documents strategic areas (shown below):

* Strategy 1: Integration of biodiversity values and management with participation from all levels
  + Measure 1: Strengthening awareness and education on biodiversity
  + Measure 2: Enhancing capacity in administration and management of biodiversity, and in implementation of related international agreements
  + Measure 3: Promoting participation of local communities and relevant sectors in the conservation, restoration and sustainable utilization of biodiversity
* Strategy 2: Conservation and restoration of biodiversity
  + Measure 1: Conserving, restoring and protecting ecosystems, species and genetic resources
  + Measure 2: Conserving and restoring biodiversity at provincial, local and community levels
  + Measure 3: Reducing threats to biodiversity
* Strategy 3: Building capacity for utilization and sharing of benefits derived from biodiversity in accordance to the principles of green economy
  + Measure 1: Promoting sustainable utilization of biodiversity
  + Measure 2: Protecting and sharing of benefits derived from biological resources and genetic resources in fair and equitable manners
  + Measure 3: Promoting research and building capacities in development of biodiversity-based economy
* Strategy 4: Developing knowledge and database systems on biodiversity, in consistent with internationally recognized standards
  + Measure 1: Promoting and developing management of knowledge on biodiversity
  + Measure2: Developing database systems on biodiversity, in consistent with internationally recognized standards

These linkages are also present between the projects activities and Thailand’s “*National Policies, Measures and Plans on the Conservation and Sustainable Utilisation of Biodiversity 2008-2012”* which is the country’s NBSAP. In particular the project is fully coherent with key strategies including:

* *“Build capacity of the people and local administrative organizations on the conservation and sustainable use of biodiversity over at least 40% of  the  country’s  total  area”;*
* *“build capacity and expertise of institutions and their staff on  the  biodiversity  conservation”;*
* *“Strengthen capacity in conservation, restoration and protection of natural habitats, within and outside the protected areas”;*

The NBSAP has also notes the need to “provide protection for endangered, rare and endemic species.”

This project will also support the implementation of Thailand’s Action Plan (2009 – 2014) on wetland conservation, which has five goals – including conservation of wetlands with significant international importance; international cooperation; and institutional performance and efficiency. The project is also in line with a Cabinet Resolution from a meeting on November 3, 2009, which approved several measures for wetland conservation. These include issues such as the declaration of public wetland areas prohibiting any further utilization and conserving areas as water sources and water retention; the monitoring and maintenance of the wetland areas including containing the accessibility and land encroachment that will affect the public wetland areas; the increase of public wetland areas; the increase of public awareness and the participation in the planning and management process of nationally- and internationally-significant wetlands; boundary demarcation to prevent land encroachment; the declaration of nationally- and internationally-significant wetlands as sanctuary and environment protected areas; and the restoration and rehabilitation of degraded wetland areas to allow ecological and hydrological systems to function naturally.

In addition the project will address a number of challenges identified within the National Capacity Self-Assessment (NCSA 2010), which noted limitations in levels of awareness of biodiversity issues, capacity within MONRE to effectively monitor and implement legislation and limited engagement of the private sector in environmental conservation. The project will thus contribute to achieving the following objectives from the National Capacity Building Action Plan:

* Objective 2: Build capacity for the implementation of environmental laws and policies.
  + *Strategy 2.1: Building the capacity of MONRE to implement actions*
* Objective 3: Build the capacity for knowledge and public outreach in biodiversity matters at all levels (local, regional, national)
  + *Strategy 3.1: Increase the knowledge of CBD and biodiversity themes and priority issues for all elected government officials and department heads.*
* Objective 4: Enhance collaboration within national agencies as well as across different stakeholder groups.
  + *Strategy 4.2: Encourage private sector to increase involvement on national biodiversity actions by having an appointed private sector representative, who represents the private sector community, to the National Committee on Conservation and Sustainable Use of Biological Diversity*

The project is also in line with the country’s Tourism Development Plan 2012-16, which focuses on the need to promote sustainable tourism, ensuring rehabilitation and protection of the environment as well as increased participation by local communities. The strategy also recognises the important role that the natural environment has in developing tourism noting that 80% of tourists in Thailand prefer nature based tourism to cultural tourism.

The project is also complementary to the following five key on-going initiatives all of which are supported by the GEF Trust Fund. Project management will forge links with these initiatives, build on their achievements and collaborate to the extent possible.

*“Integrated Community-based Forest and Catchment Management through an Ecosystem Service Approach (CBFCM)”*

This UNDP/GEF project is creating an enabling policy and institutional environment for scaling-up integrated CBFCM practices in Thailand. This is being done through: (i) strengthening systemic capacities in sustainable forest and catchment management at the local, regional and national levels, and (ii) the expansion of CBFCM coverage throughout the country through pilot testing of defined PES and bio carbon financing mechanisms and up-scaling of best practices. This project is closely linked to Component 2 of the proposed project in regards to encourage local management and benefits from the natural resource management.

*“Catalysing Sustainability of Thailand’s Protected Area System”*

This UNDP/GEF project aims to overcome barriers to sustainability of Thailand’s  PA  system  through: (i) improving the governance in order to support an enabling environment for long-term PA system sustainability; (ii) enhancing institutional and individual capacities; (iii) assessing and testing revenue generation mechanisms and management approaches at 5 demonstration sites leading to increased funding levels of the PA system; and (iv) emplacing new models of PA management that support effective management of the System. The project focuses on Protected Area Management where the proposed project will focus on mainstreaming biodiversity in productive and development sectors outside PAs, thereby complementing each other in the overall conservation of biodiversity in Thailand.

*“Sustainable Management of Biodiversity in Thailand’s Production Landscapes”*

This UNDP/GEF project’s objective is designed to strengthen national and local capacity for mainstreaming biodiversity into the management of ecologically important production landscapes by transforming the supply and market chain of biodiversity-based products. The project will be building national capacity for support of Biodiversity Business through: (i) Improved institutional capacity and staff competences of BEDO (Biodiversity-based Economy development Office) as Thailand’s Biodiversity Business Facility for facilitation and support of community-based social enterprises; and (ii) Improved national cooperation and coordination, among partners with competencies related to biodiversity business. The proposed project will focus on land/coastal use planning and the implementation of restrictions (communities compensated in the event that subsistence livelihoods are negatively influenced) adding an important component to the range of mainstreaming tools available in Thailand.

The project will also be implemented in parallel and in complementarity with the other two UNDP/ GEF 5 projects under the Biodiversity Focal Area, these are:

*“Maximising Carbon Sink Capacity and Conserving Biodiversity through Sustainable Conservation, Restoration, and Management of Peat-swamp Ecosystems”,* which aims to conserve and restore peat-lands to increase their capacities to act as carbon sinks, as habitats for globally important species, and as sources of ecosystem services for improved livelihoods.

*“Conserving Habitats for Globally Important Flora and Fauna in Production Landscapes”,* of which the objective is to mainstream globally important biodiversity species conservation into production sectors through improved management of critical habitats.

These three projects share the same theme of biodiversity conservation and utilization in sectoral activities, using the different entry points: i.e. landscape focus (peat swamp ecosystems), flagship species focus (critical flora and fauna), and development actors focus (local government organisations as a key driver of area-based development planning and actions).

They are expected to provide solid evidence-based pilot cases to inform policy direction; and practical tools to translate policies into actions on the biodiversity conservation and utilization, especially in the next cycle of the National Economics and Social Development Plan (2017-2021). A Technical Working Group will be established that brings together technical experts on biodiversity conservation: all the above related projects will be represented on this group. Regular meetings will be held between the said projects to leverage synergies.

## Sustainability and Replicability

The project has been carefully designed to optimize prospects for improving the sustainability of mainstreaming biodiversity into the development planning, budgeting and performance management of local government organisations in the following areas:

**Environmental sustainability:** The project builds on a strong baseline of activities focused on conserving biodiversity as well as an increasing movement in Thailand towards more environmentally friendly production and consumption. The project will provide a national level framework to require local governments to integrate biodiversity conservation within their development planning and budgeting processes as well as providing agencies with the capacity to measure, monitor and assess the performance of such efforts with results being linked to on-going performance assessment processes for local government.

It will also show the opportunities available to the private sector and communities in terms of conserving biodiversity within production landscapes helping to develop a cultural shift towards environmentally friendly production nationwide, in the long term, while also ensuring the long term conservation of two important habitats within Thailand, in the immediate term.

**Institutional sustainability:** The project will influence the policies and investments of key Government agencies responsible for land/coastal use planning, agriculture, tourism and environmental protection, through work with local government agencies. The project will develop the tools and mechanisms needed to require, simplify and strengthen the integration of biodiversity conservation into development planning and land management by LGOs within Thailand. To ensure that these tools are fully utilized it will also build the capacity of key institutions within MONRE, and the MoI as well as BEDO to be able to better coordinate work on integrating biodiversity into development planning processes as well as monitor the effectiveness of these plans in application.

The project strategy will anchor the policy direction and guidance materials within the DLA in the MoI, which has the mandate to oversee local government, to ensure that it encourages full adherence and adoption by LGOs. It will also specifically enhance the capacity of the DLA, BEDO and other key stakeholders at national and local level to undertake monitoring activities of the biodiversity health of areas through use of a biodiversity index and the data management systems to store information on the index. This will ensure that the performance of LGOs can be effectively assessed as well as allowing national agencies to gain a better picture of levels of conservation activities being undertaken.

In order to show these processes in action the project will also work closely with the LGOs and PONRE in the two pilot sites as well as other partners in these areas to demonstrate how integration of biodiversity into development planning and budgeting can occur effectively and be fully implemented. This duel approach will help to solidify learning and create a central group of trained and experienced practitioners at national and provincial level who will be able to both maintain conservation gains made within those areas and further demonstrate and share that knowledge across Thailand.

**Financial sustainability:** The project has a significant focus on making the case for all stakeholders to start seeing biodiversity conservation as making economic as well as ecological sense. Recognition of the economic value of biodiversity together with the potential for development of environmentally friendly goods and services that are not only economically viable but profitable will help drive this process. In developing long term financial sustainability plans for each pilot site the project will demonstrate how the long term future of these approaches can be secured while also building linkages between different bodies in communities, the government and private sector to build innovative approaches to long term financing.

At the national level mainstreaming biodiversity conservation into local development planning and management processes will ensure that approaches become part of a basic budget requirement with key ministries and agencies also moving to increase budget allocations to further address recommendations coming from the planning processes at the local level. Demonstration activities will also help to make the financial case for changes in budget allocation across activities to increase focus on, extension services and financial tools to both increase and secure long term environmentally friendly productivity within production landscapes.

At the site level capacity building will also be provided to community groups and farmers to help develop longer-term sustainable business plans for environmentally friendly goods and services. These plans and the capacity building associated with them will help to develop local level production while ensuring sound financial and business management. This will not only help to strengthen local level production but will also help to ensure the long term financial viability of conservation activities within the areas.

**Replicability and scaling up:** The selection of two pilot sites with different characteristics (one estuary, one area close to a large urban center) has been made so as to cover as much diversity as possible, and generate a diverse set of practical experiences on integrating biodiversity into development planning, budgeting and performance assessment. The project will develop and use a knowledge management system to ensure the effective collation and dissemination of experiences and information gained in the course of the project’s implementation. The project will also develop national policies and guidance, on the integration of biodiversity conservation considerations that will not only apply to the sub-districts the project will be covering, but will have national coverage establishing the enabling environment for the project initiatives to replicated in all other sub-districts and provinces of Thailand. This framework combined with the institutional capacity building that will occur, the development of linkages between actors (in particular private sector groups interested in environmentally friendly goods and services) and the existing complementary projects and activities will help ensure that scaling up of project activities will be rapid and on-going.

# Results Framework

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **This project will contribute to achieving the following Country Programme Outcome as defined in CPD:** Thailand is better prepared to address climate change and environmental security issues through the enhancement of national capacity and policy readiness. | | | | | | | | |
| **Country Programme Outcome Indicators:**  **Indicator 1:** Number of national and local (networking) platforms supported and/or strengthened.  **Baseline**: As of 2011, there are few (networking) platforms fully operated by the Thai Government and participated by communities and stakeholders.  **Target:** At least 3 national and local platforms developed with UNDP support by 2016.  **Indicator 2:** Number of climate-related policies and model actions established applied and/or replicated by national and local partners; as well as exchanged in south-south cooperation forums.  **Baseline**: As of 2011, no strong climate-related national policies and model actions established, applied and/or replicated by national and local partners.  **Target:** At least 3 climate-related policies and model actions established, applied and/or replicated by 2016 with support by UNDP. At least 3 south-south exchange forums conducted addressing the three outputs and other key issues (e.g. mitigation, adaptation, environmental security, climate fiscal framework, etc.) | | | | | | | | |
| **Primary applicable Key Environment and Sustainable Development Key Result Area :** UNDP Strategic Plan (2014-2018): Inclusive Growth and Sustainable Development | | | | | | | | |
| **Applicable GEF Strategic Objective and Program**: BD2 | | | | | | | | |
| **Applicable GEF Expected Outcomes**: Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation;  And  Outcome 2.2. Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks. | | | | | | | | |
| **Applicable GEF Outcome Indicators:** Indicator 2.1: Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool. Indicator 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. | | | | | | | | |
|  | INDICATOR | | BASELINE | | END OF PROJECT TARGETS | | SOURCE OF INFORMATION | RISKS AND ASSUMPTIONS |
| Project Objective:  To mainstream biodiversity conservation priorities into the performance management, development planning and budgeting systems of local government in Thailand. | Hectares of landscape with enhanced conservation security. | | Currently only 204ha are managed with a focus on environmental considerations:  Bang Krachao - 204ha has been acquired within Bang Krachao for management by RFD with 32ha managed as parkland.  Don Hoi Lord has no areas currently protected. | | At least 69,618ha[[84]](#footnote-84) of land and coastal area has biodiversity considerations mainstreamed into its management through development of regulations providing stricter management arrangements for land/coastal use within these areas to ensure the conservation of target species and habitats. | | Government gazette | **Assumptions:**  Conservation of biodiverse habitats will result in the stabilisation or increase of target species, in particular increased use of the area by migratory species (Eurasian Curlew).  Inclusion of BHI within DLA provincial monitoring results in improved environmental management within provinces.  **Risks:**  Populations of migratory species are impacted by threats outside of project area including in summer nesting sites.  Significant changes in water quality due to unforeseen upstream impacts e.g. accidental chemical spill cause high impacts to habitats of target species. |
| Number of provinces with important biodiversity areas within eco-regions where the BHI is used as an annual performance measure for LGOs by the DLA. | | 0 | | Two provinces – Samut Songkram and Samut Prakarn | | DLA performance reports |
| Numbers of populations of the following species at target sites;   * Eurasian Curlew * Flying earthworm | | Eurasian Curlew – Baseline to be established during year 1 of project.[[85]](#footnote-85)  Flying Earthworm – baseline to be established during year 1 of project.[[86]](#footnote-86) | | No decline in population. | | Project surveys |
| Outcome 1:  Enabling framework for LGOs to plan, monitor and adapt land management for BD conservation | Policy statement and guidance on inclusion of biodiversity considerations in local government development planning and performance assessment issued by MoI | | No policy | | Policy statement issued | | MoI statement | **Assumptions**:  By issuing a clear policy statement and guidance on its implementation as well as a monitoring mechanism SAOs and PAOs will increase their focus on biodiversity conservation within planning.  Building the institutional capacity of the DLA to support biodiversity conservation through creation of a policy framework and technical skills will result in increased focus on DLA staff on ensuring biodiversity conservation is considered by PAOs and SAOs.  **Risks:**  A change in the administrative set up of local administrations creates uncertainty and reduces willingness to engage with new requirements. |
| Number of PAOs who are meeting the BHI targets established within their Development Plans. | | Currently no such targets exist. | | Two PAO development plans with BHI targets. | | Integrated Development Plans. |
| Number of SAOs who are meeting the BHI targets in their Performance management agreements with the Office of the Provincial Governor. | | Currently no such targets exist. | | Ten SAOss | | LGO performance management agreements. |
| Improvements in capacity development indicator score for DLA for:   * Indicator 4: Degree of environmental awareness of stakeholders * Indicator 10: Existence of adequate environmental policies and regulatory frameworks * Indicator 11: Adequacy of the environmental information available for decision-making mainstreaming * Indicator 14: Adequacy of the project/programme monitoring process | | Current scores   * Indicator 4: 1 * Indicator 10: 1 * Indicator 11: 1 * Indicator 14: 2 | | * 20% increase in capacity under indicators | | End of project assessment: |
| Outputs:   * 1. LGO decision-making processes on development planning and infrastructure placement integrate biodiversity conservation considerations.   2. Increased management and compliance monitoring capacity of DLA and LGOs | | | | | | | |
| Outcome 2:  Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas | Hectares of land for which participatory land/coastal management plans are in place. | Currently no participatory management plans in place. | | * Don Hoi Lord – 67,799ha * Bang Krachao – 1,819ha | |  | | **Assumptions:**  Increased knowledge on biodiversity within target areas and its threats combined with development of participatory land/coastal use plans create demand for improved management of natural resources and the environment by LGOs.  Capacity building support to LGOs on biodiversity conservation, monitoring and enforcement enhance willingness to enforce related regulations.  Provision of training and information on biodiversity friendly production and harvesting techniques and support in their application result in uptake by farmers and harvesters.  **Risks:**  Large scale unforeseen environmental impacts cause significant damage to target areas.  Changes in climate result in changes in target species ecology. |
| Reduction in identified threats to pilot areas achieved through improved local development plans.  Don Hoi Lord:   * Improper harvesting of clams – indicated by increases in species density * Pollution of canals - indicated by water pH and dissolved oxygen (DO) levels   Bang Krachao:   * Rapid urbanisation * Pollution from agricultural run off | Don Hoi Lord  No regulation or voluntary standards for clam harvesting currently exists – density of clams reported 0.51 (+/- 0.31) clams/m2 in 2008/9[[87]](#footnote-87)  Baseline to be established in year 1. Water pollution within Don Hoi Lord estuary reported to fall below PCD recommended levels for two months per year in 2008/9[[88]](#footnote-88)  Bang Krachao  Urban area currently 389.83ha  Green area 1,112.43ha of which 204ha is conservation area[[89]](#footnote-89).  Water quality has been classified as Damaging under PCD classifications. | | Don Hoi Lord   * Increase in species density of Razor Clams. * No decline in water quality levels as indicated by levels of pH and DO based on parameters set by the Thai PCD.   Bang Krachao   * No decline in area classified as ‘green area’ with no decline in conservation area within this[[90]](#footnote-90). * Improvements in water quality levels of dissolved oxygen (DO) and pH of water within canals to levels associated with Class 3 Water Quality (pH between 5 and 9, DO 4.0mg/l)[[91]](#footnote-91). | | Project assessments | |
| Biodiversity Health of Don Hoi Lord Ramsar Site and Bang Krachao. | No BHI currently used in Thailand. Specific BHI will be designed for the project sites and baseline established in year 1 | | Increase in BHI score against baseline. | | Surveys by project partners | |
| Scale of certified production and operations. | Don Hoi Lord   * Currently no certified production of Razor Clams or other products.   Bang Krachao   * 3.4 ha of certified mango production. | | Don Hoi Lord   * 80% of full time Razor clam harvesters are certified.   Bang Krachao   * Over 70ha of certified mango production. | | Surveys by project partners  BEDO and MoA certification. | |
| Outputs:  2.1: Development of Biodiversity Index for 10 Tambons  2.2: Local development plans that incorporate conservation values are implemented for Bang Krachao and Don Hoi Lord.  2.3: Capacity building support to implement participatory land/coastal use plans  2.4: Sustainable livelihoods activities that compliment biodiversity conservation supported | | | | | | | |

# Total Budget and Workplan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Award ID:** | 00086180 |  | **Business Unit:** | THA10 |
| **Project ID:** | 00093511 |
| **PIMS#:** | 5271 |  | **Project Title:** | Sustainable Management Models for Local Government Organisations to Enhance Biodiversity Protection and Utilization in Selected Eco-regions of Thailand |
| **Award Title:** | PIMS 5271 – Sustainable Models for Local Government |  | **Implementing Partner (Executing Agency)** | Biodiversity-Based Economy Development Office (BEDO) (Public Organisation), Ministry of Natural Resources and Environment (MoNRE) |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| GEF Outcome/Atlas Activity | Implementing Agent/ Responsible Party | Fund ID | Donor Name | Atlas Budget Account Code | ATLAS Budget Description | Amount Year 1 (USD) | Amount Year 2 (USD) | Amount Year 3 (USD) | Amount Year 4 (USD) | Total (USD) | See Budget Note |
| Outcome 1: Enabling framework for LGOs to plan, monitor and adapt land management for BD conservation | DLA | 62000 | GEF | 71300 | Local Consultants | 34,000 | 49,000 | 49,000 | 24,000 | 156,000 | 1,2 and 3 |
| 71600 | Travel | 12,250 | 12,250 | 12,250 | 12,250 | 49,000 | 4 |
| 72100 | Contractual Services Company | 25,000 | 45,000 | 45,000 | 40,000 | 155,000 | 5 |
| 72500 | Supplies (Stationery, Office) | 4,000 | 4,000 | 4,000 | 2,000 | 14,000 | 6 |
| 74100 | Professional Service (micro assessment + audit) | 3,100 | - | 6,000 | - | 9,100 | 7 |
| 72200 | Equipment | - | - | - | - | - |  |
| 74200 | AV and Print Production Costs | 12,500 | 15,000 | 15,000 | 12,500 | 55,000 | 8 |
| 74500 | Miscellaneous and contingencies | 3,900 | 3,000 | 3,000 | 2,000 | 11,900 | 9 |
| 75700 | Training and workshops | 40,000 | 40,000 | 40,000 | 30,000 | 150,000 | 10 |
| **TOTAL OUTCOME 1** | | | | | | **134,750** | **168,250** | **174,250** | **122,750** | **600,000** |  |
| Outcome 2: Local government development programmes based on biodiversity mainstreaming principles are demonstrated in two pilot areas | BEDO | 62000 | GEF | 71200 | International Consultant | - | 18,000 | - | 18,000 | 36,000 | 11 |
| 71300 | Local Consultants | 22,000 | 32,000 | 22,000 | 32,000 | 108,000 | 12 |
| 71600 | Travel | 20,000 | 20,000 | 20,000 | 15,000 | 75,000 | 13 |
| 72100 | Contractual Service, company | 85,000 | 87,500 | 87,500 | 85,000 | 345,000 | 14,15 and 16 |
| 72500 | Supplies (Stationery, Office) | 5,000 | 7,000 | 5,000 | - | 17,000 | 5 |
| 72200 | Equipment | 30,000 | 35,000 | 30,000 | - | 95,000 | 17 |
| 74200 | AV and Print Production Costs | 10,000 | 10,000 | 10,000 | 10,000 | 40,000 | 18 |
| 74500 | Miscellaneous and contingencies | 2,000 | 2,000 | 2,000 | 2,004 | 8,004 | 8 |
| 75700 | Training and workshops | 70,000 | 70,000 | 70,000 | 65,000 | 275,000 | 19 |
| **TOTAL OUTCOME 2** | | | | | | **244,000** | **281,500** | **246,500** | **227,004** | **999,004** |  |
| Project Management | BEDO/ UNDP | 62000 | GEF | 74100 | Contractual Service, Individual | 30,463 | 40,615 | 40,615 | 40,615 | 152,308 | 20 |
| 74599 | Direct Project Cost | 1,898 | 1,898 | 1,898 | 1,898 | 7,592 | 21 |
| **Total Project Management** | | | | | | **32,361** | **42,513** | **42,513** | **42,513** | **159,900** |  |
| **PROJECT TOTAL** | | | | | | **411,111** | **492,263** | **463,263** | **392,267** | **1,758,904** |  |

## Summary of Funds in US Dollars: [[92]](#footnote-92)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **FUNDING SOURCE** | **Type** | **Amount** | **Amount** | **Amount** | **Amount** | **Total** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** |
| GEF | Cash | 411,111 | 492,263 | 463,263 | 392,267 | 1,758,904 |
| UNDP | Cash | 5,000 | 10,000 | 10,000 | 5,000 | 30,000 |
| BEDO – National Government | Cash/in-kind | 1,882,500 | 1,882,500 | 1,882,500 | 1,882,500 | 7,530,000 |
| **TOTAL** |  | **2,298,611** | **2,384,763** | **2,355,763** | **2,279,767** | **9,318,904** |

## Budget Notes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Items*** | ***Indicative $/person/ week*** | ***Estimated week*** | ***Total*** | ***Note*** | ***Relevant Output and tasks to be performed*** |
| *Outcome 1* | | | | | |
| National Technical Advisor | 2,000 | 48 | 96,000 | 1 | A national biodiversity policy expert to serve as a technical advisor for overall technical backstopping. S/he will work in close collaboration with the project manager and in support of the project director (in-kind from BEDO) to ensure technical coherence of outcomes as well as policy linkages. The advisor will work for 48 weeks over the 4 years. |
| Development planning expert (NRM related) | 2,500 | 14 | 30,000 | 2 | **Output 1.1** The consultant will work closely with the WG for development of the new policy statement and guidance documents on integration of biodiversity conservation into the local government development planning processes and how these will link with performance assessment agreements and processes within local government. The consultant will work with the land/coastal use planning expert to initially undertake an assessment of the existing planning mechanisms and tools available to identify the most effective entry points and in which areas systems, and capacity needs to be strengthened. Particular consideration will be paid to the interaction of different legislation and areas of institutional responsibility within the planning process. Engagement anticipated between years one and two. |
| Land/coastal use Planning Expert | 2,500 | 14 | 30,000 | 3 | **Output 1.1** The consultant will work closely with the WG for development of the new policy statement and guidance documents on integration of biodiversity conservation into the local government development planning processes and how these will link with performance assessment agreements and processes within local government. The consultant will, in partnership with the Development Planning Expert, develop an analysis of existing planning mechanisms, what gaps and limitations exist and where changes, system development and capacity building will be best placed. The consultant will be engaged in drafting recommendations for consideration of the WG and developing guidance to support the policy statement to be made by MoI. Engagement anticipated between years one and two. |
| Travel | N/A |  | 49,000 | 4 | This will cover travel under the two outputs. Budget will cover travel within Thailand to conduct training and awareness raising events with relation to Outputs 1.1 and 1.2. It will also cover at least two international trips for key decision makers to gain increased understanding of how biodiversity conservation has been integrated into development planning within other countries. |
| Contractual Services, Company | N/A |  | 155,000 | 5 | The contractual services for institution to be responsible for Output 1.2. over the course of 4 years. The team of consultants will consist of:  1. **Biodiversity indicator specialist –** the specialist will identify key indicators that can be utilised at the national, provincial and local level to assess biodiversity health for key ecosystems within Thailand. The expert will work to develop a clear and user-friendly set of ‘off the shelf’ methodologies for the development of BHIs within key ecosystems in Thailand that can be linked with information on threat assessment and vulnerability.  2. **Data management specialist** – will be responsible for integrating BHI information into existing data management systems at the local provincial and national levels.  3. **GIS / IT Expert** – responsible for integrating different information management systems to ensure that information on BHI as well as other development activities can be easily mapped and represented . The tools developed can then be rolled out within different provinces. |
| Supplies | N/A |  | 14,000 | 6 | This will cover supplies for project database and information system coordination |
| Professional Service (micro assessment + audit) | N/A |  | 9,100 | 7 | For third-party financial capacity and internal control assessment (Year 1) and Audit (Year 3) |
| AV and Print Production Costs | N/A |  | 55,000 | 8 | This will cover the cost of developing information materials and training guides. Information materials will be developed under both Outputs 1.1 and 1.2, to support understanding and implementation of the new guidelines on integrating biodiversity conservation into development planning as well as providing information on the operation of the biodiversity index and data management systems linked with this. |
| Miscellaneous |  |  | 11,900 | 9 | This has been budgeted for any unforeseeable developments during project implementation that require adaptive management actions that cannot be finance through the existing planned budget to account for inflation, currency rate exchanges |
| Training and Workshops | N/A |  | 150,000 | 10 | This will provide for a number of workshops and training events. These will focus on:   * Building understanding and awareness of how biodiversity conservation can be integrated into development planning (Output 1.1) * Building understanding of new policy statement and guidance on integration of biodiversity conservation into development planning. (Output 1.1) * Develop consensus on the approach to utilizing biodiversity indices (Output 1.2) * Strengthen understanding and awareness of Government officials and other key stakeholders of the tools available to support integration of biodiversity into development planning (e.g. biodiversity indices and data management systems) (Output 1.2)   It will also cover the project board meetings to create awareness and understanding as well as policy entry points on ES critical habitats management. |
| **Sub-Total** |  |  | **600,000** |  |  |
| **Outcome 2:** | | | | | |
| International Consultant | N/A |  | 36,000 | 11 | To cover fees for international consultant for Midterm Review (Year 2) and Final Evaluation, inclusive of travels |
| Local Consultant | N/A |  | 20,000 | 12 | To cover fees for national consultant for Midterm Review (Year 2) and Final Evaluation (Year 4), inclusive of travels |
| Local Consultant | N/A |  | 88,000 | 12 | One assistant will also be hired to support the work of BEDO, and a coordinator will also be hired to facilitate linkages within the DLA and between the DLA and other branches of MoI (to facilitate the passage of the policy statement and guidance documents) as well as in engaging with stakeholders at the two projects sites as well as strengthening links between the two outcomes.  The sum will also cover two field coordinators who will be focused on bringing together different stakeholders and technical experts at the two pilot sites. These coordinators will work closely with the relevant LGOs and facilitate linkages between LGOs, Provincial government offices and BEDO and the DLA and will have a close working relationship with the aforementioned BEDO assistant and DLA coordinator. |
| Travel | N/A |  | 75,000 | 13 | Travel will cover travel of consultants to and within project pilot sites. It will also provide for key stakeholders within each site to visit other locations (Under Outputs 2.1 and 2.2) to identify existing best-case examples of land/coastal use zoning and development of environmentally friendly goods and services. |
| Contractual Services, Company | N/A |  | 62,500 | 14 | **Institutional contract for Biodiversity research and GIS specialists to:**  **Output 2.1** to conduct initial biodiversity assessment and mapping work and to develop an index of biodiversity within the area. This will then be used to integrate biodiversity into land/coastal use zoning as part of the development of an integrated land/coastal use plan and subsequent integration into local and provincial development plans. As well as assessing, in partnership with local stakeholders, the potential funding mechanisms for different land management approaches.  **Output 2.2** to provide capacity building training and support to government ministries, extension workers and local stakeholders in assessing biodiversity, monitoring it and including it within mapping information on the area. |
| Contractual services company | N/A |  | 120,000 | 15 | **Participatory Land/coastal use Planning and Development Planning Experts** – The team will work closely with the biodiversity experts in engaging local stakeholders in integrating biodiversity within local planning processes. The team will act as facilitators to bring together community members, officials and other key stakeholders across the target Tambons to discuss development plans and to develop integrated plans that include biodiversity as well as specific targets for biodiversity conservation. |
| Contractual Services, Company | N/A |  | 100,000 | 16 | **Institutional contract for a team of consultants (covering two main areas of work),** consisting of sustainable seafood expert (Don Hoi Lord), and sustainable agricultural experts (for Bang Krachao):  **Output 2.3.** The consultants will work with key partners to develop business plans for potential environmental friendly businesses. |
| Supplies | N/A |  | 17,000 | 5 | This will cover supplies for project database and information system coordination at pilot sites |
| Equipment | N/A |  | 95,000 | 17 | This includes operational equipment related to supporting SAOs to have the operational capacity to effectively develop and manage information on biodiversity within their areas including laptops, software and environmental monitoring equipment. |
| AV and Print Production Cost | N/A |  | 40,000 | 18 | This covers materials required for awareness raising, trainings, capacity buildings, surveys, information dissemination, advocacy, manuals, under all four outputs. |
| Training and Workshops | N/A |  | 275,000 | 19 | This will provide for a number of trainings and workshops for capacity building for the implementation on ES landscape management, land/coastal use planning, biodiversity-friendly enterprises development, and extension. It will also cover the cost of meetings of local committee in each pilot site. |
| Miscellaneous | N/A |  | 8,004 | 8 | same as budget note 9 |
| **Sub-total** |  |  | **999,004** |  |  |
| ***Project Management*** | | | | | |
| Contractual Services Individuals | N/A |  | 152,308 | 20 | A full-time project manager @ 3384.6 USD/ month for 45 months |
| Direct Project Cost | N/A |  | 7,592 | 21 | Cost to UNDP for providing support services for project implementation, in hiring project personnel/consultants, and in facilitating the transfer of fund between the implementing partner (BEDO) and responsible party (DLA). The cost will be incurred on actual transactions, based on UNDP’s Universal Price List |
| Sub-Total |  |  | 159,900 |  |  |
| **Total Project** |  |  | **1,758,904** |  |  |

# Management Arrangements

The project will be executed through UNDP’s National Implementing Modality (NIM) with the Biodiversity-based Economy Development Office (BEDO) of the Government of Thailand as the Implementing Partner (IP) and the Department of Local Administration (DLA) of the Ministry of Interior (MoI) Government of Thailand as the Responsible Party (RP).

**Implementing Partner:** Following the programming guidelines for national implementing modality (NIM) of UNDP-supported projects, BEDO, will sign the project document with UNDP. The implementing partner shall be accountable for the disbursement of funds and the achievement of the project objective and outcomes, according to the approved work plan. In particular, BEDO, as the Implementing Partner (IP), will be responsible for the following functions: (i) coordinating activities to ensure the delivery of agreed outcomes (ii) certifying expenditures in line with approved budgets and work-plans; (iii) facilitating, monitoring and reporting on the procurement of inputs and delivery of outputs; (iv) coordinating interventions financed by UNDP with other parallel interventions; (v) preparation of Terms of Reference for consultants and approval of tender documents for sub-contracted inputs; and (vi) reporting to UNDP on project delivery and impacts. The BEDOs technical leadership and engagement will focus on the operations of Outcome 2 although they will also be fully engaged as a project partner in supporting the DLA under the delivery of Outcome 1.

**Responsible Party:** The DLA will be the responsible party to lead the implementation of work on development of a policy framework and guidance documents for the inclusion of biodiversity within the development planning process under Outcome 1. A responsible party is defined as an entity that has been selected to act on behalf of the Implementing Partner and is directly accountable to the Implementing Partner in accordance with the terms of their agreement with the Implementing Partner. In close coordination with the BEDO, the DLA will undertake the engagement of consultants, and other goods and services required to ensure the effective and timely delivery of the agreed outcomes.

The project will establish a Project Board (PB) and a Project Management Unit (PMU) within the BEDO. The PB and PMU will be responsible for communicating the lessons/outcomes of actual site work to relevant central bodies and make use of them in developing new policies. Existing local coordinating bodies will be utilized, enhanced, and/or expanded so as to ensure coordination of activities at the site level and the participation of important stakeholders. The overall management structure of the project is shown below:

Figure 6: Project Management Arrangements

**Outcome 2: Led by BEDO**

**Senior Beneficiaries**

RFD, DMCR, MOAC, TAT, Provinces, CSO,

**Executive**

BEDO and DLA

**Senior Supplier**

BEDO and DLA

Project Director

(in-kind) from BEDO)

-----------------

Project Manager

Project Assistant

Project Board

**Project Assurance**

UNDP Thailand

UNDP Regional Hub

**Project Technical Team**

**Outcome 1: Led by DLA**

Working group

(DTCP, ONEP, DOPA,

OPCD, DC)

------------------------------

Project Coordinator at DLA

**Don Hoi Lord**

Working Group, chaired by Provincial Governor,

consisting of TAOs, DMCR, PONRE, CSOs, with BEDO as secretariat

Link with the DMCR Provincial Mechanism

---------------------------

Field Coordinator

**Bang Krachao**

Working Group, chaired by District Chief,

consisting of TAOs, PONRE, CSOs, with BEDO as secretariat

Link with the Integrated Provincial Committee of Samut Prakarn

---------------------------

Field Coordinator

The government will appoint a high level official within BEDO who will serve part time as the **Project Director** and focal point to the project. S/he is accountable to Government and UNDP for the implementation of the project in line with the signed project document. S/he is the approving officer for the project and will be responsible for providing government oversight and guidance for project implementation. The project director will not be paid from project funds, but will represent a Government in-kind contribution to the project.

Among the duties and responsibilities of the Project Director are the following[[93]](#footnote-93):

1. Assumes overall responsibility for the successful execution and implementation of the project toward achieving the outcomes and outputs.
2. Ensures the proper use of project resources.
3. Serves as a focal point for coordination of the project with implementing agencies, UNDP, Government and other partners
4. Ensures that Government inputs for project are available.
5. Leads and coordinates partners in the selection of the Project Coordinator.
6. Supervises the Project Coordinator and facilitates the work of the Project Coordinator and all staff.
7. Ensures that the required project work plan is prepared and updated in consultation and agreement with UNDP and distributed to the Government (Counterpart Ministry)
8. Leads and arranges the recruitment of project professional and support staff in line with laid out recruitment process.
9. Authorizes commitments of resources for inputs including staff, consultants, goods and services and training. May appoint an alternate that can support the project work in the absence of the GFP.
10. Will represent the National Executing Agencies at project meetings and annual reviews.
11. Will lead efforts to build partnerships for the support of outcomes indicated in the project document.
12. Will support resource mobilization efforts to increase resources in cases where additional outputs and outcomes are required.

The project will hire a **Project Manager (PM)** who will report to the Project Board (PB), and who will work in close collaboration with the Project Director to ensure cost efficient, technical and administrative project operations. The PM will be supported by technical consultant which will provide advice and support on any technical aspects, in particular the reviewing and drafting of Terms of Reference and reviewing the outputs of consultants and other subcontractors.

Working closely with and through the PB, the UNDP Country Office (UNDP-CO) will be responsible for: (i) providing financial and audit services to the project; (ii) recruitment of project staff and contracting of consultants and service providers; (iii) overseeing financial expenditures against project budgets approved by PB; (iv) appointment of independent financial auditors and evaluators; and (iv) ensuring that all activities including procurement and financial services are carried out in strict compliance with UNDP/GEF procedures. A UNDP staff member will be assigned with the responsibility for the day-to-day oversight and control over project deliveries.

## At Central Level

A Project Board (PB) will be designated by BEDO and the DLA and will serve as the project’s governance and decision-making body. The PB, will comprise representatives of the BEDO, DLA, UNDP and relevant agencies within MONRE – including the RFD and the DMCR, and within MoI – including the Community Development Department (CDD), and the Department of Provincial Administration (DPA), and within the MoAC, and the TAT. Representatives of civil society and the private sector will also be present on the PB.

The PM will also be in attendance at PB meetings. It will meet as necessary, but not less than once every 6 months, to review project progress, approve project work plans (including budgets) and approve major project deliverables. The PB is responsible for ensuring that the project remains on course to deliver products of the required quality to meet the outcomes defined in the project document. The PB’s role will include: (i) overseeing project implementation; (ii) approving all project work plans and budgets, as put forward by the PM, for submission to the UNDP Country Office, and the GEF Unit in New York; (iii) approving any major changes in project plans or programmes; (iv) providing technical input and advice; (v) approving major project deliverables; (vi) ensuring commitment of resources to support project implementation; (vii) arbitrating any conflicts within the project and/or negotiating solutions between the project and any parties beyond the scope of the project; and (viii) overall project evaluation.

A **Project Management Unit (PMU)** will be set up to provide the day-to-day coordination and administration of the project. It will comprise the Project Manager (PM) and the Project Assistant (PA). The project staff will be recruited using standard UNDP recruitment procedures. The PM, will assume the lead responsibility for the upstream elements of the project (primarily Outcome 1) through work with the DLA, as well as provide oversight and coordination among the key Implementing Partners at the two downstream localities, namely, Don Hoi Lord, within Samut Songkram Province, and Bang Krachao within Samut Prakarn Province. The PMU, while assuming responsibility for the upstream activities, will provide advice, support and coordination for all project activities. The PM will liaise and work closely with all partner institutions to link the project with complementary national programmes and initiatives. The PM is accountable to the PB for the overall quality, timeliness and effectiveness of the activities carried out, as well as for the use of funds. The PM will collate the input from the key Implementation Partners and produce Annual Work and Budget Plans to be approved by the PB at the beginning of each year. These plans will provide the basis for allocating resources to planned activities. The PM will further produce collated quarterly operational reports and Annual Progress Reports (APR/PIR) for submission to the PB. These reports will summarize the progress made by the project against the expected results, explain any significant variances, detail the necessary adjustments and be the main reporting mechanism for monitoring project activities.

**Project Assurance** function will be performed by UNDP Thailand and UNDP Bangkok Regional Hub (BRH). The function supports the Project Board by carrying out objective and independent project oversight and monitoring functions. The role ensures appropriate project management milestones are managed and completed. Project Assurance has to be independent of the Project Manager; therefore the Project Board cannot delegate any of its assurance responsibilities to the Project Director or the Project Manager. UNDP will be responsible for Project oversight, ensuring milestones are achieved. It will undertake financial and technical monitoring, as part of its oversight functions. In addition, UNDP will be responsible for: (i) coordinating with UN Country Team in Thailand with a view to mainstreaming in their interventions at the country level and funding as appropriate; (ii) establishing an effective networking between project stakeholders, specialized international organizations and the donor community; (iii) facilitating networking among the country-wide stakeholders and south-south exchange.

## At Local Level

Whereas the project activities at the national level will be the responsibility of the PMU to organize, and the DLA to lead, implementation and management of project activities at each of the project localities will be the responsibility of the BEDO as the Implementing Partner at that location with the support, guidance and overall coordination of the PMU. In each case, BEDO will nominate a senior official to serve as the Local Project Director (LPD) who will serve as the formal link between the project, UNDP, and the PMU with the BEDO. The PMU will assign a Field Coordinator at each location within the LGO offices, to facilitate project activities (under Outcome 2). It is expected that in each location the Implementing Partner will use existing infrastructure and staff support resources and facilities to implement project activities and these will be considered as part of their contribution to the project in-kind. However, while it is unable to pay staff salaries, the project may be able to assist with equipment and facilities to safeguard the effective implementation of project activities. The project will also provide the necessary expertise and know-how as well as the incremental resources required to carry out the agreed project Activities leading to the targeted Outputs.

At the site levels project coordination will occur through a coordination committee at District level within Bang Krachao and coordination committees at the provincial and sub-district level within Samut Songkram. In Bang Krachao the committee with be chaired by the District Chief while in Samut Songkram it will be chaired by the Provincial Governor at the provincial level, (with BEDO working in close collaboration with DMCR, the PONRE and the committee on natural resources and environment) and by the District Chief at sub-district level (four tambons surrounding Don Hoi Lord – this committee will also work closely with the Ramsar and coastal management committee established by DMCR and the provincial working group with a focus on more operational and site specific issues – e.g. management of Razor Clam fisheries). These committees will also have representatives form relevant LGOs, the Chamber of Commerce, and local NGOs.

# Monitoring Framework and Evaluation

The project will be monitored through the standard M&E activities and allowances have been made for this in the M&E budget as in the table below.

## The Inception Phase

A Project Inception Workshop will be held within the first two months of project start with the participation of those with assigned roles in the project organization structure, the UNDP country office and, where appropriate/feasible, regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop will serve to confirm the Logical Framework, build ownership for the project results and plan the first year annual work plan.

The **Inception Workshop** will address a number of key issues including:

* Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and BRH staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
* Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
* Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget will be agreed and scheduled.
* Discuss financial reporting procedures and obligations, and arrangements for annual audit.
* Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures will be clarified and meetings planned. The first Project Board meeting will be held within the first 12 months following the Inception Workshop.

The Inception Workshop Report will serve as a key reference document and will be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

## Monitoring and Reporting Responsibilities and Events

On a **quarterly basis** –

* Progress made will be monitored in the UNDP Enhanced Results Based Management Platform.
* Based on the initial risk analysis submitted, the risk log will be regularly updated in ATLAS. Risks become critical when the impact and probability are high. As this is a UNDP GEF project, all financial risks associated with financial instruments such as the proposed microfinance scheme for AIGs, are automatically considered as critical on the basis of its innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
* Based on the information recorded in ATLAS, a Project Progress Report (PPR) will be generated in the Executive Snapshot.
* Other ATLAS logs will be used to monitor issues, lessons learned, etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

On an **annual basis** –

Annual Project Review/Project Implementation Reports (APR/PIR): This key report will monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

* Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
* Project outputs delivered per project outcome (annual).
* Lesson learned/good practice.
* AWP and other expenditure reports
* Risk and adaptive management
* ATLAS QPR
* Portfolio level indicators (i.e. GEF focal area tracking tools) for the Biodiversity focal area.

**Periodic Monitoring** through site visits –

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the PB may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and PB members.

* **Learning and knowledge sharing**

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

* **Communications and visibility requirements**

Full compliance is required with UNDP’s Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF\_logo. The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.

Full compliance is required with the GEF’s Communication and Visibility Guidelines (the “GEF Guidelines”). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/ thegef.org/ files/documents/C.40.08\_Branding\_the\_GEF%20final\_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

## Independent Evaluations and Audits

**Mid-term of project cycle –** The project will Mid-term of project cycle – The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation. The Mid-Term Review will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the second half of the project’s term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project – An independent Terminal Evaluation will take place three months prior to the final PEB meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project’s results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

**Project Terminal Report**

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project’s results. The Project Terminal Report will be available, at least in draft, for the Terminal Evaluation.

## M&E Work plan and Budget

| **Type of M&E activity** | **Responsible Parties** | **Budget US$**  *Excluding project team staff time* | **Timeframe** |
| --- | --- | --- | --- |
| Inception Workshop and Report | * PM * UNDP CO, UNDP GEF | Indicative cost: US$ 10,000 (as part of Outcome 1) | Within first three months of project start up |
| Setting of Baselines and end of project Targets together with Means of Verification of project results | * UNDP CO/PM will oversee the hiring of specific surveys, studies and institutions, and delegate responsibilities to relevant team members. | To be finalized in Inception Phase and Workshop | Start, mid and end of project (during evaluation cycle) and annually when required. |
| Measurement of Means of Verification for Project Progress on *output and implementation* | * Oversight by PM * Project team | To be determined as part of the Annual Work Plan's preparation. | Annually prior to ARR/PIR and to the definition of annual work plans |
| ARR/PIR | * PM and team * UNDP CO * UNDP RTA * UNDP EEG | None | Annually |
| Periodic status/ progress reports | * PM and team | None | Quarterly |
| Mid-term Review | * PM and team * UNDP CO * UNDP RCU * External Consultants (i.e. evaluation team) | Indicative cost: US$ 28,000 | At the mid-point of project implementation. |
| Final Evaluation | * PM and team * UNDP CO * UNDP RCU * External Consultants (i.e. evaluation team) | Indicative cost: US$ 28,000 | At least three months before the end of project implementation |
| Project Terminal Report | * PM and team * UNDP CO | None | At least three months before the end of the project |
| Micro Assessment | * UNDP CO * PM and team | Indicative cost per year: US$ 3,100 | Year 1 |
| Audit | * UNDP CO * PM and team | Indicative cost per year: US$ 6,000 | Year 3 |
| Visits to field sites | * UNDP CO * UNDP RCU (as appropriate) * Government representatives | For GEF supported projects, paid from IA fees and operational budget | Yearly |
| **TOTAL indicative COST**  Excluding project team staff time and UNDP staff and travel expenses | | US$ 75,100 |  |

# Legal Context

The Royal Thai Government and the United Nations Special Funds have entered into the Agreement to govern assistance from the Special Fund to Thailand, which was signed by both parties on 04 June 1960. Pending the finalization of the Standard Basic Assistance Agreement (SBAA) between UNDP and the Government, the Agreement will govern the technical assistance provided by UNDP Thailand under the Country Programme Document (2012-2016).

Under the UNDP-funded programmes and projects, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP’s property in the implementing partner’s custody, rests with the implementing partner in accordance with the aforementioned Agreement between the UN Special Fund and the Government of Thailand concerning Assistance from the Special Fund 1960.

The implementing partner shall:

1. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the Programme is being carried;
2. assume all risks and liabilities related to the implementing partner’s security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Programme Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Programme Document.

# Audit Clause

The Audit will be conducted in accordance with UNDP Financial Regulations and Rules and applicable audit policies on UNDP projects.

# Annex 1: ToR of Key Personnel

|  |  |
| --- | --- |
| ***Items*** | ***Relevant Output and tasks to be performed*** |
| **Outcome 1.** |  |
| Contractual Services Individual: National Technical Advisor | The consultant will be the technical lead on all work under Outcome 1 and will work closely with consultants and capacity building experts under Outcome 2 to ensure that there is on-going adaptive management and technical development across the project – with field experience and testing feeding into policy and technical methodology development. They will work closely with the Working Group for development of the new policy statement and guidance documents as well as working on the development of a methodology for the Biodiversity Health Index.  Key responsibilities:   * Analysis of existing policy framework for integration of biodiversity into local development planning and performance management and relationships between local and provincial authorities on biodiversity management (in coordination with the Land/coastal use and spatial planning expert and the development planning expert). * Coordinate policy development process and facilitate engagement of range of stakeholders in the process to ensure strong technical depth to the policy as well as generating political momentum for its enactment. * Coordinate development of a national level approach to the development of Biodiversity Health Indicators and their inclusion in performance management systems for local and provincial governments * Support the development of pilot site activities including guiding of BHI development, support to participatory land/coastal use planning and inclusion of land/coastal use plans into local and provincial development plans. * Integrate international best practice with national experience in BHI development and its integration into development planning and performance assessment * Coordination of all project partners and relevant government agencies   The expert will have at least 10 years’ experience of working on environmental or other relevant legislation within Thailand. S/he will be an excellent coordinator and facilitator able to bring together senior government officials, technical experts and civil society members and have experience of leading both technical policy work and advocacy work.  Engagement anticipated over the full project duration. |
| Development planning expert (NRM related) | The expert will lead in the assessment of current development planning mechanisms under Output 1.1. They will work closely with the working group established by the DLA, the Land/coastal use planning expert, biodiversity expert (CTA) and consultants working on the development of a Biodiversity Health Index.  Key responsibilities:   * Breakdown existing planning mechanisms within local and provincial government and interaction between then * Provide clear assessment of performance management systems within Provincial and Local administrations * Summarise international and domestic best practice in integrating environmental and biodiversity considerations into local government planning systems * Develop recommendations on how biodiversity related indicators can be better integrated into the planning process and performance management systems of local authorities. * Present findings to key stakeholder groups * Develop recommendations for new policy guidance to LGOs   The consultant will have at least 7 years’ experience of working on development planning and management in Thailand and will have an excellent understanding of the operational linkages between national, provincial and local planning processes. |
| Land/coastal use Planning Expert | The expert will lead in the assessment of current spatial and land/coastal use planning mechanisms under Output 1.1. They will work closely with the Development planning expert, biodiversity expert (CTA) and consultants working on the development of a Biodiversity Health Index.  Key responsibilities:   * Breakdown existing land/coastal use planning mechanisms within local and provincial government and interaction between them * Assessment of existing data systems and coherence between systems used by different ministries and agencies * Summarise international and domestic best practice in integrating environmental and biodiversity considerations into land/coastal use and spatial planning systems * Develop recommendations on how biodiversity related indicators can be better integrated into the land/coastal use and spatial planning processes including process and technical requirements * Present findings to key stakeholder groups * Develop recommendations for new policy guidance to LGOs   The consultant will have at least 7 years’ experience of working on land/coastal use and spatial planning and management in Thailand and will have an excellent understanding of the operational linkages between national, provincial and local planning processes. |
| Contractual Services, Company (for Output 1.2: Development of Biodiversity Health Index) | **Biodiversity indicator specialist –** the specialist will work with BEDO, the DLA as well as in close collaboration with the development planning and land/coastal use planning experts and the pilot site teams to identify how best to integrate biodiversity indicators into development planning and performance management systems. They will focus on development of a simple methodology that can be rolled out across Thailand and that can both be utilised by local governments and national government to assess performance against agreed biodiversity targets.  The consultant will build on a learn from findings made by the land/coastal use planning and development planning experts and will be responsible for:   * Identifying key habitats for which BHIs can be developed * Developing simple BHI approaches that can be fit to different habitat types and easily rolled out by local governments * Developing systems of integrated information collection to ensure data on key species is collected from local levels. * Providing awareness raising and training to other stakeholders on the basis for the BHI and how it can be operationalized.   The consultant will also have to work closely with the team to learn lessons from implementation of BHIs at the two pilot sites as well as working with the data management and GIS specialist to identify how best information can be utilised within different IT systems to ensure that the most biologically important data is both captured easily available.  The expert will have at least 7 years of experience of working on environmental conservation and will be familiar with ES and critical habitat conservation. They will also be familiar with existing land/coastal use planning frameworks and processes at local, provincial and national levels. |
| **IT / GIS systems expert:** The expert will work with the DLA and BEDO as well as pilot locations and other consultants, in particular the spatial and land/coastal use planning expert to identify how spatial information it currently utilised in planning process and what opportunities exist t strengthen the way this is done through the inclusion of biodiversity information. They will be working with the overall objective of including biodiversity information in spatial planning processes allowing for its inclusion within a range of LGO, government department and ministry planning processes.  It is anticipated that work with be divided over the course of a year.  Key responsibilities:   * Identify existing GIS and IT human and technical capacity within key institutions and systems and data sets being utilised * Identify existing lessons learned from use of IT and GIS systems in planning within Thailand * In collaboration with the Information management specialist identify potential system requirements to better integrate national and local data systems for review by key government staff * Identify resource requirements for establishment of system * Support instillation of hardware and software * Work with government staff and other stakeholders to provide hands on training * Develop and operational training manual.   The expert will have at least 7 years’ experience of developing complex GIS based information management systems. They will have excellent knowledge of government systems. |
|  | **Data management specialist:** The expert will work with BEDO and DLA in the development of an integrated system of data management to ensure that LGOs have access to accurate information on biodiversity.  Key responsibilities:   * Review of existing data management systems and limitations to their linkage and accessibility at sub-national level * Review of key monitoring systems and how data is fed into these * Consultation with other staff on the nature of the BHI, what data it will contain, and what data is required to support its implementation. * Conduct a capacity assessment of key staff within the DLA, LGOs, BEDO, the PCD and ONEP * Identify existing information needs for land/coastal use decision making (In partnership with the Land/coastal use planning expert) * Identify existing information needs for development planning processes (In partnership with the development planning expert) * Identify existing challenges and barriers to effective ES and critical habitat information management in Thailand * Consolidate lessons learned from existing information management platforms within government in particular the clearinghouse mechanisms. * Identify an information management approach including identification of:   + Institutional responsibilities   + Mechanisms for information management   + Mechanisms to ensure sustainability of information management * Present findings to a technical group * Develop capacity building plan for system development and operation.   The consultation will work closely with all other consultants under Outcome 1. They will have at least 7 years’ experience in information management processes and will be familiar with government systems. |
| **Outcome 2.** |  |
| Contractual Services – Biodiversity Specialists | **Biodiversity and information management specialists:** The team will consist of:   * Biodiversity specialists * Data management and GIS specialists   They will be responsible for under taking comprehensive biodiversity assessments of the target areas through participatory processes, developing a local level biodiversity health index (in consultation with consultants under Output 1.1 and in particular 1.2) development of basic IT systems to facilitate data collection and spatial visualisation (in collaboration with consultants under Output 1.2). Key activities required will include:   * Development of participatory survey methodologies for key species * Identification of draft BHI methodology for development at site level * Undertaking biodiversity surveys and conducting quality assurance on community based data collection * Presentation of results to communities and other local and national stakeholders * Developing simple data collection and management systems appropriate to LGOs * Running and facilitating community workshops and training events * Providing training to local government and community members * Undertaking a Strategic Environmental Assessments through a participatory approach to enhance local understanding of risks to the environment and their potential implications.   The consultant team will have at least five years experience and will have demonstrable experience of running participatory biodiversity assessment processes.  (This contract could be linked to the contract under output 1.2 to facilitate synergies) |
| Contractual Services - Capacity Building and Training Provider | **Participatory Land/coastal use Planning and Development Planning Experts** – The team will work closely with the biodiversity experts in engaging local stakeholders in integrating biodiversity within local planning processes. The team will act as facilitators to bring together community members, officials and other key stakeholders across the target Tambons to discuss development plans and to develop integrated plans that include biodiversity as well as specific targets for biodiversity conservation. Their work will focus on Output 2.2 but will also be linked to outputs 2.3 and 2.1 and they will act as a central coordinating point bringing together activities under the different outputs under Outcome 2. This will require close coordination with the relevant LGOs at the two pilot sites as well as with the other consultant teams and government agencies.  Key elements of the roles will include:   * Establishing and operating local level coordination groups to discuss key elements of the land/coastal use and development planning * Running participatory planning sessions * Supporting capacity building of LGOs and other key stakeholders in participatory approaches to land/coastal use and development planning * Supporting the identification of environmentally friendly goods and services and working with other technical experts to develop long term capacity building plans for those engaged in these activities (Output 2.4)   The consultants will have at least 4 years’ experience of environmental management at provincial and local level within Thailand. They will have excellent facilitation skills and strong track record of developing and implementing capacity building programmes for a range of stakeholders. The consultants will be engaged for the full project duration. |
| Contractual Services, Company  Sustainable livelihood development (Outcome 2.4) | **Sustainable shellfish harvesting expert**: The expert will work with the communities in Don Hoi Lord to develop a plan for the sustainable management of the shellfish harvesting process within the area. They will work closely with the biodiversity assessment team as well as participatory planning team. Key roles will include:   * Coordination with research scientists to identify the carrying capacity of the mudflat area as well as the existing and potential environmental and anthropogenic threats. * Working with communities to update information on levels of participation and resource extraction within the area * Development of proposals for a quota and management system for the shellfish harvesting * Establishment of a ‘shellfish management’ group across the area to discuss and develop management approaches * Work with LGOs in the development and implementation of regulations on shellfish harvesting.   The consultant will have at least 5years experience within the development of sustainable shellfish management and will have extensive experience of working with community groups and local authorities in the development of management approaches to local fisheries. |
| **Sustainable Agriculture Consultant**: the consultants will be responsible for supporting the development of sustainable mango production within Bang Krachao. They will work closely with the ecological consultants and representatives of the MoAC to identify specific environmental requirements to ensure environmental protection. They will then work with local producers to develop effective business strategies to strengthen production and access to markets. Key responsibilities:   * Coordination with MoAC on adaption for the GAP to best fit Bang Krachao * Coordination and networking of farmers to facilitate, training, decision making and certification * Development of mango cooperatives to strengthen systems of supply for larger buyers and to facilitate management and certification * Provision of training to farmers on business plan development and improved business management * Development and application of Geographical Indicator and any required follow up activities * Awareness raising and information sharing on Bang Krachao Mangos * In collaboration with the MoAC development of capacity building plans for key stakeholders and provision of on-going capacity building support.   The consultants should have at least 5 years’ experience of sustainable agriculture (rice/ salt-farming) development. |

**Project Management**

**Project Manager**

Objective of the Project Manager position

The ultimate Objective of the Project Manager is to provide central leadership and coordination for the project. They will be responsible for ensuring that the project is effectively managed, work plans are developed and implemented and budgets are managed soundly.

Key task and responsibilities

Working under the supervision of the Project Director, the Project Manager will be responsible for:

1. Assume primary responsibility for daily project management, including: communication and maintenance of good relations with all project stakeholders, budgeting, planning and general monitoring of the project;
2. Develop and implement a project communication strategy, in order to facilitate effective and constructive communication between different project stakeholders and adequate understanding of the objectives, strategies and advances of the project stakeholders at all levels;
3. Coordinate closely with an maintain regular contact with UNDP Country Office, BEDO Project Director, DLA and project pilot sites on project implementation issues of their respective competence;
4. Review of quarterly work plans, expenditure reports and disbursement requests prepared by contractors, and recommendation to UNDP regarding their approval or, where necessary, modification prior to approval;
5. Provide on-going supervision of and support to the Project Technical Team in the preparation of Annual Work Plans and Budgets (AWPBs) and review of the AWPBs prior to their presentation to the Project Board for approval, in order to ensure their feasibility, relevance, correspondence with project resource availability and the harmonization of the activities proposed under each component;
6. Drafting of TOR’s for contractual services  (companies and institutions) and all outsourced   activities;
7. Assume overall responsibility for the proper handling of logistics related to project workshops and events;
8. Prepare necessary GEF project progress reports, as well as any other reports requested by the Executing Agency and UNDP;
9. Monitor the expenditures, commitments and balance of funds under the project budget lines, and draft project budget revisions;
10. Assume overall responsibility for reporting on project progress vis-à-vis indicators in the log- frame;

**Project Coordinator**

Objective of the Project Coordinator position

The ultimate objective of the Project Coordinator position is to strengthen coordination within the DLA, between the DLA and other branches of the MoI and between the MoI and other project stakeholders in particular the project partner BEDO.

Key task and responsibilities

Working under the supervision of the Programme Manager the project coordinator will be responsible for:

Coordination (approx. 30%)

* Strengthen coordination within the DLA, between different offices including monitoring and evaluation office
* Strengthen coordination within MoI facilitating the passage of the policy statement, in particular strengthen coordination with the Department of Provincial Administration
* Strengthen coordination with other stakeholders in particular through facilitating the establishment and operation of the working group on biodiversity mainstreaming
* Facilitating coordination with project partners within BEDO and at site level.

Administrative responsibilities (approx. 40% of time)

* Assist in all administrative aspects of the project.
* Schedule workshops and meetings, and arrange their logistics.
* Draft and type minutes of meetings and correspondence in English and/or Thai.
* Follow-up on correspondence with relevant stakeholders, Implementing Partners, the Project Board, UNDP and GEF, etc.
* Maintain up-to-date soft and hard filing systems.
* Undertake secretarial duties such as maintaining contact information (tel., fax, e-mail) of all project stakeholders including work teams.

Project Management (approx. 30%)

* Participate fully in the process of quarterly and annual planning of project activities,
* In cooperation with relevant Project personnel build effective working relationships with the Project’s key partners at the local level (Local Government, village leaders, communities, locals NGOs, the private sector, etc.)
* Work closely with co-funding partners to ensure that their activities/programmes are integrated and complementary with those of the GEF project
* Participate fully in the preparation and content of the annual Project Implementation Review (PIR)
* On delegation from the Project Manager, assume responsibility for the task of preparation of implementation reports for UNDP (such as Atlas reports)
* Jointly with the Project Manager, prepare quarterly and annual project plans and reports

**Project Assistant**

Objective of the Project Assistant position

The ultimate objective of the National Project Assistant is to provide all necessary support (administrative, financial, and some technical) to the Programme Manager and strengthen linkages between the Programme manager, the DLA and BEDO as well as key stakeholders within the pilot sites.

Key task and responsibilities

Working under the supervision of the Programme Manager the assistant will be responsible for:

Administrative responsibilities (approx. 50% of time)

* Assist in all administrative aspects of the project.
* Schedule workshops and meetings, and arrange their logistics.
* Draft and type minutes of meetings and correspondence in English and/or Thai.
* Follow-up on correspondence with relevant stakeholders, Implementing Partners, the Project Board, UNDP and GEF, etc.
* Assist the BEDO and the DLA in liaison with key stakeholders at the project sites as well as between project partners,
* Maintain up-to-date soft and hard filing systems.
* Undertake secretarial duties such as maintaining contact information (tel., fax, e-mail) of all project stakeholders including work teams.

Project Management

* Participate fully in the process of quarterly and annual planning of project activities,
* In cooperation with relevant Project personnel build effective working relationships with the Project’s key partners at the local level (Local Government, village leaders, communities, locals NGOs, the private sector, etc.)
* Work closely with co-funding partners to ensure that their activities/programmes are integrated and complementary with those of the GEF project
* Participate fully in the preparation and content of the annual Project Implementation Review (PIR)
* On delegation from the Project Manager, assume responsibility for the task of preparation of implementation reports for UNDP (such as Atlas reports)
* Jointly with the Project Manager, prepare quarterly and annual project plans and reports

**Field Coordinators**

Objective of the Field Coordinator position

The ultimate objective of the Field Coordinator position is to coordinate project inputs and stakeholders at the pilot site levels, facilitating delivery of project activities and increasing project impact.

Key task and responsibilities

Working under the supervision of the Programme Manager the field coordinators will be responsible for:

Coordination and support to local stakeholders

* Facilitating establishment of working groups at the provincial and sub-district level
* Working with and facilitating the engagement of local stakeholders around key project objectives
* Facilitating planning processes and supporting the establishment of new approaches (eg local regulations or management approaches) at the local level
* Supporting the establishment of cooperatives for eco-friendly products as well as networking between key stakeholder groups at the project sites

Project coordination and management

* Working closely with the project assistant, project coordinator and project manager to facilitate effective project operations and management
* In partnership with BEDO and the DLA, coordinating and overseeing the inputs of technical consultants
* Developing site level workplans and coordinating inputs from different stakeholders
* Organising meetings and undertaking administrative responsibilities including note taking and developing of minutes and reports on project operation at the local level
* Supporting the capture of lessons learned at the site level for input into the project management as well as wider circulation as part of the ongoing technical learning and feedback process of the project.

# Annex 2: Capacity Assessment Score Card

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project Name:** | **Sustainable Management Models for Local Government Organisations to Enhance Biodiversity Protection and Utilization in Selected Eco-regions of Thailand** | | | | | |
| **Project Cycle Phase:** |  |  |  |  |  |  |
| **Date:** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Capacity Result / Indicator** | **Staged Indicators** | **Rating** | **Score** | Comments | **Next Steps** | **Contribution to which Outcome** |
|  |  |  |  |  |  |  |
| **Indicator 1: Degree of legitimacy/ mandate of lead environmental organizations** | **Organizational responsibilities for environmental management are not clearly defined** | **0** | **TRUE** | The DLA have a mandate to advise and support LGOs in line with the principles of good governance in order to benefit citizens. | The project will support the DLA in the development of a policy statement that will provide a clear basis for DLA engagement on environmental issues (Output 1.1). The project will also bring together key agencies working on environmental management at the local government level to support coordination and harmonising of approaches to environmental guidance to LGOs (Output 1.1). | Outcome 1 |
| **Organizational responsibilities for environmental management are identified** | **1** |  |
| **Authority and legitimacy of all lead organizations responsible for environmental management are partially recognized by stakeholders** | **2** |  |
|  | **Authority and legitimacy of all lead organizations responsible for environmental management recognized by stakeholders** | **3** |  |
| **Indicator 2: Existence of operational co-management mechanisms** | **No co-management mechanisms are in place** | **0** |  | The DLA forms part of the Provincial Environment Committees but have limited engagement on environmental issues or co-management arrangements at the national level. | The project will support the development of coordination mechanisms on environmental management and land/coastal use planning at the national (Output 1.1.), provincial and local levels (Output 2.2). These mechanisms will support strong engagement from the DLA in management decisions on environment and planning issues at all levels. | Outcome 1 and 2 |
| **Some co-management mechanisms are in place and operational** | **1** | **TRUE** |
| **Some co-management mechanisms are formally established through agreements, MOUs, etc.** | **2** |  |
|  | **Comprehensive co-management mechanisms are formally established and are operational/ functional** | **3** |  |
| **Indicator 3: Existence of cooperation with stakeholder groups** | **Identification of stakeholders and their participation/involvement in decision-making is poor** | **0** |  | The DLA is mandated to support LGOs in the undertaking of their mandate and can work to support coordination between LGOs. Existing levels of coordination led by the DLA is however limited particularly in relation to environmental matters. | The project will work with the DLA to establish coordination mechanisms at the national (Output 1.1.), provincial and local levels (Output 2.2). This will support the DLA in increasing coordination across the MoI and other ministries at the national and provincial levels as well as increasing coordination across SAOs at the local level. | Outcome 1 and 2 |
| **Stakeholders are identified, but their anticipation in decision-making is limited** | **1** | **TRUE** |
| **Stakeholders are identified, and regular consultations mechanisms are established** | **2** |  |
| **Stakeholders are identified, and they actively contribute to established participative decision-making processes** | **3** |  |
| ***CR 2: Capacities to Generate, Access and Use Information and Knowledge*** | | | | |  |  |
| **Indicator 4: Degree of environmental awareness of stakeholders** | **Stakeholders are not aware of global environmental issues and their relevant possible solutions** | **0** |  | The DLA have limited capacity with regard to environmental management throughout the organisation. At national level environmental considerations are guided by the Pollution Control Department setting requirements. At the local level environmental considerations are normally viewed in terms of basic project activities such as tree planting or dredging of canals with limited awareness of the potential environmental impacts of such projects. | The project will strengthen the capacity of the DLA to engage on environmental issues through both establishing mechanisms to ensure more effective guidance by the DLA to LGOs on environmental issues within areas of high biodiversity value outside of protected areas (Output 1.1), and through the building of the capacity of DLA staff to identify, monitor and provide support on environmental issues (Outputs 1.2, and 2.3). | Outcomes 1 and 2 |
| **Stakeholders are aware of global environmental issues, but not the possible solutions** | **1** | **TRUE** |
|  | **Stakeholders are aware of global environmental issues and the possible solutions, but do not know how to participate** | **2** |  |
|  | **Stakeholders are aware of global environmental issues, and are actively participating in the implementation of relevant solutions** | **3** |  |
| **Indicator 5: Access and sharing of environmental information by stakeholders** | **The environmental information needs are not identified, and the information management infrastructure is inadequate** | **0** |  | There is limited access to or sharing of environmental information between the DLA and other key government departments. Limited connectivity of data management systems and limited coordination between key agencies within MoNRE and the DLA and specific local governments mean that in many areas there is a lack of sufficient information on or awareness of the biodiversity value of key areas and how they will be impacted by development activities. | The project will support access to information across agencies at the national level through further development of information management systems that work across ministries as well as facilitating integration of spatial planning information (Output 1.2). At the local level the project will engage with a wide number of stakeholders, in particular representatives of the DLA and LGOs in the collection of biodiversity information and development of management plans that are in line with conservation commitments (Output 2.1. and 2.2). | Outcome 1, 2 |
| **The environmental information needs are identified, but the information management infrastructure is inadequate** | **1** | **TRUE** |
|  | **The environmental information is partially available and shared among stakeholders, but is not covering all focal areas and/or the information management infrastructure is limited** | **2** |  |
|  | **Comprehensive environmental information is available and shared through an adequate information management infrastructure** | **3** |  |
| **Indicator 6: Existence of environmental education programmes** | **No environmental education programmes are in place** | **0** |  | MoNRE and BEDO have developed a number of environmental information programmes. The reach of these programmes is however limited with many communities, LGOs and government agencies not gaining access to them. This is particularly true of communities and LGOs outside of and not adjacent to protected areas. | The project will support the development of structured awareness raising and educational materials associated with the integration of biodiversity considerations into LGO planning and management activities that can be utilised with central DLA staff, provincial staff, LGOs and communities (Output 1.1, Output 2.3.). These will ensure there is full understanding of the value of biodiversity and how it can be integrated into local development activities so that there is both enhanced demand for the integration of biodiversity conservation into planning and management and the capacity to achieve this. | Outcomes 1 and 2 |
| **Environmental education programmes are partially developed and partially delivered** | **1** | **TRUE** |
|  | **Environmental education programmes are fully developed but partially delivered** | **2** |  |
|  | **Comprehensive environmental education programmes exist and are being delivered** | **3** |  |
| **Indicator 7: Extent of the linkage between environmental research/science and policy development** | **No linkage exist between environmental policy development and science/research strategies and programmes** | **0** |  | Considerable research has and continues to be undertaken within Thailand. The linkages between this research, policy development and development planning at the local level however remain limited due to lack of effective stakeholder engagement within both research and planning processes as well as a lack of effective data management on environmental information. The DLA in particular have limited access to information on environmental management issues and as such cannot provide effective support to LGO bodies. | The project will support the development of a policy statement on inclusion of biodiversity into development planning and management as well as the use of Biodiversity Health Indices, which will link field research and development planning and biodiversity (Output 1.1).  At the local level the project will work with a range of stakeholders in the collection of biodiversity based information and development of local plans, strategies and regulations to support the protection of these (Output 2.1. and 2.3.). | Outcomes 1 and 2 |
| **Research needs for environmental policy development are identified, but are not translated into relevant research strategies and programmes** | **1** |  |
| **Relevant research strategies and programmes for environmental policy development exist, but the research information is not responding fully to the policy research needs** | **2** | **TRUE** |
| **Relevant research results are available for environmental policy development** | **3** |  |
| **Indicator 8: Extent of inclusion/ use of traditional knowledge in environmental decision-making** | **Traditional knowledge is ignored and not taken into account for relevant participative decision-making processes** | **0** |  | Existing mechanisms for local and provincial planning provide for the inclusion of traditional knowledge in planning and decision making through consultation processes. However these consultation processes are regularly not fully implemented and the impacts of stakeholders with traditional knowledge can be limited by a lack of supporting scientific information. | The project will work with the DLA in the integration of biodiversity into development planning processes as well as the integration of biodiversity health indices into planning and monitoring activities (Output 2.2). Guidance on the integration process at local level will focus on ensuring effective participation of stakeholders both within environmental data collection and developing targets that link scientific and traditional knowledge (Output 1.1). | Outcomes 1 and 2 |
| **Traditional knowledge is identified and recognized as important, but is not collected and used in relevant participative decision-making processes** | **1** | **TRUE** |
| **Traditional knowledge is collected, but is not used systematically into relevant participative decision-making processes** | **2** |  |
| **Traditional knowledge is collected, used, and shared for effective participative decision-making processes** | **3** |  |
| ***CR 3: Capacities for Strategy, Policy and Legislation development*** | | |  | |  |  |
| **Indicator 9: Extent of the environmental planning and strategy development process** | **The environmental planning and strategy development process is not coordinated, and does not produce adequate environmental plans and strategies** | **0** |  | The DLA provides support to LGOs in the development of their local development plans. These are required to include a section on environment and natural resource management. Limited assessment however goes into the impact of broader development activities within the plan and environmental activities identified are rarely based on an effective assessment of ecological needs. | Through working with DLA the project will build their capacity to assess development plans and identify key environmental and biodiversity considerations. Increased performance assessment requirements based on biodiversity considerations and Biodiversity Health Indices will also help to incentivise increased attention to environmental issues throughout development plans (Output 1.1).  At the local level increased engagement of communities in the collection of environmental information combined with capacity building of local authorities will also help to drive improvements in the integration of biodiversity into LGO planning processes (Outputs 2.1. 2.2 and 2.3). | Outcomes 1 and 2 |
| **The environmental planning and strategy development process does produce adequate environmental plans and strategies, but they are not implemented or used** | **1** |  |
|  | **Adequate environmental plans and strategies are produced, but are only partially implemented because of funding constraints and/or other problems** | **2** | **TRUE** |
|  | **The environmental planning and strategy development process is well coordinated by the lead environmental organizations, and produces the required environmental plans and strategies that are being implemented** | **3** |  |
| **Indicator 10: Existence of adequate environmental policies and regulatory frameworks** | **The environmental policy and regulatory frameworks are insufficient; they do not provide an enabling environment** | **0** |  | There is currently no specific or guiding framework for the DLA to engage with LGOs specifically on environmental issues. Even where this does occur the DLA have limited capacity to support LGOs in the development of effective environmental regulations or policies to ensure effective environmental management. | The project will provide a clear requirement for the DLA to support LGOs in the development of development plans that consider biodiversity and to have monitoring systems in place in areas of biodiversity value (Output 1.1).  Capacity building of the DLA on how this can be achieved will provide the DLA with both the tools to effectively provide information and monitor the progress of LGOs as well as supporting LGOs in the development of local regulations and policies (Output 1.1 and 1.2). | Outcome 1 |
| **Some relevant environmental policies and laws exist, but few are implemented and enforced** | **1** | **TRUE** |
| **Adequate environmental policy and legislation frameworks exist, but there are problems in implementing and enforcing them** | **2** |  |
| **Adequate policy and legislation frameworks are implemented, and provide an adequate enabling environment; a compliance and enforcement mechanism is established and functions** | **3** |  |
| **Indicator 11: Adequacy of the environmental information available for decision-making** | **The availability of environmental information for decision-making is lacking** | **0** |  | There are significant gaps in the level and quality of information on biodiversity outside of protected areas available to decision makers at national, provincial and local level with information developed on an adhoc basis. | The project will support the development of a data management system at the national and provincial level that will allow for biodiversity information, linked to a biodiversity health index to be more effectively integrated into planning processes at the national, provincial and local levels (outputs 1.2 and 2.1). | Outcome 1 and 2 |
| **Some environmental information exists, but it is not sufficient to support environmental decision-making processes** | **1** | **TRUE** |
| **Relevant environmental information is made available to environmental decision-makers, but the process for updating this information is not functioning properly** | **2** |  |
| **Political and administrative decision-makers obtain and use updated environmental information to make environmental decisions** | **3** |  |
| **Indicator 12: Existence and mobilization of resources** | **The environmental organizations don’t have adequate resources for their programmes and projects, and the requirements have not been assessed** | **0** |  | Even where environmental projects are included within local development plans budget allocations to support these activities is often lacking resulting in activities not being undertaken or being scaled down. Similarly application of environmental safeguards is often limited due to their costs at local level. | The development of performance assessment processes focused on biodiversity conservation and linked to budget allocations will increase the prioritisation of budget within these areas. This will be achieved through capacity building of the DLA to effectively support LGOs in inclusion of biodiversity based activities, reviewing budgets for LGOs as well as monitoring their application (Outputs 1.1 and 1.2). | Outcomes 1 |
|  | **The resource requirements are known but are not being addressed** | **1** | **TRUE** |
|  | **The funding sources for these resource requirements are partially identified, and the resource requirements are partially addressed** | **2** |  |
|  | **Adequate resources are mobilized and available for the functioning of the lead environmental organizations** | **3** |  |
| **Indicator 13: Availability of required technical skills and technology transfer** | **The necessary required skills and technology are not available, and the needs are not identified** | **0** |  | The DLA have high level of capacity at the national level and strong capacity at local level. However the skills and systems available to address environmental risks and biodiversity considerations is limited. | The project will support the training of DLA staff at the national and provincial level to increase their capacity to engage with biodiversity and environmental issues within the planning and monitoring processes. It will also develop mechanisms to support DLA staff in their operation linked to data management and development of Biodiversity Health Indices (Outputs 1.1, 1.2, 2.3). | Outcome 1 and 2 |
| **The required skills and technologies are obtained, but their access depends on foreign sources** | **2** | **TRUE** |
| **The required skills and technologies are available, and there is a national-based mechanism for updating the required skills and upgrading the technologies** | **3** |  |
| **Indicator 14: Adequacy of the project/programme monitoring process** | **Irregular project monitoring is being done without an adequate monitoring framework, for detailing what and how to monitor the particular project or programme** | **0** |  | The DLA undertake annual monitoring activities of LGOs. These processes however have a limited focus on environmental issues and are not adapted to meet specific local conditions. | The project will work with the DLA to provide a clear policy statement and guidance on monitoring approaches for LGOs within areas of high biodiversity value. It will also provide both the tools to undertake monitoring (such as the Biodiversity Health index) and support to the capacity of staff to work with other partners in undertaking monitoring and to utilise monitoring data (Outputs 1.1 and 1.2). | Outcome 1 |
| **An adequate resourced monitoring framework is in place, but project monitoring is irregularly conducted** | **1** |  |
| **Regular participative monitoring of results is being conducted, but this information is only partially used by the project/programme implementation team** | **2** | **TRUE** |
| **Monitoring information is produced timely and accurately, and is used by the implementation team to learn and possibly change the course of action** | **3** |  |
| **Indicator 15:Adequacy of theproject/programmeevaluation process** | **No or ineffective evaluations are being conducted, with no adequate evaluation plan or the necessary resources** | **0** |  | The DLA undertake assessment of the effectiveness of development of project delivery activities. However there is limited focus on the biodiversity requirements or environmental information. | The project will work with the DLA to provide a clear policy statement and guidance on evaluation approaches for LGOs within areas of high biodiversity value. It will also provide both the tools to undertake monitoring (such as the Biodiversity Health index) and support to the capacity of staff to work with other partners in undertaking evolution and to utilise evaluation data (Outputs 1.1 and 1.2). | Outcome 1 |
| **An adequate evaluation plan is in place, but evaluation activities are irregularly conducted** | **1** | **TRUE** |
| **Evaluations are being conducted as per an adequate evaluation plan, but the evaluation results are only partially used by the project or programme implementation team** | **2** |  |
| **Effective evaluations are conducted timely and accurately, and are used by the implementation team and the Implementing Agencies and/or GEF staff to correct the course of action, if needed, and to learn for further planning activities** | **3** |  |

# Annex 3. Social and Environmental Screening Template

**Project Information**

|  |  |
| --- | --- |
| ***Project Information*** |  |
| * Project Title | Sustainable Management Models for Local Government Organisations to Enhance Biodiversity Protection and Utilization in Selected Eco-regions of Thailand |
| * Project Number |  |
| * Location (Global/Region/Country) | Thailand |

**Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability**

|  |
| --- |
| **QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?** |
| ***Briefly describe in the space below how the Project mainstreams the human-rights based approach*** |
| The project has the principles of human rights mainstreamed throughout its design. Central to the project’s approach is the empowerment of communities (as rights holders) and local government (as duty bearers), as key actors within the management of their natural resources to have the capacity and tools to manage those resources more effectively. The project’s approach includes both bottom up and top down strategies and is designed to be fully participatory engaging key stakeholders as well as rights holders in making decisions about how natural resources are managed to secure both biodiversity conservation and on-going economic and social development. This is achieved through stakeholder analysis both within the current Project Document Development processes and during project implementation that ensures all groups are effectively represented with particular attention paid to marginalized and vulnerable groups, many of whom are the most dependent on the use of natural resources to maintain their livelihoods (particularly within Don Hoi Lord). A focus on local development plans and engagement of both communities and local government to both create demand for improved environmental management and the capacity to implement it also ensures that all initiatives are locally owned and will be championed by local stakeholders. This mechanism has been further tested through consultation on the project design during the development of the Project document. Through providing support to local, natural resource based livelihoods the project will also work to reduce disparities within communities by helping to strengthen livelihoods and provide more regular and enhanced income from environmentally friendly products including sustainable seafood (Don Hoi Lord) and mangos (Bang Krachao). Finally the project sets clear targets for its implementation that have been discussed with key stakeholders and provide a clear way that all groups can measure and review progress and success within the project. |
| ***Briefly describe in the space below how the Project is likely to improve gender equality and women’s empowerment*** |
| The project is designed to ensure careful consideration of potential gender impacts. The project is designed to support the participation of all stakeholders within the community in working with local government organisations in assessing biodiversity within their local areas, developing land/coastal use management plans and implementing those plans. The project will ensure that gender balance is considered when developing activities as well as identifying key representatives for working groups at the local and national level. Consideration will also be given to the potential impacts of new requirements for the inclusion of biodiversity within local government development plans on women as well as the impact that revised development plans within pilot will have across genders and other vulnerable groups. Particular attention will also be paid on the inclusion of women and other vulnerable groups in the provision of support to the development of sustainable livelihood activities to ensure that these activities do not reinforce existing economic or social divisions within communities  Within the project implementation structure gender considerations will be reviewed during the project inception phase, as well as integrated into project monitoring and evaluation activities. |
| ***Briefly describe in the space below how the Project mainstreams environmental sustainability*** |
| The projects central objective is on the mainstreaming of environmental sustainability and management into local government development planning through a focus on biodiversity conservation. To achieve this it will strengthen the policy, guidance, incentive and monitoring and enforcement frameworks for local governments to increase the focus on biodiversity conservation. It will also work with key government ministries and local governments to build their capacity to integrate biodiversity conservation into their daily operations, strategic planning and monitoring and assessment processes. |

**Part B. Identifying and Managing Social and Environmental Risks**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **QUESTION 2: What are the Potential Social and Environmental Risks?**  *Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).* | **QUESTION 3: What is the level of significance of the potential social and environmental risks?**  *Note: Respond to Questions 4 and 5 below before proceeding to Question 6* | | | | **QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?** | |
| ***Risk Description*** | ***Impact and Probability (1-5)*** | ***Significance***  ***(Low, Moderate, High)*** | ***Comments*** | | ***Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*** | |
| Risk 1: P1, 4 - Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them? | I = 2  P = 2 | **Low** | Within Don Hoi Lord the Razor Clam fishery is accessed by a large number of stakeholders from inside and outside the focus Tambons on a sporadic basis. It may not be possible to engage all of these stakeholders in decisions on management of the area and the fisheries. | | During the development of a sustainable management approach for the Razor Clam (*Solen regularis*) the project will conduct a detailed assessment of harvesting levels and stakeholders engaged in harvesting. Consultation events related to the development of new management approaches will engage as many of these identified stakeholders as possible and will ensure that all those who participate on a regular basis in harvesting are effectively engaged in the development of an approach. | |
| Risk 2: P1, S1.2: - Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | I = 1  P = 1 | **Low** | The project is focused on conserving two areas of high biodiversity value. Within Don Hoi Lord this includes a Ramsar area, which is part of a broader Important Bird Area. The project is focused on conserving these areas as such likely negative impacts are low. | | Strategic Environmental Assessments are to be undertaken (Outcome 2 – Output 2.1) as part of the development of the participatory land/coastal use management plans. These will ensure that potential risks to environmentally significant areas are identified and can be addressed during the planning process. The project will also build the capacity of key stakeholders to implement these plans (Output 2.2) and to ensure that the effectiveness of these processes is monitored (Output 1.2). | |
| Risk 3: P1, Si.7: - Does the Project involve the production and/or harvesting of fish populations or other aquatic species? | I = 2  P = 2 | **Low** | The project includes the development of sustainable harvesting approaches for the Razor Clam (*Solen regularis*). As the focus of this engagement is to promote sustainable harvesting while strengthening livelihoods there is only a low risk that the intervention could cause negative impacts on either livelihoods or the ecology of the area. | | An initial feasibility assessment has been undertaken as part of the project document development process. This will be further developed during the projects implementation to ensure that harvesting yields are maintained at a sustainable level while also promoting increased livelihood security. | |
|  | **QUESTION 4: What is the overall Project risk categorization?** | | | | | |
| **Select one (see** [SESP](http://www.undp.org/content/undp/en/home/librarypage/operations1/undp-social-and-environmental-screening-procedure.html) **for guidance)** | | | | | **Comments** |
| ***Low Risk*** | | | **X** | | **Interventions have a low risk of causing negative social or environmental impacts.** |
| ***Moderate Risk*** | | |  | |  |
| ***High Risk*** | | |  | |  |
|  | **QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?** | | | | | |
| Check all that apply | | | | | **Comments** |
| ***Principle 1: Human Rights*** | | |  | |  |
| ***Principle 2: Gender Equality and Women’s Empowerment*** | | |  | |  |
| ***1. Biodiversity Conservation and Natural Resource Management*** | | |  | |  |
| ***2. Climate Change Mitigation and Adaptation*** | | |  | |  |
| ***3. Community Health, Safety and Working Conditions*** | | |  | |  |
| ***4. Cultural Heritage*** | | |  | |  |
| ***5. Displacement and Resettlement*** | | |  | |  |
| ***6. Indigenous Peoples*** | | |  | |  |
| ***7. Pollution Prevention and Resource Efficiency*** | | |  | |  |

**Final Sign Off**

|  |  |  |
| --- | --- | --- |
| ***Signature*** | ***Date*** | ***Description*** |
| QA Assessor |  | UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted. |
| QA Approver |  | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD)**,** Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC. |
| PAC Chair |  | UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC. |

### SESP Attachment 1. Social and Environmental Risk Screening Checklist

|  |  |
| --- | --- |
| **Checklist Potential Social and Environmental Risks** |  |
| **Principles 1: Human Rights** | **Answer  (Yes/No)** |
| 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups? | No |
| 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? [[94]](#footnote-94) | No |
| 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups? | No |
| 4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them? | Yes |
| 5. Are there measures or mechanisms in place to respond to local community grievances? | Yes |
| 6. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project? | No |
| 7. Is there a risk that rights-holders do not have the capacity to claim their rights? | No |
| 8. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process? | No |
| 9. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals? | No |
| **Principle 2: Gender Equality and Women’s Empowerment** |  |
| 1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls? | No |
| 2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? | No |
| 3. Have women’s groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment? | No |
| 3. Would the Project potentially limit women’s ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?  *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being* | No |
| **Principle 3: Environmental Sustainability:** Screeningquestions regarding environmental risks are encompassed by the specific Standard-related questions below |  |
|  |  |
| **Standard 1: Biodiversity Conservation and Sustainable** [**Natural**](#SustNatResManGlossary) **Resource Management** |  |
| 1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?  *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes* | No |
| 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | Yes |
| 1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5) | No |
| 1.4 Would Project activities pose risks to endangered species? | No |
| 1.5 Would the Project pose a risk of introducing invasive alien species? | No |
| 1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation? | No |
| 1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species? | Yes |
| 1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?  *For example, construction of dams, reservoirs, river basin developments, groundwater extraction* | No |
| 1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) | No |
| 1.10 Would the Project generate potential adverse transboundary or global environmental concerns? | No |
| 1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?  *For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.* | No |
| **Standard 2: Climate Change Mitigation and Adaptation** |  |
| 2.1 Will the proposed Project result in significant[[95]](#footnote-95) greenhouse gas emissions or may exacerbate climate change? | No |
| 2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change? | No |
| 2.3 Is the proposed Project likely to directly or indirectly increase social and environmental [vulnerability to climate change](#CCVulnerabilityGlossary) now or in the future (also known as maladaptive practices)?  *For example, changes to land/coastal use planning may encourage further development of floodplains, potentially increasing the population’s vulnerability to climate change, specifically flooding* | No |
| **Standard 3: Community Health, Safety and Working Conditions** |  |
| 3.1 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities? | No |
| 3.2 Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? | No |
| 3.3 Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)? | No |
| 3.4 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure) | No |
| 3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions? | No |
| 3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)? | No |
| 3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning? | No |
| 3.8 Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)? | No |
| 3.9 Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)? | No |
| **Standard 4: Cultural Heritage** |  |
| 4.1 Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts) | No |
| 4.2 Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes? | No |
| **Standard 5: Displacement and Resettlement** |  |
| 5.1 Would the Project potentially involve temporary or permanent and full or partial physical displacement? | No |
| 5.2 Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)? | No |
| 5.3 Is there a risk that the Project would lead to forced evictions?[[96]](#footnote-96) | No |
| 5.4 Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources? | No |
| **Standard 6: Indigenous Peoples** |  |
| 6.1 Are indigenous peoples present in the Project area (including Project area of influence)? | No |
| 6.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples? | No |
| 6.3 Would the proposed Project potentially affect the rights, lands and territories of indigenous peoples (regardless of whether Indigenous Peoples possess the legal titles to such areas)? | No |
| 6.4 Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned? | No |
| 6.4 Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | No |
| 6.5 Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? | No |
| 6.6 Would the Project adversely affect the development priorities of indigenous peoples as defined by them? | No |
| 6.7 Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples? | No |
| 6.8 Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? | No |
| **Standard 7: Pollution Prevention and Resource Efficiency** |  |
| 7.1 Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or [transboundary impacts](#TransboundaryImpactsGlossary)? | No |
| 7.2 Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)? | No |
| 7.3 Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs?  *For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol* | No |
| 7.4 Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health? | No |
| 7.5 Does the Project include activities that require significant consumption of raw materials, energy, and/or water? | No |

# Annex 4: Sustainable Livelihood Support Feasibility Assessment

**Sustainable Mango Harvesting Bang Krachao:**

Households within Bang Krachao have diversified income sources but agriculture and in particular fruit trees remain a significant income source either through direct farming or through lease of land to farmers with fruit (Mango, coconut, banana, rose apple, lemon) orchards covering over 265ha of the land area. Maintaining an effective income from these orchards is a key element of maintaining incentives for local communities to remain within the area and to help protect the landscape.

Mango production within Bang Krachao has been undertaken for a significant period of time and the mangos of the area are recognised as being of a high quality and containing a unique sweet taste thought to be due to the slight salinity of the waterways that irrigate them. Over 600 households are engaged in the cultivation of 77ha of mango, however little coordination exists between farmers and agricultural extension work has been limited with many farmers developing their own techniques. The sustainability of these practices is however becoming limited with lower uptake of farming by the younger generation, and poor regulation of waterways leading to more marginal conditions for cultivation and resulting in higher costs of inputs to maintain a viable crop. BEDO have been working with a number of farmers within the area to help them to develop improved agricultural practices for mango production in the area including certification of producers under the MoAC Good Agricultural Practices certification. Early results from this process have shown good results in the production of high quality mangos with limited levels of chemical inputs. At the same time BEDO have been working at promoting the unique nature of the mangos from the area and are investigating the application for a Geographical Identifier for the product.

Early evidence of the market for mangoes with both an agricultural and geographical certification is that they are able to access premium markets and that there is currently insufficient supply to meet demand in this area – with current stocks having been purchased and shops requesting more supply. The price premium for such products is approximately 30% (as shown in the table below) with the potential for the average producer to earn an additional 331baht per annum through adoption of these methodologies. As the cost to farmers of adopting the standards is very low (DoA provide free training and inspection, and improved techniques have been seen to reduce levels of required inputs, while GI is obtained for the whole area with no direct cost to farmers), these gains represent a direct livelihood benefit.

|  |  |  |
| --- | --- | --- |
|  | Current | Anticipated |
| Number of Producers | 620.00 | 620.00 |
| Number of ha under cultivation | 77.00 | 77.00 |
| Total Production | 4,350.00 | 4,350.00 |
| Price per kg | 110.00 | 160.00 |
| Total income (baht) | 478,500.00 | 696,000.00 |
| Average income per producer (baht) | 771.77 | 1,122.58 |
| Average income per ha (baht) | 6,214.29 | 9,038.96 |

Average figures presented per producer are considered inaccurate as multiple farmers rent land from householders to achieve larger area of cultivation as such benefits to these producers would be more markets. The project will also work with producers to form cooperatives to facilitate training, certification, management and sale of products.

It is also anticipated that once farmers have identified the benefits of these approaches to production and links between producers and agricultural extension workers have been strengthened such approaches will spread to other fruit species and forms of production within the area.

**Sustainable shellfish harvesting Don Hoi Lord:**

Razor clam harvesting within Don Hoi Lord provides a livelihood for a significant number of people within the communities surrounding Don Hoi Lord. Over harvesting and poor habitat management have led to reductions in species number as well as a tendency towards harvesting lower quality clams. The local industry is also now facing pressure from external inputs, which are being imported to meet supply. Average incomes for those harvesting Razor clams currently vary between 300-500 Baht per day.

Differentiation of Don Hoi Lord Razor Clams (which are recognised within Thailand as a speciality) along with improved harvesting standards could however allow for razor clam harvesters to attract a price premium for the product in the region of 30% to 390 and 650baht per day. This premium would help to incentivise further management and policing of the resource to ensure that standards are maintained. Equally control of levels of production would also help to smooth supply levels allowing for a more standardised price and level of harvesting effort for fishermen, increasing their income security over the year.

# Annex 5: Stakeholder Engagement Plan

| **Stakeholders** | **Potential Role** | **Engagement Strategy** | **Timeline** | **Assessment** |
| --- | --- | --- | --- | --- |
| Biodiversity-based Economy Development Office (BEDO), Ministry of Natural Resources and Environment (MoNRE) | BEDO will be a key Implementing Partner of this project. It will play a leading role in coordinating and supporting the local government organizations in the selected sites, in close collaborations with the Department of Local Administration (DLA), as well as ensuring the development and application of Biodiversity Health Index in the demonstration sites. | Consultation, implementation, steering committee and management unit, policy, legislation, R&D, investment, capacity building, public-private partnerships, biodiversity database and indicators, land/coastal use planning, M&E | Early Year 1 and throughout project cycle | M&E reports, investment on local livelihood activities, scale of certified products |
| Department of Local Administration (DLA), Ministry of Interior | DLA will ensure implementation of local initiatives and oversee the work of Provincial Administrative Organizations (PAOs) and Tambon Administrative Organizations (TAOs) in the two sites. DLA will oversee the work of PAOs and TAOs under their jurisdiction and monitor their work towards achieving the specific performance indicators as defined in the Ministry’s orders and the local development plans. | Consultation, implementation, steering committee, policies and guidelines, LGO M&E and performance indicators, biodiversity indicators, land/coastal use planning, capacity building | Early Year 1 and throughout project cycle | M&E reports, guidelines for local development and land/coastal use planning, performance indicators and results |
| Office of Natural Resources and Environmental Policy and Planning (ONEP), MoNRE | ONEP will support BEDO and DLA in defining Biodiversity Health Index criteria as well as setting up of a monitoring system to ensure the continual evaluation of performance. ONEP will also provide technical support in the process of Biodiversity Health Index development for the Bang Krachao and Don Hoi Lord pilot sites. | Consultation, implementation, steering committee, international conventions, policy, legislation, biodiversity database and indicators, LGO performance indicators, capacity building | Early Year 1 and throughout project cycle | Biodiversity database and indicators, biodiversity indices developed and implemented in the two sites |
| Department of Marine and Coastal Resources (DMCR), MoNRE   * Marine and Coastal Resources Conservation Center 2 (Samut Sakorn) * Marine and Coastal Resources Research and Development Centre (Upper Gulf of Thailand) * Mangrove Forest Resource Development and Learning Support Center 2 (Samut Songkram). | DMCR’s potential role is to collaborate in the project implementation at the site level, specifically at Don Hoi Lord site. DMCR will be responsible for implementing the new law, Promotion of Marine and Coastal Resources Management Act 2015 that empowers local authorities and coastal communities to conserve and manage coastal and marine resources, as well as to provide guidelines for formulating marine and coastal resources policies at national, provincial, and local levels for implementation. DMCR and its regional offices in the target sites could provide technical advice and logistical support for project implementation, as well as policy integration. | Consultation, implementation, steering committee, coastal management and local planning, international conventions (Ramsar), policy, legislation, biodiversity database and indicators, LGO performance indicators, capacity building | Early Year 1 and throughout project cycle | Coastal planning and implementation in Don Hoi Lord with biodiversity mainstreamed |
| Royal Forest Department (RFD), MoNRE | RFD is mandated to oversee government forestlands excluding protected areas. The agency manages approximately 200 ha of forest in Bang Krachao and will be involved in the development of land/coastal use plans for the six sub-districts. | Consultation, implementation, steering committee, green area management, biodiversity database and indicators, land/coastal use planning, capacity building | Early Year 1 and throughout project cycle | Green and forestry planning and implementation in Bang Krachao with biodiversity mainstreamed |
| Ministry of Interior (MoI) and the Department of Provincial Administration (DPA), MoI | In this project, the governor of the two demonstration provinces will provide necessary support on policy formulation, planning coordination, and capacity development to ensure smooth operation at both provincial and local levels. | Consultation, implementation, steering committee, provincial and local administration, local development planning, capacity building | Early Year 1 and throughout project cycle (mainly during Year 2-4) | Local performance index integrating biodiversity developed and implemented |
| Local government organizations (Tambon Administrative Organizations - TAOs and Provincial Administrative Organizations - PAOs), Ministry of Interior | TAOs in the demonstration areas (Don Hoi Lord and Bang Krachao) will be focal points for mainstreaming biodiversity conservation activities at various interventions including planning, capacity building, local collaboration and partnership.  PAOs of the two demonstration provinces (Samut Songkram and Samut Prakarn) will work with the provincial government (governors and district chiefs) and the target TAOs to ensure mainstreaming Biodiversity Health Indices into the provincial development plan of the target provinces. | Consultation, implementation, development planning, coastal management, green area management, capacity building, investment, public-private sector partnerships, local steering committees/working groups, public meetings | Early Year 1 and throughout project cycle | M&E reports, local development plans, performance indicators |
| Bang Krachao conservation groups | Local groups of community members with an aim to conserve the areas and biodiversity resources, including the Green Area Protection Network (Song Kanong), Lumphu Bang Krasorb Conservation Group (Bang Kasorb). | Consultation, implementation, steering committee/local advisory groups, biodiversity database and indicators, land/coastal use planning, survey, green area management, capacity building | Year 1 and throughout project cycle | biodiversity database and indicators, local plans mainstreaming biodiversity |
| Small and micro community enterprise groups in Bang Krachao | BEDO-supported Biodiversity-based community enterprise groups such as local flower gardeners group, Nam Dok Mai Khung Bang Krachao Mango plantation group, coconut palm sugar production group. | Consultation, implementation, steering committee/local advisory groups, survey, livelihood development, land/coastal use planning, capacity building | Year 1 and throughout project cycle | Sustainable livelihood activities |
| Coastal Community Network along the Gulf of Thailand | The Don Hoi Lord Conservation Group was established by local people in 2009 aiming to conserve the site and the clams through awareness raising and community involvement. These activities included monitoring the status of Don Hoi Lord, and organizing study tours to other communities to exchange experiences regarding the management of natural resources. | Information sessions, consultation, implementation, steering committee/local advisory groups, biodiversity database and indicators, land/coastal use planning, survey, coastal area management, livelihood development, capacity building | Year 1 and throughout project cycle | biodiversity database and indicators, local plans mainstreaming biodiversity, sustainable livelihood activities |
| Green World Foundation and BioBlitz Initiative | The Foundation will collaborate closely with youth, educators, practitioners, and community leaders to strengthen the capacity for proactively contributing to the sustainable care of the local environments. The Foundation organized a biological surveying effort, called BioBlitz, participated by local residents, experts, and youths in Bang Krachao in November 2012. In 24 hours, they found 675 species of plants and animals in the area including new species such as *Glyphidrilus* earthworms. | Consultation, expert panels and training, green area management, biodiversity database and indicators, land/coastal use planning, co-financed biodiversity conservation activities | Year 1 and throughout project cycle | biodiversity database and indicators |
| Joint Operational Committee on Tourism and Recreational Promotion in Bang Krachao Areas | Established by Ministry of Tourism and Sports (Order 852/2014), aiming to ensure integration of public-private initiatives in the Bang Krachao areas toward participatory, green and sustainable tourism. | Consultation, steering committee/ advisory committee membership, eco-tourism, policy and regulations, public-private partnerships | Year 1 and throughout project cycle | Policy framework mainstreaming biodiversity |
| Committee on Management of Don Hoi Lord Ramsar Site and Working Group on Demarcation of the Don Hoi Lord Ramsar Site Boundary | Established by Samut Songkram Province (Order 845/2005 and 604/2013) to oversee and manage the areas in accordance to the action plans, and to review the boundary of the site. | Consultation, steering committee/ advisory committee membership, coastal management and planning, policy and regulations, public-private partnerships | Year 1 and throughout project cycle | Confirmed Don Hoi Lord Ramsar site boundary |
| Relevant regulatory and executive agencies | These are government agencies with statutory authority or designated public authority to perform their functions including:   * Provincial Natural Resources and Environment Offices (PNREO) in three provinces: Samut Songkram, Samut Prakarn, and Samut Sakorn (for sources of river pollution in Don Hoi Lord) * Tourism Authority of Thailand (TAT) * Pollution Control Department (PCD) * Department of Industrial Works (DIW) * Royal Irrigation Department (RID) – Bang Krachao * Marine Department (MD) | Consultation and dialogue, provision of data and information, joint planning /co-financed activities, policy and regulations, steering committee/local advisory groups, focus groups, training experts | Year 1 and throughout project cycle | Policy framework mainstreaming biodiversity |
| Research and academic institutions | A number of R&D institutions have conducted research activities and/or community-based initiatives in both demonstration sites during the past decades, including:   * Faculty of Science, Chulalongkorn University * Department of Marine Science, Faculty of Fisheries, Kasetsart University * Centre of Excellence in Biodiversity, Faculty of Science, Prince of Songkhla University (PSU), Songkhla Campus * Thailand Environment Institute (TEI) * Faculty of Architecture and Planning, Thammasat University | Consultation, research/R&D, information technology, risk assessment, monitoring, training | Year 1 and throughout project cycle  (mainly during Year 1-3) | Research findings and report developed, disseminated, and used in the two sites |
| Private sector | In addition, there are companies, industries, SME business, and industry that conduct CSR programs in the demonstration sites, including PTT Exploration and Production (PTTEP), IUCN-Marriott partnership, and local business. | Consultation, technology and financial investment, public-private partnerships, steering committee/advisory committee membership, participation in green/coastal area planning process, training experts, capacity building/awareness | Year 1 and throughout project cycle (mainly during Year 2-3) | Sustainable livelihood activities in the two sites |

# Annex 6: Stakeholder Engagement During Project Document Development

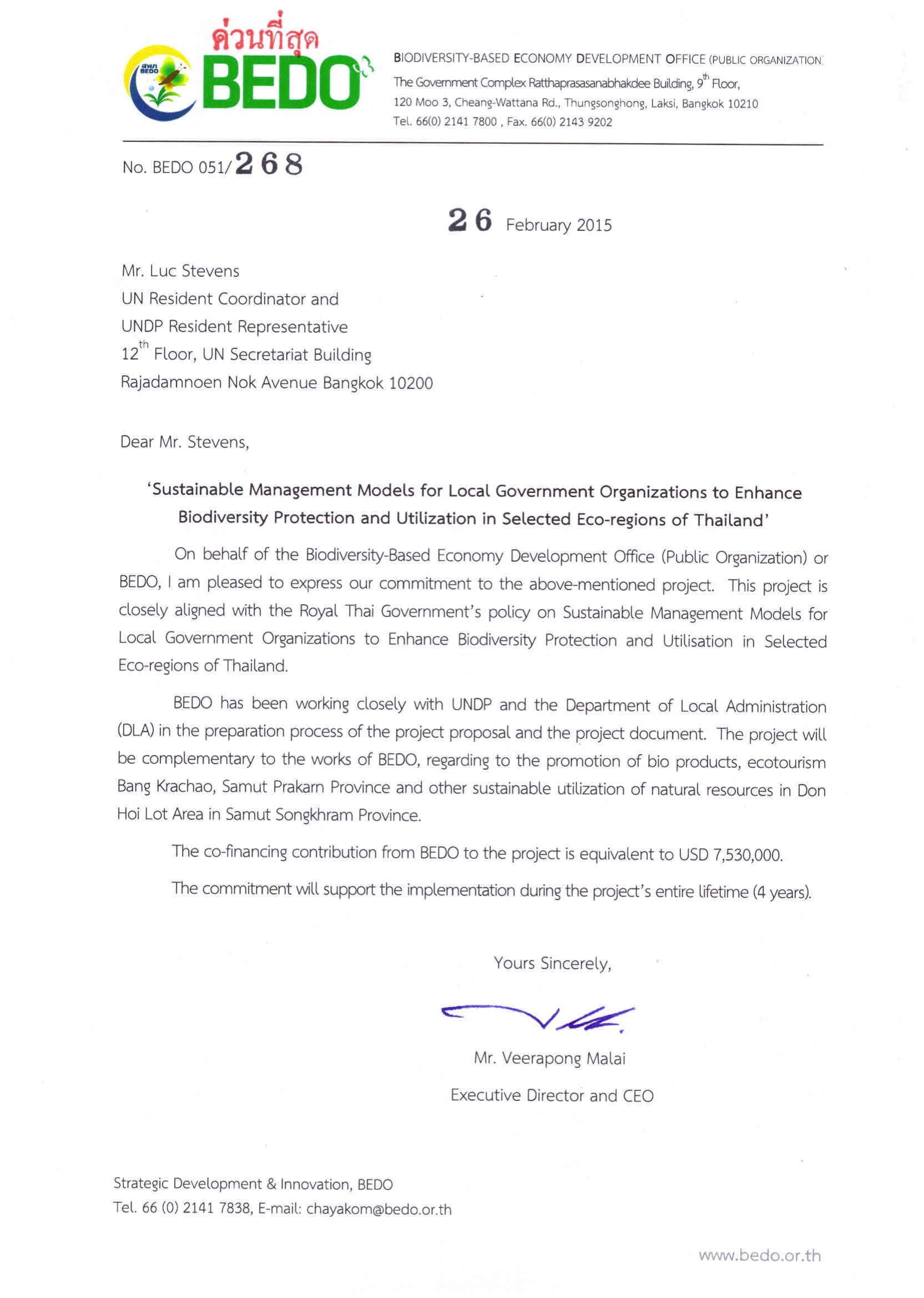
A series of engagement have been conducted during the project preparation period, from November 2014 to February 2015. Full reports of the PPG engagement are attached.

| **Stakeholders** | **Date** | **Findings** |
| --- | --- | --- |
| BEDO | 12 November 2014 | An introductory meeting was held at BEDO to review the project design as outlined in the approved PIF and to discuss the project preparation. In addition, the meeting discussed project preparation timeframe and activities. BEDO will facilitate access to existing project-related documents and data as well as participate in field missions as outlined in the project preparation work plan. Representatives from DLA would be invited to participate in field missions to enhance the agency’s engagement and commitment. Specific dates were discussed for conducting field visits and stakeholder consultations/workshops. |
| BEDO, DLA, DMCR | 26 November 2014 | An introductory meeting was held at BEDO to inform key project partners on the project design and to discuss the project preparation. DLA confirmed the agency’s interest and commitment to implement the project. DMCR expressed keen interest in providing technical support to the project particularly on coastal management and capacity development. Proposed PPG timeline and schedules was agreed. |
| BEDO, DLA, DMCR, concerned LGOs, local community representatives | 11 December 2014 | The first PPG field visit to Don Hoi Lord was conducted today to engage LGOs and conduct field data collection. After presentation of detailed summary of the project backgrounds and design, a number of recommendations were received and recorded for further review and inclusion in the project design. |
| BEDO, DLA, concerned LGOs, local community and private sector representatives | 12 December 2014 | The first PPG field visit to Don Hoi Lord was conducted today to engage LGOs and conduct field data collection. After presentation of detailed summary of the project backgrounds and design, a number of recommendations were received and recorded for further review and inclusion in the project design. |
| BEDO, DLA, RFD, ONEP, DWCR | 12 January 2015 | A consultative meeting was held at BEDO to consolidate ideas and activities for project preparation among key project partners, as well as to provide an opportunity for the international consultant to discuss about alternative scenario.  The meeting discussed existing and potential policy and practice on key performance indicators (KPIs) and performance measurements for local governments. DLA informed that KPIs have been applied to government agencies and departments in conformity with the Public Sector Management Quality development guidelines developed by the Office of the Public Sector Development Commission. However, LAOs currently do not participate nor have access to a formal performance measurement scheme (mainly for a budget-related reason). Instead, the performance of LGOs (both PAOs and TAOs) is evaluated in relation to Provincial DLA Office’s KPI on LAO promotion and development (in accordance with a guidance provided by the Office of the Public Sector Development Commission – OPDC) as well as through the Provincial Committee on Local Development Plans Coordination established by MoI’s Ministerial Regulation B.E. 2546 (2003). KPIs for LGO performance assessment are set to provide feedbacks on the implementation of the 3-year local development plans. Figure 1 illustrates reporting structure of provincial and local governments. The solid lines show individuals and offices with performance measured under the performance management system. |
| BEDO, DLA, DMCR, concerned LGOs, local community representatives | 14 January 2015 | The second PPG field visit to Don Hoi Lord was conducted to further address data gaps and gain initial feedback from key stakeholders on the draft project strategic results framework (SRF). After presentation of detailed summary of information received from previous consultation and the proposed project design, a number of recommendations were received and recorded for further review and inclusion in the project design. |
| BEDO, DLA, concerned LGOs, local community and private sector representatives | 15 January 2015 | The second PPG field visit to Bang Krachao was conducted to further address data gaps and gain initial feedback from key stakeholders on the draft project strategic results framework (SRF). After presentation of detailed summary of information received from previous consultation and the proposed project design, a number of recommendations were received and recorded for further review and inclusion in the project design. |
| ONEP | 19 January 2015 | A meeting was held with ONEP, as the focal point of Ramsar Convention, to seek advice on management of Don Hoi Lord Ramsar site as well as to clarify on the boundary. It was noted that the official demarcation of the area was incorrect and a committee has been appointed at the provincial level to review and propose the correct boundary of the site. ONEP has developed a national master plan on biodiversity conservation that requires LGO engagement in planning and implementation of mainstreaming biodiversity into local plans, which will be submitted for the Cabinet review and endorsement. |
| BEDO, DLA | 19 January 2015 | A meeting was held at BEDO with representatives of DLA to discuss ONEP’s master plan that involves LGOs. The meeting also sought clarification on the policy and practice of KPIs under Thai Government’s Public Sector Performance Agreement. It was confirmed that LGOs are not mandated to participate in the scheme, but their performance has been assessed through DLA provincial functions and LGO development plans. |
| BEDO, DMCR | 23 January 2015 | A meeting was held at BEDO with participation of DMCR to seek the agency’s cooperation in Don Hoi Lord. It was informed that DMCR has been engaged in formulation of a number of rules and regulations in accordance with the new law on Promotion of Marine and Coastal Resources Management Act 2015 that empowers local authorities and coastal communities to conserve and manage coastal and marine resources, as well as to provide guidelines for formulating marine and coastal resources policies at national, provincial, and local levels for implementation. It was agreed that DMCR and its regional offices in the target sites would provide technical advice and logistical support for project implementation, as well as policy integration. |
| BEDO, DLA, DMCR, concerned LGOs, local community representatives | 05 February 2015 | The third PPG field visit to Don Hoi Lord was conducted to present the project outcome, outputs, activities, and indicators in order to gain feedbacks from key stakeholders. Recommendations were received and recorded for further review and inclusion in the project design. The meeting discussed two important issues with implications to the mud flats - dredging of Mae Klong River and canals by Marine Department resulting in spill into the mud flats, and water pollution from upstream particularly from industries located in Samut Sakorn Province. It was agreed that the project would conduct systematic assessments on water quality situation, impacts, and mitigation measures. |
| BEDO, DLA, concerned LGOs, local community and private sector representatives | 06 February 2015 | The third PPG field visit to Bang Krachao was conducted to present the project outcome, outputs, activities, and indicators in order to gain feedbacks from key stakeholders. Recommendations were received and recorded for further review and inclusion in the project design. Participants from local communities raised an issue of salt-water intrusion and wastewater in canals causing damages to agriculture and freshwater, and thus biodiversity, in the area, and requested for urgent mitigation. It was agreed that the project would include a thorough and systematic assessment of water quality situation as part of project implementation. In addition, the project should also develop an environmentally friendly land/coastal use plan at Tambon level during the first 1-2 years of project implementation. |
| BEDO, ONEP, DLA, MoD, DMCR, RFD | 19th February | Validation meeting. The meeting was held to discuss the project document.  Stakeholders agreed with the structure and nature of proposed project.  Comments were received on the nature of using a migratory bird species as an indicator and potential challenges of that. |

# Annex 7: GEF Tracking Tool

Please see attached file.

# Annex 8: Co-Financing Letters



1. For UNDP supported GEF funded projects as this includes GEF-specific requirements [↑](#footnote-ref-1)
2. Sodhi N.S. and B.W. Brook. 2006. *Southeast Asia biodiversity in crisis*. Cambridge: Cambridge University Press [↑](#footnote-ref-2)
3. Royal Forest Department, as of 5/7/2557.XXX http://forestinfo.forest.go.th/55/Content.aspx?id=80 [↑](#footnote-ref-3)
4. GoT (2014) Fifth National Communication to the Convention on Biodiversity. Available at http://www.cbd.int/reports/nr5/ [↑](#footnote-ref-4)
5. Ibid [↑](#footnote-ref-5)
6. Ibid [↑](#footnote-ref-6)
7. Information adapted from GoT (2014) Firth National Communication to the Convention on Biodiversity Available at <http://www.cbd.int/reports/nr5/> and information on Thailand’s IUCN Redlist species available at <http://www.iucnredlist.org> - Acronyms equate to: EX = Extinct; EW = Extinct in the Wild; CR = Critically Endangered; VU = Vulnerable; NT = Near Threatened; LC = Least Concern; DD = Data Defincient. [↑](#footnote-ref-7)
8. GoT (2014) Fifth National Communication to the Convention on Biodiversity. Available at http://www.cbd.int/reports/nr5/ [↑](#footnote-ref-8)
9. Ibid [↑](#footnote-ref-9)
10. (draft) Fifth National Report on the Implementation of the Ramsar Convention on Wetlands, to be submitted to the 12th Meeting of the Conference of the Contracting Parties, Uruguay, June 2015. ONEP. [↑](#footnote-ref-10)
11. Available at <http://en.nrct.go.th/en/NationalResearchPolicyandStrategy.aspx> [↑](#footnote-ref-11)
12. BEDO pers comms [↑](#footnote-ref-12)
13. Figures from June 2004 [↑](#footnote-ref-13)
14. Ministerial Regulation on the Organisation of the Department of Local Administration, MoI BE 2551 (2008) [↑](#footnote-ref-14)
15. Figure adapted from “Thai Local Government” Booklet produced by the Department of Local Administration [↑](#footnote-ref-15)
16. Syamananda  (2014) Political Reform in Thailand...will not be Successful without the Town and Country Planning Reform. Handout distributed in the session of the Dialogue on  “Reform of Thailand... Reform of Thailand’s Town and Country Planning” [↑](#footnote-ref-16)
17. Department Public Works and Town & Country Planning, Ministry of Interior, Thailand (DTCP) (2013). [↑](#footnote-ref-17)
18. Chardchawan S (2010) Local Governance in Thailand: The Politics of Decentralisation and the Roles of Bureaucrats, Politicians and the People. V.R.F Series no459 Institute of Developing Economies, Japan External Trade Organisaiton. Available at [www.ide.go.jp/English/Publish/Download/Vrf/pdf/459.pdf](http://www.ide.go.jp/English/Publish/Download/Vrf/pdf/459.pdf) [↑](#footnote-ref-18)
19. Adapted from UNDP (2012) Thailand Climate Public Expenditure and Institutional Review. [↑](#footnote-ref-19)
20. Col et al (2006) Results-Based Management in Thailand: Evaluation Report. World Bank Report available at <http://siteresources.worldbank.org/INTTHAILAND/Resources/CDP-G/392030-1163054967445/Jeanne_Marie_Results_based_management_in_Thailand.pdf> [↑](#footnote-ref-20)
21. Dorotinsky et al (2011) Implementing Results Based Management in Thailand. World Bank report. Available at: <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/12/19/000333037_20111219235215/Rendered/PDF/660670WP0P12260ed0Management0Report.pdf> [↑](#footnote-ref-21)
22. DLA (2014) DLA projects on DLA website accesses January 2015 http://www.dla.go.th/en/o4.jsp [↑](#footnote-ref-22)
23. DLA pers comms [↑](#footnote-ref-23)
24. UNDP pers comms. [↑](#footnote-ref-24)
25. Key Performance Indicators For Local Government Infrastructure Development: The Case Of Sub-District (Tambon) Administrative Organization. Professional Project Management Education blog updated 03/2010 available at <http://professionalprojectmanagement.blogspot.com.au/2010/03/key-performance-indicators-for-local.html>. Accessed 02/2015 [↑](#footnote-ref-25)
26. Information on this eco-region adapted from Round et al – Tropical and Sub-tropical Moist Broadleafed Forest Southeastern Asia – Thailand available at <http://www.worldwildlife.org/ecoregions/im0107> [↑](#footnote-ref-26)
27. Information adapted from WWF ecoregions description available at <http://www.worldwildlife.org/ecoregions/im0107>. Accessed Jan 2015. [↑](#footnote-ref-27)
28. Plungplub M (2012), Potentials and constraints for land/coastal use in Bang Kacao Area, Amphoe Phra Pradaeng, Samut Prakarn, [↑](#footnote-ref-28)
29. Information on species numbers from BEDO (2012) Biodiversity in Bang Krachao, conducted by Uthain Thongthip, Rajabhat Phranakorn, BEDO, 2012. [↑](#footnote-ref-29)
30. Professor Somsak Panha pers comms – 10 new species of the semi-aquatic freshwater earthworms have recently been discovered in Thailand and appear to be locally endemic to the river basins and areas of basins in which they are found (see http://www.pensoft.net/news.php?n=196) [↑](#footnote-ref-30)
31. Thai Birding <http://www.thaibirding.com/locations/central/sri-nakorn-kuen-khan-park.htm> Accessed 02/2015 [↑](#footnote-ref-31)
32. Krul (2012) Dealing with high pressure: Urban Agriculture as a tool to prevent green spaces from turning red, a case study from Bang Krachao. University of Amsterdam [↑](#footnote-ref-32)
33. Figures from the Office of Provincial agriculture 2012 [↑](#footnote-ref-33)
34. Geographical Indicators are issues by the Department of Intellectual Property (DIP) in Thailand and denote a product that is uniquely produced within an area. Issuing of indicators of a products origin have gained popularity in Thailand with evidence that consumers are also willing to pay premium prices for products which they are able to tell the origin of and associate with a high quality (Seetisarn (2011) Thai Consumers Willingness to Pay for Food Products with Geographical Indications. Mahidol University). [↑](#footnote-ref-34)
35. Krul (2012) Dealing with high pressure: Urban Agriculture as a tool to prevent green spaces from turning red, a case study from Bang Krachao. University of Amsterdam [↑](#footnote-ref-35)
36. Adapted from Krul (2012) Dealing with high pressure: Urban Agriculture as a tool to prevent green spaces from turning red, a case study from Bang Krachao. University of Amsterdam [↑](#footnote-ref-36)
37. Ibid [↑](#footnote-ref-37)
38. Figures from BEDO pers comms based on information from the Tourism Authority of Thailand. [↑](#footnote-ref-38)
39. BEDO pers comms. [↑](#footnote-ref-39)
40. Please note a number of spellings of Don Hoi Lord are possible the most common being Don Hoi Lord (as used here) and Don Hoi Lord. [↑](#footnote-ref-40)
41. Nithinart Charoenphoeraj and Petchpanom Chitmun, (2014) Biodiversity and sustainable use of birds in sub-district Klong Kone, Muang District, Samut Prakan and database of birds using website for ecotourism in the mangrove of Samut Songkram, Rajabhat Suan Sununtha University. [↑](#footnote-ref-41)
42. Worrapimphong (2010) Integrated and Collaborative Ecological and Social-economic Modeling for Sustainable Razor Clam management: Don Hoi Lord Ramsar Site Thailand. PhD Dissertation Chulalongkorn University [↑](#footnote-ref-42)
43. Suwanna (2003) Suwanna, N. 2003. The ability of the community in managing local resource: A case study of Don Hoi Lod, Bangjakreng, Samut Songkram. Department of Environmental planing for community and ryral development. Graduate School Mahidol University Bangkok.  [↑](#footnote-ref-43)
44. Worrapimphong, K. 2005. Companion modelling for razor clam *Solen regularis* conservation at Don Hoi Lord, Samut Songkhram province. Master's thesis. Department of Biology, Graduated School. Chulalongkorn University [↑](#footnote-ref-44)
45. Worrapimphong (2010) Integrated and Collaborative Ecological and Social-economic Modeling for Sustainable Razor Clam management: Don Hoi Lord Ramsar Site Thailand. PhD Dissertation Chulalongkorn University  [↑](#footnote-ref-45)
46. Numbers quoted in Worrapimphong 2010 [↑](#footnote-ref-46)
47. Worrapimphong (2010) Integrated and Collaborative Ecological and Social-economic Modeling for Sustainable Razor Clam management: Don Hoi Lord Ramsar Site Thailand. PhD Dissertation Chulalongkorn University  [↑](#footnote-ref-47)
48. Worrapimphong (2010) Integrated and Collaborative Ecological and Social-economic Modeling for Sustainable Razor Clam management: Don Hoi Lord Ramsar Site Thailand. PhD Dissertation Chulalongkorn University [↑](#footnote-ref-48)
49. Worrapimphong, K. 2005. Companion modelling for razor clam *Solen regularis* conservation at Don Hoi Lord, Samut Songkhram province. Master's thesis. Department of Biology, Graduated School. Chulalongkorn University [↑](#footnote-ref-49)
50. Numbers reported in Worrapimphong (2010) [↑](#footnote-ref-50)
51. Ibid [↑](#footnote-ref-51)
52. Suravanichakit (2009) Natural Heritage Value and Sustainable Use of the Lower Segment of the Mae Klong River, Samut Songkram Province. A Thesis Submitted in Partial Fulfillment of the Requirements for a PhD Silpakorn University [↑](#footnote-ref-52)
53. Lambregts B et al (2009) Managing Landuse Conflicts mobility and cultural heritage in Amphawa Samut Songkram. [↑](#footnote-ref-53)
54. Worrapimphong (2010) Integrated and Collaborative Ecological and Social-economic Modeling for Sustainable Razor Clam management: Don Hoi Lord Ramsar Site Thailand. PhD Dissertation Chulalongkorn University [↑](#footnote-ref-54)
55. The Office of Agricultural Economics estimating that the areas of land/coastal used for agriculture increased by 45,000 ha per annum from 2005 to 2010. [↑](#footnote-ref-55)
56. World Bank Thailand Environment Page – accesses 06/14 - <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/EXTEAPREGTOPENVIRONMENT/0,,contentMDK:20266329~menuPK:537827~pagePK:34004173~piPK:34003707~theSitePK:502886,00.html> [↑](#footnote-ref-56)
57. Syamananda  (2014) Political Reform in Thailand...will not be Successful without the Town and Country Planning Reform. Handout distributed in the session of the Dialogue on  “Reform of Thailand... Reform of Thailand’s Town and Country Planning” [↑](#footnote-ref-57)
58. Ibid [↑](#footnote-ref-58)
59. Tosin, (2011) Participatory Management of Green area in the context of urbanisation in Bang Krachao by using GIS, Master Thesis for Environmental Management, Faculty of Environment and Social Development, National Institute of Development Administration (NIDA) [↑](#footnote-ref-59)
60. Krull (2012) Dealing with high pressure: Urban Agriculture as a tool to prevent green spaces from turning red, a case study from Bang Krachao. University of Amsterdam [↑](#footnote-ref-60)
61. BEDO pers comms [↑](#footnote-ref-61)
62. The use of caustic soda to remove clams from their holes has been reported. This technique results in indiscriminate collection of clams of all sizes, not just adults as previously done, and the potential long term degradation of the environment due to the input of large volumes of acidic liquid onto the mud flats. Efforts have been made to reduce such practices but enforcement remains challenging across the vast mudflat areas. (Information taken from reporting by The Nation: Don Hoi Lord, Clams Under Threat – reported in 2006 – available at http://www.nationmultimedia.com/2006/09/10/headlines/headlines\_30013235.php [↑](#footnote-ref-62)
63. Numbers reported in Worrapimphong (2010) Integrated and Collaborative Ecological and Socio-economic modelling for sustainable razor clam management at Don Hoi Lord Ramsar site in Thailand [↑](#footnote-ref-63)
64. Worrapimphong, K. 2005. Companion modelling for razor clam *Solen regularis* conservation at Don Hoi Lord, Samut Songkhram province. Master's thesis. Department of Biology, Graduated School. Chulalongkorn University [↑](#footnote-ref-64)
65. Ruffolo, D.; Charusiri, P.; Gajaseni, N.; Piumsomboon, A.; Piumsomboon, P.; Pradatsundarasar, A.; and Tantratain, S. 1999. Population dynamics of Razor Clams in Samut Songkram, Thailand. Journal of scientific Research Chulalongkorn University 24: 67-83  quoted in Worrapimphong (2010) [↑](#footnote-ref-65)
66. Impact on broader ecology noted by Thorn Thamrongnawasawadi of Kasetsart University reported in the The Nation: Don Hoi Lord, Clams Under Threat – reported in 2006 – available at http://www.nationmultimedia.com/2006/09/10/headlines/headlines\_30013235.php. Rise in number of Horse Mussels reported by Worrapimphong (2010) Integrated and Collaborative Ecological and Socio-economic modelling for sustainable razor clam management at Don Hoi Lord Ramsar site in Thailand [↑](#footnote-ref-66)
67. Worrapimphong (2010) Integrated and Collaborative Ecological and Socio-economic modelling for sustainable razor clam management at Don Hoi Lord Ramsar site in Thailand [↑](#footnote-ref-67)
68. Ibid [↑](#footnote-ref-68)
69. Kamnan and village headmen are both influential persons at the local level. A village headman is elected by popular vote every five years. Kamnan are elected from the village headmen who have run for the post directly by the local residents in the Tambon with a five-year term. [↑](#footnote-ref-69)
70. Don Hoi Lord – area includes entire province 41,670ha and marine / mudflat area of 26,129ha – total 67,799ha

    Bang Krachao – area of focus 1,819ha

    Total area: 69,618ha [↑](#footnote-ref-70)
71. Roles taken from the objectives of BEDO as laid out by the Royal Decree on its establishment – information available at <http://www.bedo.or.th/swf/BEDOFACTSHEET_EN2014.swf> accessed Jan 2015. [↑](#footnote-ref-71)
72. Provincial level planning in Thailand should be guided by both national plans and strategies and local level plans and objectives – for further information on this see Section 1.3 [↑](#footnote-ref-72)
73. The review will also be particularly pertinent given that there are currently proposals for amendments in the structure of the autonomous pathway of local government with the potential that the PAO level will be abolished thus changing the relationship and systems that exist between the Provincial Governor’s office and the TAO level of autonomous administration. [↑](#footnote-ref-73)
74. UNDP (2012) Lessons Learned from Developing Poverty-Environment Indicators for Screening Sub-National Plans. Poverty Environment Initiative Policy Brief [↑](#footnote-ref-74)
75. There have been moves within the Government of Thailand to propose the removal of the PAO as an administrative body with a closer relationship developed between SAOs and the Provincial Governor’s office. As yet there is limited information on the nature of these proposals but amendments may be promoted within a short time frame. [↑](#footnote-ref-75)
76. See section 1.2 for further information on existing systems. [↑](#footnote-ref-76)
77. The approach will learn from work undertaken by the Thailand Research Fund’s community research Thai Bahn approach, integrating information collected by specialists with community monitoring. [↑](#footnote-ref-77)
78. Percentage increase provided by BEDO based on existing experience of utilizing certificates of origin to promote different agricultural products. [↑](#footnote-ref-78)
79. BEDO pers comms [↑](#footnote-ref-79)
80. The concept of a ‘just society’ which includes equal opportunities for all Thai people is included within the 11th NESDP. [↑](#footnote-ref-80)
81. Thai Birding <http://www.thaibirding.com/locations/central/sri-nakorn-kuen-khan-park.htm> Accessed 02/2015 [↑](#footnote-ref-81)
82. IUCN Red list information from <http://www.iucnredlist.org/about/summary-statistics#Tables_5_6> accessed 06/2014 [↑](#footnote-ref-82)
83. National Economic and Social Development Plan [↑](#footnote-ref-83)
84. 67,799ha for the Don Hoi Lord area, which encompasses (26,129ha of marine area within revised Ramsar area, and the full area of Samut Songkram 41,670ha (including 6,324ha of four coastal Tambons included within Ramsar area)). Remaining 1,819ha comes from the six Tambons of Bang Krachao. [↑](#footnote-ref-84)
85. A standardized survey methodology will be adopted to track bird species numbers through the projects lifetime. The methodology, based on periodic point counts, will be developed as part of the baseline biodiversity survey and will include year round observations and will link specialists with local communities in data collection. [↑](#footnote-ref-85)
86. A standardized survey methodology to identify levels of earthworm population will be undertaken within different landuse classifications including: vacant land, agricultural land (subdivided by crop and production method eg certified as GAP or not certified), and forest-land. [↑](#footnote-ref-86)
87. Numbers reported in Worrapimphong (2010). A further baseline will also be undertaken in year 1 of the project as part of the development of a revised management plan for the clam fishery. [↑](#footnote-ref-87)
88. Water quality assessments reported in Worrapimphong (2010). Pollution Control Department recommended water quality levels available at: <http://www.pcd.go.th/info_serv/en_water.html>. Systematic sampling procedure for canals to be developed as part of biodiversity assessment in year 1. [↑](#footnote-ref-88)
89. Tosin, (2011) Participatory Management of Green area in the context of urbanisation in Bang Krachao by using GIS, Master Thesis for Environmental Management, Faculty of Environment and Social Development, National Institute of Development Administration (NIDA). [↑](#footnote-ref-89)
90. Currently green area includes both agricultural and conservation areas. As such the target is to maintain the green area and the conservation area within it so that the conservation area is not replaced by agriculture. [↑](#footnote-ref-90)
91. Class 4 as identified by the PCD’s Surface Water Quality Standards – available at <http://www.pcd.go.th/info_serv/en_reg_std_water05.html#s3> - accessed Jan 2015 [↑](#footnote-ref-91)
92. *Summary table should include all financing of all kinds: GEF financing, co-financing, cash, in-kind, etc...*  [↑](#footnote-ref-92)
93. See UNDP Bureau of Management (2003) Country Office Support For Effective Project Management: Working Paper #3- National Project Directors Manual [↑](#footnote-ref-93)
94. Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals. [↑](#footnote-ref-94)
95. In regards to CO2, ‘significant emissions’ corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.] [↑](#footnote-ref-95)
96. Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections. [↑](#footnote-ref-96)