



## **Inclusive Sustainable Rice Landscapes in Thailand**

### **Part I: Project Information**

#### **Name of Parent Program**

**Food Systems, Land Use and Restoration (FOLUR) Impact Program**

#### **GEF ID**

**10268**

#### **Project Type**

FSP

#### **Type of Trust Fund**

GET

#### **CBIT/NGI**

**CBIT No**

**NGI No**

#### **Project Title**

Inclusive Sustainable Rice Landscapes in Thailand

#### **Countries**

Thailand

#### **Agency(ies)**

UNEP

#### **Other Executing Partner(s)**

GIZ / Thai Rice Department - Ministry of Agriculture and Cooperatives

#### **Executing Partner Type**

Others

#### **GEF Focal Area**

Multi Focal Area

## **Taxonomy**

Climate Change, Focal Areas, Integrated Programs, Chemicals and Waste, Pesticides, Climate Change Adaptation, Livelihoods, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Forest, Forest and Landscape Restoration, Biodiversity, Protected Areas and Landscapes, Productive Seascapes, Productive Landscapes, Mainstreaming, Forestry - Including HC VF and REDD+, Infrastructure, Agriculture and agrobiodiversity, Land Degradation, Sustainable Land Management, Improved Soil and Water Management Techniques, Income Generating Activities, Restoration and Rehabilitation of Degraded Lands, Sustainable Forest, Sustainable Agriculture, Integrated and Cross-sectoral approach, Sustainable Fire Management, Sustainable Livelihoods, Community-Based Natural Resource Management, Influencing models, Convene multi-stakeholder alliances, Deploy innovative financial instruments, Demonstrate innovative approaches, Strengthen institutional capacity and decision-making, Stakeholders, Local Communities, Private Sector, Large corporations, SMEs, Individuals/Entrepreneurs, Type of Engagement, Information Dissemination, Partnership, Participation, Consultation, Civil Society, Community Based Organization, Non-Governmental Organization, Academia, Beneficiaries, Communications, Public Campaigns, Awareness Raising, Education, Gender Equality, Gender results areas, Access and control over natural resources, Participation and leadership, Access to benefits and services, Capacity Development, Knowledge Generation and Exchange, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Food Systems, Land Use and Restoration, Deforestation-free Sourcing, Sustainable Commodity Production, Sustainable Food Systems, Comprehensive Land Use Planning, Food Value Chains, Integrated Landscapes, Landscape Restoration, Smallholder Farming, Capacity, Knowledge and Research, Innovation, Knowledge Exchange, Knowledge Generation, Learning, Theory of change, Indicators to measure change, Adaptive management

## **Rio Markers**

### **Climate Change Mitigation**

Climate Change Mitigation 1

### **Climate Change Adaptation**

Climate Change Adaptation 0

### **Submission Date**

12/1/2020

### **Expected Implementation Start**

10/1/2021

### **Expected Completion Date**

9/30/2025

## **Duration**

48In Months

**Agency Fee(\$)**

498,237.00

**A. FOCAL/NON-FOCAL AREA ELEMENTS**

<b>Objectives/Programs</b>	<b>Focal Area Outcomes</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
IP FOLU	Transformation of food systems through sustainable production, reduced deforestation from commodity supply chains, and increased landscape restoration	GET	5,535,963.00	67,300,000.00
<b>Total Project Cost(\$)</b>			<b>5,535,963.00</b>	<b>67,300,000.00</b>

## B. Project description summary

### Project Objective

To transform the Thai rice value chain for environmental sustainability by upscaling the Sustainable Rice Platform (SRP) Standard through an Integrated Landscape Management approach.

<b>Project Component</b>	<b>Financing Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>GEF Project Financing(\$)</b>	<b>Confirmed Co-Financing(\$)</b>
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 1: National Policy and Institutional Development for Integrated Multi-Sectoral Management of Sustainable Rice Landscapes	Technical Assistance	<p><b>Outcome 1:</b> National policy strengthened, inter-ministerial collaboration improved, and environmental outcomes achieved under the framework of New Theory Farming Policy</p> <p><b>Outcome Indicator:</b> Number of policies and regulatory approaches adopted by the government, to implement a national roadmap for sustainable rice landscapes, enable restoration of biodiversity and ecosystems services.</p> <p><b>Indicator 1.1.a</b> <i>Number of coordinated Government agencies and stakeholders that adopt integrated SRP &amp; Landscape Approaches</i></p> <p><b>Indicator 1.1.b</b> <i>Number of capacity development plans designed and implemented</i></p>	<p><b>Output 1.1:</b> The positive economic and environmental benefits of an integrated SRP and landscape approach have been demonstrated to and are acknowledged by national governmental agencies</p> <p><b>Output 1.2:</b> A national roadmap is developed and agreed for integrated target setting, investments, management, and monitoring for sustainable rice landscapes as well as to enable restoration of biodiversity and ecosystem services at provincial level in Chiang Rai and Ubon Ratchathani</p> <p><b>Output 1.3:</b> National multi-agency agreement reached and applied on better alignment of the Mega</p>	GET	613,024.00	5,200,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 2: Integrated Landscape Management for productive agriculture and environmental sustainability in Chiang Rai and Ubon Ratchathani	Investment	<p><b>Outcome 2:</b> Management of forested landscapes improved for enhancing environmental integrity and productivity of neighboring agricultural areas, including rice, by the governments of Chiang Rai and Ubon Ratchathani</p> <p><b>Outcome Indicator:</b></p> <p>Quantity of land under integrated landscape spatial management plans and gender inclusive, diversified agriculture practices-improved farmers? welfare in the selected provinces.</p> <p><b>Indicator 2.1.</b> <i>Percentage increase in government budget allocated for investments through implementing landscape management plans</i></p> <p><b>Indicator 2.2.1:</b></p> <p><b>GEF Core Indicator 3.2</b></p>	<p><b>Output 2.1:</b> Two spatial landscape management plans produced and agreed at provincial level that integrate sustainable agriculture with improved landscape conservation and restoration of ecosystem services and biodiversity</p> <p><b>Output 2.2:</b> Government partners (MoAC, RFD, provincial administrations of UR&amp;CR) implement landscape management plans through investments that reduce negative environmental impacts and restore ecosystem/water services of HCVF for agricultural areas such as Mega Farms</p> <p><b>Output 2.3:</b> Gender-inclusive agriculture diversification and</p>	GET	1,363,754.00	12,000,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 3: Upscaling sustainable rice production and value chains through provincial rice sector investments	Technical Assistance	<p><b>Outcome 3:</b> Environmental and social benefits on- and off-farm obtained by deployment of SRP Standard and diversification of agricultural production widely adopted by small farmers in selected provinces</p> <p><b>Outcome Indicator:</b> Increased area under SRP Standard and integrated landscape management approaches and level of funding from financial mechanisms and investments made available to farmers</p> <p><b>Indicator 3.1.1:</b> <i>Area under SRP Standard is increased, in the selected target areas by 90,000 ha</i></p> <p><b>Indicator 3.1.2:</b> <i>Reduction tCO<sub>2</sub>e from rice production following SRP standard with the integrated landscape</i></p>	<p><b>Output 3.1:</b> The area under Sustainable Rice Platform (SRP) Standard practices is expanded through capacity building, extension and farmer field schools servicing 45,000 farmers (50% female)</p> <p><b>Output 3.2:</b> Feasibility design and investments agreed for diversification of agricultural production in 10,000 ha of low-land sub-optimal rice systems</p> <p><b>Output 3.3:</b> Financial instruments and investments mobilized and agreed with private sector, government partners and rice producers for scaling up sustainable rice value chains and landscapes (Revolving Fund , BAAC Green Loan</p>	GET	1,824,969.00	41,100,000.00



Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 4: Knowledge management and outreach for national and regional replication and impact monitoring systems	Technical Assistance	<p><b>Outcome 4:</b> Environmental, technical and socio-economic benefits from implementation of SRP standards and integrated landscape approaches are understood by government agencies, private companies, and farmers willing to replicate this scheme at national and regional level</p> <p><b>Outcome Indicator:</b> SRP Standard with integrated landscape approach is increasingly recognized and expanded at national and regional level (1 additional province; 2 countries)</p> <p><b>Indicator 4.1:</b></p> <p><i>Increased knowledge and awareness levels of targeted communities, government, corporate and civil society</i></p> <p><b>Indicator 4.2:</b></p> <p><i>Number of companies that</i></p>	<p><b>Output 4.1:</b> A national outreach campaign implemented to strengthen governmental and farmer adoption of sustainable rice value chains and integrated landscape management for multiple services</p> <p><b>Output 4.2:</b> Corporate and government mobilized for adopting and replicating SRP Standard and sustainable sourcing of ?Quality Thai Rice? under the New Theory Farming Policy</p> <p><b>Output 4.3:</b> Concept of integrating the SRP Standard into sustainable rice value chains is extended to two other Asian countries (under the SRP partnership and South ? South</p>	GET	1,396,828.00	5,500,000.00



**C. Sources of Co-financing for the Project by name and by type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
Recipient Country Government	Ministry of Agriculture and Cooperatives: Thai Rice Department, including Hom Mali Rice Initiative	In-kind	Recurrent expenditures	10,500,000.00
Recipient Country Government	Office of Natural Resources and Environmental Policy and Planning (ONEP) in MoNRE	In-kind	Recurrent expenditures	4,000,000.00
Recipient Country Government	Department of National Park & Wildlife Conservation	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Royal Forest Department	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Governments Chiang Rai	In-kind	Recurrent expenditures	1,500,000.00
Recipient Country Government	Government of Ubon Ratchathani	In-kind	Recurrent expenditures	1,500,000.00
Private Sector	Urmatt Limited	Grant	Investment mobilized	1,000,000.00
Private Sector	OLAM international	Grant	Investment mobilized	13,600,000.00
Donor Agency	GIZ	In-kind	Recurrent expenditures	8,500,000.00
Other	IRRI	In-kind	Recurrent expenditures	3,000,000.00
Other	SRP e.V	In-kind	Recurrent expenditures	2,500,000.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	UNEP, UN Environment Program	In-kind	Recurrent expenditures	200,000.00
Other	BAAC (Bank of Agriculture and Cooperatives): Green Bond and Green Loan mechanisms *	Loans	Investment mobilized	20,000,000.00
<b>Total Co-Financing(\$)</b>				<b>67,300,000.00</b>

**Describe how any "Investment Mobilized" was identified**

\*Please refer to Appendix 12 regarding the co-financing letters, in particular that of BAAC, which includes additional explanations regarding the nature of their co-financing contribution. The project will establish an innovative, so-called Revolving Fund (RF) to leverage donors, partners, service providers, and rice farmers' own financial contributions under a similar structure to that employed by the Thai Rice NAMA Project. A corpus of USD\$ 7,738,535 (7 million EUR) initial equity capital will be sourced for the RF. The RF will pre-finance ? from non-GEF sources, the CC, BD, LD services to the beneficiaries and reduction of agro-chemicals services required to transition Thai rice farmers to the SRP Standard. Farmers, in turn, will repay into the RF in instalments over time after successive harvests. Farmers accessing the RF will possess ownership rights over the RF, thereby boosting their savings and wealth. Additional debt and initial equity capital for the RF will be raised through various vehicles, e.g. via Green Bond issuance, and public & private partner grants to name a few sources. SRP Standard certificates will be issued for farmers that make the transition to the SRP Standard. Hence, the project will pursue an innovative financing trajectory through supporting design, development, preparation, issuance and verification of green bonds with possible monetization of SRP Standard certificates, contributing to watersheds protection, ecosystem and biodiversity preservation, as well as sustainable land restoration interventions in the uplands and forest protection. Additionally, the project proposes to partner with BAAC and corporate partners with interest in a sustainable value chain, such as Urmatt Ltd. and OLAM, towards sustainable sourcing funds. Both corporations will invest their own and new cash resources towards sustainably sourced and processed rice. BAAC has indicated that the bank had USD hundreds of millions available for investment from their issuance of a Green Bond mechanism in 2020; they are also a partner in the Thai NAMA regarding the revolving fund, as well as the Green Loans for sustainable agriculture. The bank is committed supporting the project-specific mobilization of loans that will enable the setup of the financial mechanisms that are a central element of the project concept.

**D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds**

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNEP	GET	Thailand	Biodiversity	BD STAR Allocation	1,799,862	161,988
UNEP	GET	Thailand	Climate Change	CC STAR Allocation	443,716	39,934
UNEP	GET	Thailand	Land Degradation	LD STAR Allocation	1,447,064	130,236
UNEP	GET	Thailand	Multi Focal Area	IP FOLU Set-Aside	1,845,321	166,079
<b>Total Grant Resources(\$)</b>					<b>5,535,963.00</b>	<b>498,237.00</b>

**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

**F. Project Preparation Grant (PPG)**

PPG Required **false**

**PPG Amount (\$)**

120,000

**PPG Agency Fee (\$)**

10,800

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programmin g of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNEP	GET	Thailand	Biodiversity	BD STAR Allocation	35,000	3,150
UNEP	GET	Thailand	Climate Change	CC STAR Allocation	15,000	1,350
UNEP	GET	Thailand	Land Degradation	LD STAR Allocation	30,000	2,700
UNEP	GET	Thailand	Multi Focal Area	IP FOLU Set- Aside	40,000	3,600
<b>Total Project Costs(\$)</b>					<b>120,000.00</b>	<b>10,800.00</b>

## Core Indicators

### Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	30000.00	0.00	0.00

#### Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	10,000.00		

#### Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	20,000.00		

#### Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

#### Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

### Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	160000.00	0.00	0.00

#### Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)



Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	25,000.00		

**Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	90,000.00		

**Type/Name of Third Party Certification**

SRP rice validated through the formal SRP Assurance Scheme, including its three assurance levels, of which level 3 is through third party validation under GLOBAL.G.A.P.

**Indicator 4.3 Area of landscapes under sustainable land management in production systems**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	25,000.00		

**Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	20,000.00		

**Documents (Please upload document(s) that justifies the HCVF)**

Title	Submitted

**Indicator 6 Greenhouse Gas Emissions Mitigated**

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO <sub>2</sub> e (direct)	0	12736341	0	0
Expected metric tons of CO <sub>2</sub> e (indirect)	0	0	0	0

**Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector**

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO <sub>2</sub> e (direct)		12,736,341		
Expected metric tons of CO <sub>2</sub> e (indirect)				
Anticipated start year of accounting		2022		
Duration of accounting		20		

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO <sub>2</sub> e (direct)				
Expected metric tons of CO <sub>2</sub> e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 9 Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
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Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
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Indicator 9.6 Quantity of POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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100.00

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		22,500		
Male		22,500		
Total	0	45000	0	0

## **Part II. Project Justification**

### **1a. Project Description**

#### **1) The global environmental significance and/or adaptation problems, root causes and barriers that need to be addressed (systems description):**

No significant change since PIF stage. The environmental problems, threats, root causes and barriers have been also elaborated in Project Document Sections 2.1, 2.2 and 2.3.

#### **Threats**

Thailand's landscapes and agricultural systems, especially its rice production systems, are threatened by encroachment on forest borders, forest loss & land degradation, pollution from agro-chemicals, extensive and frequent man-made forest & field fires for land clearance, urbanization, as well as climate change. The burning of rice fields contributes to the massive air pollution problem in southeast Asia. Farmers burn their fields mainly because the stubble gets stuck in the axels of tractors when they plough fields. These threats are already having significant impact on rice production systems, landscapes and ecosystem services. As rice production is dependent on the well-being and functioning of natural ecosystems, it is crucial to recognize that threats which at first appear not to have 'direct impact' on rice production systems will have impact on ecosystem services vital for production systems. Therefore, rice systems are embedded within landscapes. Thus, the state of both rice production systems and landscapes is closely linked and interdependent.

All forests contain environmental and social values, such as wildlife habitat, watershed protection and archaeological sites. Where these values are considered to be of outstanding significance or critical importance, the forest can be defined as a High Conservation Value Forest (HCVF). The idea of HCVFs was developed by the Forest Stewardship Council (FSC) and first published in 1999. This concept has clearly moved the forestry debate away from definitions of particular forest types (e.g. primary, old growth) or methods of timber harvesting (e.g. industrial logging) to focus on the values that make a forest important. By identifying these key values and ensuring that they are maintained or enhanced, it is possible to make rational management decisions that are consistent with the maintenance of important environmental and social values. In Thailand, the watershed classification is the main types of conservation value related to areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia) and forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all, naturally occurring species exist in natural patterns of distribution and abundance. HCVFs in Thailand are labelled as 1A & 1B WSC zones under the Thai Watershed Classification (see below).



WSC 1A	Watershed and forest resources
WSC 1B	Watershed areas have been destroyed
WSC 2	Less slope, suitable for stream of water and important activities, e.g. mining
WSC 3	Watershed area, could be used for economic forest, agriculture, perennial
WSC 4	Hilly area, forest condition has been invaded and cleared for use in most field crops
WSC 5	Forest has been encroached upon and cleared for agriculture, paddy field, community and other farming activities

Without forests to provide rainfall catchment and absorption, rivers overflow with flood waters and mudslides can be triggered in deforested regions with steep hillsides, leading to further land degradation. Connections between deforestation and flood risk has been modelled and proven. Across the northeast of Thailand, land degradation ? in the form of soil erosion and forest loss, - has been a negative result of land conversion to crop production (cassava, maize, sugar cane, rubber). Analyses of soil erosion damages indicate annual soil losses of 100 metric tons per hectare. The floods of 2011 were, amongst others, blamed on deforestation by national experts when heavy monsoon rains were not able to be safely managed. In 2019, the tropical storm Podul brought flash flooding and landslides to 32 Thai provinces, among them Ubon Ratchathani, and although Chiang Rai was not recorded to have been affected, the surrounding provinces Chiang Mai and nearby province Nan were; in total 1.5 million rai (over 240,000 ha) in Thailand. Ubon Ratchathani was one of ten provinces to receive emergency assistance from the Thai government, as well as where evacuations were necessary, and deaths were recorded due to flooding.

*Pesticides:* The intensification of crop production (including rice) in Thailand has led to serious degradation of many ecosystem services, e.g. preserving biodiversity, providing fresh water through natural, regulating functions, or through the aesthetic and recreational value of landscapes for eco-tourism. This also relates to agrochemical pollution due to high intensity of pesticide use in Thailand, another important issue that negatively impacts biodiversity/ecosystem services and human health. Thai farmers spend annually between 7,000 and 22,000 THB per farm on pesticides.

*Urbanization, labor shortages:* Thailand's agriculture sector is threatened by urbanization and labor shortages as the younger generation enters the better-paid manufacturing and service sectors in the larger cities, especially the national capital Bangkok. Currently, the average age for a Thai farmer is 58 years old. Farmer income is below that of professional, technical and administrative workers, according to data from the National Statistics Office (2015), as well as the national average. This is partially because small-scale farmers are seldom able to negotiate higher prices and contracts with agribusiness traders. Farmers also often have no control over production methods and must bear the cost of initial investment in expensive machinery if they want to increase the efficiency of their farm operations. These challenges often result in increasing indebtedness of farmers to financial institutions and banks.

*Climate change:* According to data from 1994 to 2013, Thailand is ranked the 11th country most affected by climate-related impacts. Due to changes in rainfall patterns, shifting seasons, and increased occurrence of natural disasters, particularly floods and droughts, climate change is causing significant impacts on rice and agricultural production in Thailand. Rain-fed rice farming in Thailand has developed over generations based on seasonality, specifically the arrival and departure of the Monsoon rains. Farmers usually plant their first rice crop at the start of the rainy season in May. However, in recent years the Monsoon rains have arrived later than in the past, exposing rice crops to drought, with farmers having to delay planting or watch crops fail entirely. The Meteorological Department of Thailand reported that the country experienced the worst drought in a decade, as average precipitation across large swaths of the country has fallen far behind the monthly average, particularly in the north and northeastern provinces as well as in the Central Plains - all of which are important crop growing regions. The water level of the Mekong river in the northeastern border province is only about 1.5 metres high, possibly the lowest level in almost 100 years.

#### **Root Causes (contributing drivers)**

The root causes of encroachment, gender inequality, forest loss and landscape degradation, biodiversity impacts, agrochemical pollution, urbanization and climate change are diverse and complicated. Key drivers are rapid economic development, lack of access to natural resources (including women, landless, disabled, etc.) and land tenure issues, poverty, as well as unsustainable farming practices including cash crop expansion and governance aspects related to ecosystems services and biodiversity protection at landscape level. These root causes are not only at the center of the threats to sustainable rice production and landscapes as discussed above, but they are also driving these threats, already creating long-lasting negative impacts and natural resource scarcity in Thailand.

*Poverty:* This is an important factor stimulating forest land encroachment, degradation, biodiversity loss, illegal logging, etc. A large volume of Thailand's natural stocks (forests, soils, water resources) have been utilized or compromised to make this rapid economic development possible, resulting in continuous degradation. As a result, the existing supply of water in Thailand has not been able to meet the demands of the various economic sectors. Furthermore, land is being withdrawn from agricultural production, creating additional pressures for the reallocation of water currently used in agriculture. Thailand's natural resources and environmental quality are deteriorating, providing a weak foundation for productive agriculture and landscape health in the coming years.

*Habitat and biodiversity loss and land degradation:* Both have also been the result of increasing demand for land for infrastructure (i.e. road and dam construction) agriculture and industrial food systems development. Initial expansion focused mainly on the expansion of agricultural areas by forest clearance and high level of domestic labor- in 2019 some 30.4% of the population were still employed in the agriculture sector. Recent expansion has focused on increased intensification of agriculture, as labor has become more scarce and costly with the expansion of farmed area becoming more difficult. Production increases have also come from increases in mechanization as well as the use of improved chemical inputs and seed varieties. Weak regulation of the use of some chemicals has led to widespread pollution and damage to the broader agricultural and ecosystems environment

*Unsustainable farming practices and cash crop expansion:* Increased rice production over the past decades (mainly through dissemination and adoption of new technologies) has resulted in negative

externalities such as significant GHG emissions, air pollution and declines in biodiversity and ecosystem services (e.g. freshwater provision, soil retention, and flood control functions). Regulatory incentives for chemical inputs and the lack of farmer incentives with insufficient international value chain actor involvement, have led to limited adoption of sustainable rice production practices and significant environmental impacts on rice production landscapes, e.g. by farmers encroaching on forests to increase income, as well as following the 'high input-high output' approach by public and private extension services to agricultural production, with agro-chemical application increasing as farms expand. Destructive agricultural expansion, intensive crop monoculture, and expansion of cash crops (including cassava, longan, sugar cane, coffee, maize and rubber), particularly in the upper reaches of watersheds in the target provinces, have caused deforestation with negative impacts on wildlife habitat and connectivity between various Protected Areas (PA) in the landscape context.

### **Key barriers**

Presently, agriculture is the second largest GHG emitting sector in Thailand and, at the same time, highly vulnerable to climate change effects. As a major global rice exporter, the Thai rice sector is not only responsible for almost 60% of Thailand's emissions from agricultural activities (approximately 9% of national emissions) but is also the world's 4th largest emitter of rice-related GHG – mainly methane. Despite Thailand's conservation efforts that started in the 1980s to protect its nationally and globally important biodiversity, the proportion of forest area in Thailand is still declining, from around 63% in 1946-1947 (Food and Agriculture Organization 1948) to 43% in 1973 (Royal Forest Department 2017) and 35% in 2009 (Food and Agriculture Organization 2015).

Given these increasing threats, a long-term strategy for transforming the rice value chain must address various barriers to achieve inclusive sustainable rice landscapes. The major barriers are summarized below.

- ? Lack of institution and policy coordination at national and local levels to promote an integrated approach to sustainable rice production, land use planning and sustainable land management for both production as well as environmental outcomes
- ? Limited technical knowledge, capacity, and incentives for implementing sustainable rice/agriculture production systems at both farm and landscape level
- ? Insufficient linkages between sustainable rice value chain actors to leverage market growth
- ? Lack of incentives and financing mechanisms for farmers to support transformation of rice production systems
- ? Lack of innovative financing for land restoration, forest protection and ecosystem services protection
- ? Limited sharing of knowledge on sustainable rice production systems, land use planning and restoration (national, regional and global level)

The project's focus on upscaling adoption of sustainable practices among rice smallholders and other value chain actors in and beyond Thailand for sustainable food systems and productive landscapes will be leveraged through linkages and synergies with the FOLUR IP Global Platform. This will be accomplished through providing targeted Technical Assistance to other countries through the SRP global network. Hence, the respective networks of the SRP and its members will be mobilized to

maximize stakeholder outreach for technical assistance, training, communication and other knowledge sharing activities in other rice producing countries. This will represent a substantive contribution to the effectiveness of the FOLUR IP Global Platform in translating knowledge to grassroots actions and policy advocacy.

Transformation of the food system at local level requires stronger enabling policies in the agricultural sector providing incentives toward sustainable intensification ? and disincentives for just expanding agricultural land on the expense of forests. For instance, through the Mega Farm rice production policy in Ubon Ratchathani and Chiang Rai the provinces receive government subsidies that need to be well channeled and monitored in order to avoid negative impacts, such as reducing rather than improving farmers? and the landscape?s resilience towards climate change. Such oversight is not necessarily given due to institutional and policy shortcomings outlined above. Here is where the project intervenes in that it focuses on landscape management and improved environmental outcomes while strengthening the sustainability and CC resilience of the agricultural landscape and its people.

To achieve this, IRSL project will work across sectors in a multi-stakeholder setting addressing changes in policies and governance that support scaling of sustainable practices. Private sector partners will also play a vital role, particularly for developing a value chain approach that can offer incentives for changing current behavior and practice. Public and community participation is especially needed for the management of community forests and improvements in the buffer function of areas surrounding protected forests, reducing the pressure on these biodiversity-rich ecosystems.

## **2) The baseline scenario and any associated baseline projects:**

The baseline has been significantly updated since PIF stage, as a number of initiatives identified as baseline at PIF stage have elaborated on with detailed information such as budgets, objectives and anticipated outcomes of the implementing agencies, etc. The ProDoc Section 2.4 includes a detailed situation analysis of the institutional, sectoral and policy context for the project, which has not significantly changed since PIF stage due to the institutionally and politically stable situation in Thailand. However, staff changes, due to promotions or otherwise, in the national government, are anticipated mid-2020, accompanied by changes in policies and leadership of relevant ministries (especially in the Ministry of Agriculture and Cooperatives (MoAC)).

The GEF resources will be used to develop strategic links and relationships, and build upon a number of existing initiatives, programs and projects address the underlying global environmental problems described in the ProDoc, which include government programs and ongoing initiatives led by the private sector and development partners. The below summarized baseline projects and programs and their baseline analysis enable the proposed GEF incremental support to achieve its objectives of transforming the rice sector through upscaling the SRP Standard and thriving towards environmental and ecosystems sustainability by integrating and reflecting the dependencies on healthy landscapes (e.g. water supply from healthy forested watersheds) as well as off-farm environmental impacts. The work of the Ministry of Agriculture and Cooperatives (MoAC) forms part of the baseline program most specifically those operated under the Rice Department (RD) and other departments such as the Land Development Department (LDD), Department of Agriculture (DoA), Royal Irrigation Department (RID) and the Department of Agricultural Extension (DoAE) as their activities relate to agriculture, sustainable rice production, land and water management, extension management, crop diversification, etc.



The GEF project will complement these multi-agency-department activities through holistic, multi-disciplinary approaches at national level (e.g., multi-stakeholder and inter-institutional workshops and negotiation meetings), but with more focus and intensity in the two target provinces (through provincial committees and groups under the governor's office). Current MoAC/RD baseline programs are, among others, directed towards supporting organic rice production, SRP Standard and value chain related interventions, research, and food security improvements yet largely confined to an on-farm approach only, without putting efforts in a landscape context. Key baseline projects from the RD include: The Mega Farm Project, The Rice Seed Bank Project, Organic Rice Project, Rice Research and Development Project, Integrated Organic Rice Market Linkages Project and the Smart Farmer Project (which are all implemented in the selected landscapes). However, with respect to Component 3, the GEF/ISRL project would most specifically build and expand upon the existing Mega Farms by integrating the SRP Standard and practices in the schemes, including landscape approaches for promoting more ambitious conservation of biodiversity and ecosystem services in rice agro-ecosystems, generating many sustainable social, economic, and environmental co-benefits. With respect to Component 2, the GEF ISRL project will build on existing baseline initiatives that contribute to scaling up on-farm crop diversification in sub-optimal rice production systems, contributing also to enhanced farm productivity and farmer welfare and environmental sustainability. These would include MoAC's Self Sufficiency Agriculture Project, the Sustainable Agricultural Development Project and the Project of the Management of Economic Zone Important Agricultural Products that are implemented at landscape level.

In addition to the above programs and recognizing forest loss and degradation as major causes of flooding, the government approved the Master Plan on Water Resources Management (2018-2037) including the Flood Retention Program. The Plan touches upon the improvement of water security in the farming sector with measures to improve the efficiency of the existing water supply system, flood management and prevention, water quality management, and water resource preservation, including the mitigation of water pollution in watersheds as well as the prevention and mitigation of soil erosion, landslides and the prevention of topsoil loss, in watershed areas covering about 72,000 ha. The ISRL project will build on this key baseline initiative to scale up forest restoration and reduce water pollution in water bodies, more specifically through protection of watershed area, protecting forests by smart patrolling, preventing encroachment in forest land.

Baseline Programs attaining to the Land Development Department include the Royal Development Project and the Community Watershed Development Project as well as the Water Resources Development Project. The Ministry of Natural Resources and Environment (MoNRE) is responsible for environmental protection and restoration, particularly the protection of natural resources, including forests and water resources. MoNRE's work on environmental sustainability, forest management, conservation of biodiversity and climate change will form part of the baseline program of this GEF investment. The GEF project is specifically aligned with the Royal Forest Department Strategy (2016-2021), which focuses on promoting forest conservation, forest restoration, and stakeholder engagement with the main goal towards increasing forest areas from 33.6% to 40% of the total country area in the

next 10 years. The baseline projects and programs are mainly hosted in the associated provincial departments of the RFD and DNP. However, at National level, ONEP will be an important stakeholder with respect to the strengthening of environmental and natural resources policies under Component 1. At provincial level, the RFD promotes community forest development and the management, restoration and conservation of forests. Community Forests have long been part of Thailand's rural areas and have become an important mechanism to wider change and empowerment at the local level. The ISRL project will work through the OrBortTor (Tambon Administrative Organization, TAO) as this is a key community liaison structure and build on the efforts made through Community Forests using them as a mechanism to engage local communities in landscape management whilst balancing decision-making between the central government and local communities. The RFD's most important baseline program in both Chiang Rai and Ubon Ratchathani is the Forest Protection and Preservation. The DNP promotes, among others, community forest development and the restoration and conservation of biodiversity and implements the Forest and Wildlife Conservation and Restoration Project in Chiang Rai and Ubon Ratchathani. The GEF/ISRL project will align and collaborate with these key baseline initiatives to support protection of natural resources and restoration for environmental sustainability.

**Other important baseline programs include:**

The Sustainable Rice Platform (SRP)<sup>[1]</sup> is a global multi-stakeholder alliance to promote resource efficiency and sustainability both on-farm and throughout rice value chains. SRP was co-convened by UNEP, UN Environment Program and IRRI in December 2011, now includes over 100 institutional partners across the stakeholder spectrum/ SRP facilitates collaborative initiatives among the public and private sectors and civil society actors. Figure 11 in ProDoc summarizes the number and type of partners involved. The SRP Standard on Sustainable Rice Cultivation (launched in 2015 and recently revised to v 2.1 in January 2020) is the world's first sustainability standard for rice and provides an overarching framework for climate-smart best practice in any rice-based system. The Standard is complemented by a set of 'Performance Indicators', which serve as a quantitative tool to measure impacts of Standard adoption and reward progress. Together, the Standard and Performance Indicators provide a normative framework or working definition for sustainable rice production, as well as a framework for benchmarking the sustainability of any rice system. However, the SRP Standard and PI needs yet to be expanded to properly capture its environmental impacts off-farm at a landscape scale (and which is part of the proposed GEF incremental support to enable FOLUR project M&E under outputs 2.1. and 4.4. The SRP Secretariat /e.V. acts as a facilitator to promote the SRP Standard at international level, operationalize it on the farm and throughout supply chains, as well as integrate practical field experiences into further development of the Standard. The Standard and Indicators also provide a basis for the SRP Assurance Scheme, which serves as a framework to verify sustainable production and enables its supply to domestic and international markets. The SRP Assurance Scheme recognizes three levels/options of assurance: level 1, self-assessment (by selected data collector), level 2, 2<sup>nd</sup> party verification (by verification body), and level 3, 3<sup>rd</sup> part verification, which is the highest level of SRP assurance in terms of impartiality and where certification bodies are approved under the Assurance Service Provider (GLOBALG.A.P.). In country, the SRP Secretariat/e.V. acts through National Chapters, which mirror the mandate and multi-stakeholder structure of the global organization to foster national-level uptake of sustainable, climate-smart best practice. In Thailand the SRP national Chapter is under establishment and would benefit from the GEF project through broadened partnerships, as well as increase capacity and outreach for wider adoption of the SRP Standard at farm level.

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? The TEEB AgriFood Program (The Economics of Ecosystems and Biodiversity) led by UNEP, UN Environment Program since 2008, has extensive technical expertise, access to an international network of specialized agencies and experts, as well as the methodological basis and tools available to support the GEF Project through research and capacity-building focusing on the holistic evaluation of eco- and food systems along their value chains and including their most significant externalities. The baseline activities of the TEEB AgriFood Program Thailand are implemented under the International Climate Initiative (IKI) and under the European Union Partnership Instrument (EUPI). Under the IKI program research is conducted (led by a team from Khon Kaen University) that focuses on a comparison of organic and conventional rice production practices, with a field study in Buriram and Surin provinces of the Northeast of Thailand. The EUPI project of the TEEB AgriFood Program Thailand is expected to focus on presenting an economic analysis of trade-offs between costs and benefits of adopting the SRP Standard as currently defined, and a potential future enhanced Standard promoting more ambitious conservation of biodiversity and ecosystem services in rice agroecosystems, towards achievement of sustainable development goals. These baseline projects results and methodology are of great use to the GEF project and will ensure that the focus of the analysis is on a landscape level use spatial models to generate results at a local/regional scale (e.g. watershed level) and present them on a map. In this way, analysis would take into account landscape configuration and context as these are key factors in determining impacts on many ecosystem services and biodiversity.

? In both programs (IKI and EUPI) the projects are aimed at integrating the economic, social, cultural, and ecological values of biodiversity and ecosystem services into decision making and planning of key public and private sector actors in the rice sector in Thailand. The TEEB AgriFood Evaluation Framework[2]<sup>2</sup> will be used to capture and demonstrate the value of ecosystems services, and to identify intervention options that improve livelihoods and biodiversity outcomes. The scope of TEEB's research also includes employment, food security, human health and understanding the extent that these ultimately affect biodiversity and ecosystem functions in agricultural landscapes. It is expected that the broad range of stakeholders such as policymakers, agri-businesses, farmers and civil society organizations that will be involved in the GEF/ISRL project, will be able to use the information revealed by the TEEB AgriFood study to better manage risks associated with degradation of natural, social, human and produced capitals. During the project implementation a specialised agency would be contracted by the project to conduct the valuation and spatial analyses selected through a tender procedure and to assist with input to the policy analysis work under Component 1 by applying the TEEB for AgriFood analytical framework, as well as assist with doing economic and BD/ES-based trade-off analysis of options for land restoration

? UNEP, UN Environment Program and Rabobank have established a global Forest Protection and Sustainable Agriculture partnership, with the aim to unlock at least USD 1 billion in finance towards deforestation-free, sustainable agriculture and land use. A grant fund has been established jointly by the Government of the Netherlands and Rabobank to catalyse private financial resources for this initiative: the AGRI-3 Fund, which aspires to function as a role model for banks, other financial institutions and agribusinesses by developing business models that include acceleration of forest protection and reforestation and implementation of innovative agricultural solutions, whilst improving the living

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standards of local farmers and smallholders. The Agri3 fund would be an important baseline for the GEF project for the generation of significant co-financing arrangements that would specifically contribute to directly and indirectly halting the loss of forests in Thailand through sustainable intensification, replantation as well as supporting the private sector (e.g. Olam, Urmatt) through blended financing as a solution towards sustainable, deforestation free, rice (commodity) production. However, this baseline is not yet confirmed as the actual issuance of the green bond is not certain and is considered an innovative mechanism which would need further feasibility design and analysis as well as negotiations with the Bank as well as financiers and corporate sustainable sourcing companies.

? Bank for Agriculture and Agricultural Cooperatives (BAAC). The objectives of this state Bank are to provide financial assistance to farmers, farmer associations and agricultural cooperatives which conduct agriculture and other agriculture-related business. Additionally, BAAC announced that it may be going green in Thailand as the Finance Minister approved plans by the state-run Bank for Agriculture and Agricultural Cooperatives (BAAC) to issue \$640 million in 'green bonds' to fund community projects that will protect forests and promote sustainable farming. BAAC was the first institution allowed to issue green bonds for environment development, in line with the bonds' international standard, as stated by the Minister of Finance Uttama Savanayana[3]<sup>3</sup> These bonds are checked and guaranteed by related organizations. The bonds will be sold to Thai financial institutions first, and they are expected to buy up the entire tranche. The BAAC will use the money raised to provide low-interest loans to rural small and medium-size enterprises or those involved in green businesses. The funds will also go to community enterprises, and farmers planning green projects. Increasingly, Thai farmers are growing more organic produce, and transitioning towards more sustainable and environmentally friendly farming methods. Financing through bonds is a tool to help community projects that promote that transition, and ones that do more to protect the country's forests. Agriculture, although it contributes a relatively small percentage to the gross domestic product, is vital to the Thai economy and Thai culture. It generates employment for over 40 percent of the population, supplies the country with a treasure trove of natural resources and raw materials for biotechnology and biosciences, and advances the nation's reputation because of the high quality of its commodities. Thailand is the only net food exporter in Asia and a key pillar in regional food security. The country ranks among world leaders in shipments of rice, sugar, cassava, seafood, and other agricultural goods[4]<sup>4</sup>.

? The International Rice Research Institute (IRRI) is the world's premier research organization dedicated to reducing poverty and hunger through rice science; improving the health and welfare of rice farmers and consumers; and protecting the rice-growing environment for future generations. More than half of the rice area in Asia is planted to IRRI-bred varieties or their progenies. The institute develops new and improved methods and technologies that enable farmers to manage their farms profitably and sustainably and recommends rice varieties and agricultural practices suitable to particular farm conditions as well as consumer preferences. IRRI assists national agricultural research and extension systems in formulating and implementing country rice sector strategies. Through the Sustainable Rice Platform (SRP), IRRI has been involved in the development and monitoring of SRP

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Performance Indicators designed to assess and track the sustainability of farm practices in any rice production system (including in Thailand). IRRI would support the project through research, capacity development and monitoring and evaluation especially of practices under the SRP Standard and their impacts using the Performance Indicators. IRRI is a co-financier of the GEF project with in-kind contribution of USD 3,000,000.

? Olam has begun to upscale tested solutions with targets to reach 35,000 farmers by 2023 to make a tangible impact on livelihoods. Olam's outgrowers' project in Ubon Ratchathani, has produced the world's first sustainable rice, fully verified by a third-party. Olam will be a key corporate partner to the ISRL project especially under Component 3, Upscaling of the adoption of the SRP Standard in rice. Olam will actively participate in the policy development activities under component 1 and will implement SRP training programs for upscaling SRP Standard and other value chain related activities such as participate in the development of market-based financial instruments and investments to scale up sustainable and deforestation free rice commodity value chains (Component 3). Olam is a co-financier with an estimated USD 13,600,000.

? SRP e.V. The Sustainable Rice Platform (SRP)<sup>[5]</sup> is a global multi-stakeholder alliance to promote resource efficiency and sustainability both on-farm and throughout rice value chains. The SRP was co-convened by UN Environment and IRRI in December 2011, and now includes over 100 institutional partners across the stakeholder spectrum. SRP is managed by a Secretariat based in Bangkok and operates through an independent not-for-profit legal entity (SRP e.V.) registered in Germany. The SRP Secretariat as a formal part of the SRP e.V., acts as a coordinating office to which capacity has been attached as part of the ISRL project for defined project roles and work packages, with the evolving SRP Thailand National Chapter towards country-level program implementation as well as SRP members along the value chain. SRP facilitates collaborative initiatives among the public and private sectors as well as civil society actors.

? Urmatt. The largest organic Jasmine rice producer in the world with partnerships with farmers in Northern Thailand including in Chiang Rai province. The company, through impact investments, supports organic rice production which also positively impacts the lives of smallholder farmers through price premiums for organically produced rice (without the use of chemicals).

? GIZ. The *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GmbH) in Thailand (GIZ Thailand) is well established as the head of the food and agriculture cluster for Southeast Asia. Its target crop is rice, which provides various opportunities for synergies among projects in efforts and resources. The Thai Rice NAMA is grounded in efforts to drive wide-scale adoption of the SRP Standard, and even provides ground-breaking work for upscaling its innovative revolving fund and MRV system implementation under the GEF 7 project. In addition, ISRL builds upon the BRIA II/MSVC project and its efforts to strengthen rice value chains to benefit rice smallholders. GIZ Thailand has established private sector relationships within the rice sector, upon which ISRL will continue to build and benefit from in implementing sustainable production practices and supporting farmer livelihoods. In addition to the GIZ, IUCN and TEEB have conducted projects in Thailand

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related to forest restoration, climate change adaptation, biodiversity, sustainable land use and ecosystem services. It also happens that the two IUCN projects have been implemented in Chiang Rai, and could provide valuable insights for project implementation in this province. The TEEB projects have also focused on ecosystem services within agricultural landscapes, which is highly relevant for the ISRL project. This prior work will be consulted and be beneficial to ISRL. The GIZ Thai Rice NAMA project aims to enable a shift towards low-emission rice production in Thailand through a combination of three core components namely: 1) enabling farmers to implement low-emission rice farming; 2) supporting entrepreneurs in providing mitigation services (land laser levelling, alternate wetting and drying, site-specific nutrient management & straw/stubble management) to farmers and 3) enhancing policy formulation and supporting measures promoting low-emission production at the national political level (co-financier of the project). The Rice NAMA would be the facilitating baseline project for the financing mechanisms of the ISRL project as well as other work taking place in Ubon Ratchathani (in ProDoc, Appendix 21, Financial mechanism).

### **National policies and regulatory framework regarding land tenure**

In Thailand, around 20 government agencies possessing mandates related to land management and spatial planning. Additionally, there are combined top-down and bottom-up approaches present, raising the problem of institutional fragmentation facilitated by the lack of coordination among agencies on different levels.

The overarching development strategy of Thailand is represented by the National Economic and Social Development Plan, which is further considered in the National Spatial Plan provided by Department of Town and Country Planning (DPT) within the Ministry of Interior (MoI). At the regional level, key zoning proposals concerning industrial and urban development, agriculture, environment and watershed protection are highlighted by the DPT. The provinces are required to develop their own spatial plans based on the guidance from the national and regional levels. This participatory process includes input from a broad range of stakeholders, often leading to overweighing of economic development activities over social or environmental considerations.

Another aspect leading to the neglect of biodiversity and environmental protection in land use planning is the lack of legal and administrative authority of the DPT to convince or force other agencies to follow suit. In some cases, Comprehensive Plans and Zoning Regulations provided by the DPT were disregarded in the land use plans and project implementation of other governmental agencies with different strategic priorities, eg. the Department of Rural Roads. Adding to these complications, there have been cases of interagency competition for budget in land management and land use planning.

The Ministry of Natural Resources and Environment (MoNRE) is responsible for the protection of natural resources and is one of the agencies involved in land use planning. It has established 16 Regional Environmental Offices (REOs) in four spatial administrative divisions based on Thailand's four hydrological regions reflecting the country's division on landscape level, with 24 large catchment basins that sustain various flora, fauna and ecosystem functions. In order to mainstream various environmental aspects like biodiversity conservation, watershed management, sustainable landscapes and land use planning, each REO brings together and coordinates important stakeholders, e.g. Royal Department of Forestry, and the Department of National Parks, Wildlife and Plant Conservation under the Five-Year Regional Environmental Management Plan of MoNRE.

The Master Plan for Integrated Biodiversity Management (2015-2021) is the principal biological diversity plan of Thailand, developed in compliance with Article 6 of the Convention on Biological Diversity, under which it states that each Contracting Party shall develop national strategies, plans or

programmes for the conservation and sustainable use of biological diversity. In line with the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, which were adopted by the Conference of the Parties to the Convention of Biological Diversity at its tenth meeting, the Master Plan for Integrated Biodiversity Management was formulated to address the underlying causes of biodiversity loss by aiming at conserving, restoring and protecting biodiversity and ecosystem services, as well as enhancing the benefits from them, along with raising public awareness and understanding of the roles and importance of biodiversity to human well-being, and collaborating with all relevant sectors in integrated management. The Plan emphasizes various measures such as raising awareness and knowledge on the importance of biodiversity among a broad range of stakeholders, promoting improved biodiversity management, restoration and protection of biodiversity at provincial, local and community levels, reduce threats to biodiversity and habitats and promote sustainable utilization of biodiversity .

The lack of knowledge about ecosystem services, natural capital and landscape approaches remains striking throughout all levels of spatial and land use planning in Thailand, and results in unsustainable management practices so far, especially in the context of agricultural practices and expansion. However, on provincial level, authorities have emphasized the integration of environmental protection and sustainable development to achieve sustainable development.

The 12th National Economic and Social Development Plan (NESDP 2017-2021) provides an overall strategic framework for promoting green growth including sustainable (rice) farming and increasing the country's forest area to 40% (55% by 2037) to maintain a balanced ecosystem and facilitate water management to alleviate water shortages, prevent and mitigate floods, and expand irrigation for crop lands. To address the environmental challenges and ensure food security and enhance farmers' livelihoods, the government is implementing the late King's Sufficiency Economy Philosophy (SEP) principles formulating policies on sustainable development (including agriculture, forest, and water management) overseen by the National Committee for Sustainable Development, the highest mechanism for addressing sustainable development policy in Thailand and chaired by the Prime Minister. The SEP promotes balanced development by embracing the following concepts: moderation, reasonableness, and resilience or risk management. The Philosophy provides the necessary basis for sustainable development, which focuses on developing quality human resources and nurturing the qualities of Thai society, enhancing chances for everyone to live happily and harmoniously, while the growth of the Thai economy increases continuously, appropriately, stably, fairly, inclusively, and friendly to the environment, while biodiversity, communities' ways of life, values, traditions, and cultures are preserved . SEP shares ultimate common principles and objectives with the SDGs, seeking to eradicate poverty and reduce inequality as a means to achieve sustainable development, and strike the right mindset towards the balance among three dimensions of sustainable development (environmental, economic and social).

The Ministry of Agriculture and Cooperatives (MoAC) is responsible for administering national agricultural policy, water resources, irrigation, promotion and development of farmers and cooperative systems. The Ministry consists of various units including the Rice Department, and supports efforts related to sustainable rice systems and practices. The Ministry oversees important policies and initiatives that enable and facilitate successful outcomes of integrated management of sustainable rice production landscapes. The Ministry has launched the "Mega Farm Program" which is the current extension policy/scheme of the ministry focused on an area-based approach with integrated support from (other) government agencies and the private sector to farmer groups. The general objective of this landscape-based multi-agency extension service is to enhance the resource mobilization program to improve the rice value chain through farmers group organizations. Under the Mega Farm scheme, a field manager or committee acts as the focal point for managing the farmers' organization activities along the rice value chain and encourages the members to work together as a group when managing their inputs, cultivation, quality assurance, and market linkages. The scheme contributes to reduced production costs, improved yields, enhanced bargaining power, increased competitive advantage, and enhanced farmer group capacity. An average Mega Rice Farm consists of 100-150 farmers with a planting area of around 480 ha. Some Mega Rice Farms emerged from combining several Community Rice Centers (CRCs) that were supported by the Rice Department. In each of them, committee

structures have been developed to manage cooperation and knowledge exchange among members. Currently, there are 8 Mega Farms and 177 CRCs in the Ubon Ratchathani Province and one Mega Farm and 36 CRCs in Chiang Rai Province.

The MoAC also implements the **New Theory Agriculture Policy** that enables synergies among multiple crops, fruit trees, livestock and aquaculture as a foundation for self-reliance and to improve the quality of life for farmers while protecting natural resources and the environment. The Policy for Diversification of Farmer Income & Reduction of Rice Farming in Dry Season promotes crop rotation and cultivation of other crops to reduce rice oversupply in the dry season. The policy has three main objectives: 1) substituting rice farming in dry season with other crops; 2) increasing the income from other crops; and 3) creating the opportunity for rice farmers to learn to cultivate rice alternatives promoting sustainable farming in the long run. Alternative crops such as maize, soybean, green bean, peanut, and vegetables require less water and a shorter growing period of <120 days. By solving the potential rice oversupply and introducing alternative crops to meet market demand, this policy helps reduce the risk of fluctuation in rice prices, recuperate soil, increase farmer income from other crops, and reduce pest outbreaks. The project will build on this key baseline initiative to scale up on-farm crop diversification in sub-optimal rice production systems, contributing also to enhanced farm productivity and farmer welfare in upland biodiversity and forest conservation hotspots through agriculture diversification.

Recognizing forest loss and degradation as major causes of flooding, the government approved the Master Plan on Water Resources Management (2018-2037). The Plan touches upon the improvement of water security in the farming sector with measures to improve the efficiency of the existing water supply system, flood management and prevention, water quality management, and water resource preservation including the mitigation of water pollution in watersheds as well as the prevention and mitigation of soil erosion in watershed areas covering about 72,000 ha. The master plan is an improvement from the Water Resource Management Strategy (2015-2026) and seeks to manage water resources throughout the whole system for the country's water security. Main objectives are that all villages will have clean water for consumption and production, flood damages will be reduced, water quality will be at acceptable standards, and water resource management will be sustainable, under the concepts of balanced development and the participation of all sectors. The Master Plan comprises 28 strategies and 54 work plans, in six major areas, involving the management of water for consumption, water security in the production sector, water management to tackle floods, water quality and water resource conservation, watershed rehabilitation and soil erosion prevention, and efficient management, such as law improvements and international cooperation. For example, the work plan for Restoration and Conservation of Forest and Ecosystem aims to restore watershed forest where water is retained and develop land use plans that fit with the local and socio-geographical conditions by restoring and conserving the degraded watershed areas, developing projects for soil and water conservation by promoting economic and community afforestation while rehabilitating mangrove forest, improving water and land usage, increasing storage capacity, and revising and drafting relevant laws. The Office of the National Water Resources, the Ministry of Interior, the Ministry of Agriculture and Cooperatives, and the Ministry of Natural Resources and Environment will serve as core agencies in mobilizing the implementation of the Master Plan on Water Resource Management.

The Royal Forest Department Strategy (2016-2021) focuses on promoting forest conservation, forest restoration, and stakeholder engagement with the main goal towards increasing forest areas from 33.6% to 40% of the total country area in the next 10 years. Additionally, the Royal Forest Department supports over 8,000 registered Community Forests to provide basic needs, generate income, and strengthen local capacities to manage natural resources. The government of Thailand, in an attempt to halt forest loss and degradation, already imposed a logging ban in natural forests in 1989 and introduced a master plan for reforestation. This plan aims to restore forest cover to 40% of the national territory within the next 40 years. This target will consist of protected forests (25%) for nature conservation, recreation and environmental protection, and economic forests (15%) for timber and non-timber production .



International Multilateral Environmental Agreements (MEA) to which Thailand is a party include: the Convention on Biological Diversity (CBD), Cartagena Protocol on Biosafety, International Plant Protection Convention (IPPC), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), New York Declaration of Forests & the Bonn Challenge, Association of Southeast Asian Nations (ASEAN) with the endorsement of ASEAN Guidelines on the Regulation, Use, and Trade of Biological Control Agents (also through its National Action Plan) & ASEAN Guidelines on Soil and Nutrient Management, the Mekong River Commission (ASEAN Agreement on Cooperation for Sustainable Development of the Mekong River Basin committing to improve utilization, conservation, and management of water resources), Vienna Convention and Montreal Protocol, United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, United Nations Framework to Combat Desertification, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Male' Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effect for South Asia, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Stockholm Convention on Persistent Organic Pollutants, The Climate and Clean Air Coalition (CCAC). Thailand is also a under the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

In view of ISRL's landscape approach, it is important to note that Thailand has recently (since 2019) started implementing a policy on National Land Allocation for Arable Land for the Underprivileged?. This policy was directed by the National Land Policy Committee (NLPC), chaired by the Prime Minister. The Office of Natural Resource and Environmental Policy and Planning (ONEP) serves as Secretary. The NCL is mandated to prepare policies and plans for the management of the country's lands and soils to be proposed for cabinet approval.

The framework for land allocation to communities comprises of four strategies:

- ? Strategy 1: Maintaining the natural balance, conservation, land use, and sustainable land resources
- ? Strategy 2: Use of land and soil resources for maximum benefit and fairness
- ? Strategy 3: Allocating land for the underprivileged people in a thorough and fair manner
- ? Strategy 4: Land and soil resource management

In the first phase of implementation, focus is on the third strategy, land allocation for the underprivileged people. Land under consideration for allocation to underprivileged or the poor can include already encroached areas inside National Forest Reserves, mangroves, areas under land reform, land for public use, land for living, land with self-built settlements and state property.

The Department of National Parks (DNP), under the National Park Management Plan, has mapped and zoned selected areas in conservation forests and within national park boundaries that were encroached upon and were allocated to underprivileged or poor farmers who have been living there before 30 June 1998. The farmers or poor residents, who do not legally own land in the target areas, have been allocated arable land, on which the state recognizes the right of the community to participate in land management, whereby the state remains the owner of the land. Conditions for use are imposed, monitored, and controlled by DNP.

With regard to ISRL project activities in areas that are bordering protected areas (e.g., Phujong Nayoi National Park in Ubon Ratchathani; Doi Luang National Park in Chiang Rai) and aim at protecting HCVF, those areas have been selected for intervention in consultation with the local authorities where land tenure issues have been clarified or settled. Therefore, the project will not involve in issues

regarding land tenure but support existing activities and plans that aim at protecting HCVF (e.g., SMART Patrol program), sustainable land use (e.g., agroforestry, crop diversification, soil preservation), and linking locals to alternative markets (e.g., national OTOP program).

### 3) The proposed alternative scenario:

The project, through a multi-focal area GEF grant of Biodiversity, Land Degradation, Climate Mitigation and FOLUR grant support, seeks to transform rice and agricultural production landscapes in Thailand by reconciling competing social, economic, and environmental interests. To achieve this, the project proposes an integrated and multi-disciplinary landscape management approach to create both inclusive, sustainable rice farming practices through policy, capacity building, and financing as well as sustainable land management (SLM) practices at landscape scale. Inter-ministerial land use planning at the national and local levels in the target provinces Chiang Rai and Ubon Ratchathani will precede the upscaling of adoption of SRP Standard practices by small-holder farmers, while maintaining, restoring and improving landscapes, ecosystems and biodiversity. Policymakers and land managers at national, provincial and local levels are targeted to enhance existing capacities and build on experience established by baseline investments and projects, as well as community-based organizations such as the Community Rice Centers. A fundamental element of the project strategy is to establish public-private-community collaborations and financing mechanisms (revolving fund, increased access to green loans and establishment of green bonds) for supporting transformational change from conventional to inclusive sustainable rice value chains. ISRL will facilitate the adoption of the SRP Standard and other eco-technologies (agro-forestry, multi-cropping, land restoration techniques, etc.) that will lead to improved ecosystems in the two selected landscapes. Adoption and scale up of the SRP Standard and marketing support will reduce use of chemical farm inputs, as well as need for destructive expansion, deforestation and encroachment. This will require a change in the business as usual approach (high input ? high output paradigm) by emphasizing the values and dependencies on natural resources for local economic development and ecosystems services, the need for natural resource management and protection, and enhanced spatial allocation for natural resource management. All stakeholders will benefit from training, awareness-raising and technical assistance to upscale sustainable rice practices and integrated landscape planning for reducing net GHG emissions while generating additional environmental and socio-economic benefits.

The **two provinces, Chiang Rai and Ubon Ratchathani**, are located in the North and Northeast of Thailand, respectively. They were selected among other potential locations (e.g. Kanchanaburi, Nan) considering the unique relationship between agricultural and forested land, notably major environmental degradation problems and potential for improvement. Furthermore, implementation of the SRP Standard has already started in Ubon Ratchathani through baseline projects (see above). The governmental Mega farm scheme is present in both provinces, important pre-conditions for facilitating upscaling of the SRP Standard in Thailand. Chiang Rai still harbors extensive biodiversity-rich forests that often constitute the watersheds that feed the rice growing valleys in this mountainous province. The **objective of the project** is ?to transform the Thai rice value chain for environmental sustainability by upscaling adoption of the SRP Standard through an integrated landscape management approach?. A landscape approach deals with large-scale processes in an integrated and multidisciplinary manner, combining natural resource management with environmental and livelihood considerations. The landscape approach also factors in human activities and their institutions, viewing them as an integral part of the system rather than as external agents. This approach recognizes that the root causes of problems may not be site-specific and that a development agenda requires multi-stakeholder interventions to negotiate and implement actions across landscapes.

The project also entails that two **landscape management plans** are developed and agreed within the target provinces. These plans will account for ongoing government projects at the local level and will integrate key guidelines of the Mega Farm Program and other key baseline programs such as the Flood

Retention Program, National Reforestation Action Plan (Forest Plantation Plan under the National Economic and Social Development Plan), HRDI projects for upland cropping and forest management (including Wawi Royal Project, Mae Salong Royal Project, Hai Kang Pla Royal Project), Policy for Diversification of Farmer Income & Reduction of Rice Farming in Dry Season, community forests, and CRCs. The project targets related to the implementation of the landscape management plans include changed practices on newly restored forest land of 20,000 ha, improved practices for biodiversity, carbon & water services on 25,000 ha, upland agroforestry/multi-cropping on 25,000 ha, and improved HCVF conservation on 20,000 ha, totaling 90,000 ha. Land management plans, concepts, and goals will be communicated to and discussed with various stakeholders at local level once these plans have been approved by the provincial sub-committees. In support of implementation, demonstration plots and investments will be set up addressing forest restoration, water management & biodiversity conservation close to rice landscapes or connected via major water tributaries (rivers, streams, canals etc.). This will also include analysis of potential conservation measures that will guide SLM efforts and strengthen habitat protection and connectivity.

Furthermore, the so-called "SMART Patrol" program of the Thai government will be supported for strengthening local forest stewardship and to address poaching, illegal logging and fires along forest borders, including protect protected areas. The ISRL project will support ongoing activities within the target areas as well as address biodiversity, carbon & water services in HCVFs with ongoing projects of the RFD, DNP & HRDI, and improved agricultural and upland rice production practices in non-protected areas together with the RD (Mega Farmer Project, New Theory Agriculture, Project, Rice Research & Development Project, etc.), CRCs and RID.

The main activities include:

- ? Introducing land management concepts, plans & targetes for landscapes, including watersheds adjacent to rice fields or feeding into irrigated rice schemes to implementing stakeholders, defining roles and responsibilities for the project.
- ? Supporting the existing "Learning Centres" with demonstration sites & training material for capacity development in HCVF restoration, protection, water management & biodiversity conservation in target landscapes bordering rice systems (e.g. U5, U9, U10, C10).
- ? Setting up training programs for target communities in CR & UB on land restoration/sustainable land use and management (in the management zones) including soil and nutrient management, crop selection and rotation, and market linkages (e.g. U5, U9, U10, C10).
- ? Assisting in the set-up of an M&E system in support of "SMART patrol" of high biodiversity hotspots (see Fig. 11 D and Fig. 12 C), including provision of wildlife monitoring cameras and GPS/GIS system in UB/CR (U16, C10) Provide expert support for man-assisted natural forest restoration, assess potential invasiveness of suggested species, and support nurseries (e.g. tree seedling stations) for non-invasive and /or native reforestation species, for improving biodiversity and landscape connectivity (focus HCVFs, connectivity and reforestation) (see U11, C11)

Through inter-institutional arrangements for a collaborative infrastructure, the Provincial Agricultural Committees of Ubol Ratchathani and Chiang Rai will direct and monitor the implementation of landscape management plans. The Provincial Office of Agricultural Extension (PoAE) together with DoAE, by mandates, will be the key actors for providing technical support on rice production and advising on communication and collaboration with Mega Farms. DNP and RFD will focus on sustainable diversification practices that help protect against further encroachment and deterioration of land and forest. HRDI will oversee upland cropping (e.g., fruit trees and vegetables) and management of forest buffer zones. The Provincial Committees will also develop and discuss incentive policies targeting farmers (e.g., premium price, GAP or SRP certification, private sector investment with support of BAAC's Green Loan Program etc.

In order to achieve the project objective based on a barrier analysis (see Section 2.3 of ProDoc) that identified the development challenges being addressed by the project, its root causes and the barriers that need to be overcome to systematically address various persistent environmental problems, the **project's intervention has been organized into four components**, each with one outcome, elaborating on the concept proposal presented at PIF stage. Please refer to the ProDoc-associated Appendix 4 (Results framework) for indicators and targets, Appendix 4a (GEF-7 core indicators), Appendix 5 (Workplan and timetable) and Appendix 6 (Key deliverables and benchmarks). Please note that the GEF budget/budget lines and co-financing figures relate to the UNEP-template of Appendix 1&2. The GEF and co-financing figures have been also calculated according to the GEF-template for Appendix 1&2.

**Component 1** (GEF: \$575,750; Co-Financing: \$5,200,000; Total: \$5,775,750) focuses on strengthening national policy and inter-ministerial collaboration to achieve landscape-level sustainable land management (SLM) through the development of targets for sustainable rice production systems at the landscape level. Shared interests among government agency mandates for sustainable management of water, forests, climate change mitigation and New Theory Farming will guide inter-ministerial efforts to achieve landscape-level SLM. In Thailand, there are over 40 departments distributed through various ministries, both at national and provincial level, which are responsible for land use planning, water management, biodiversity conservation, ecosystem management, sustainable agriculture and rice farming. Given this decentralized approach, effective coordination between ministries alongside their individual mandates is often challenging. The project seeks to further develop coordination between ministries and identify common policy interests for the integrated target-setting, management, budgeting and monitoring for sustainable rice landscapes, and will guide the national policy-making process to develop and agree on a national roadmap for integrated management of sustainable rice landscapes in the targeted landscapes in provinces Ubon Ratchathani and Chiang Rai, including analysis and valuation of ecosystem services related to rice systems to determine best policy options. The roadmap will facilitate a comprehensive strategic and integrated approach to sustainable landscape management and rice production, as well as long-term promotion and implementation of SLM beyond the project implementation period, with the guidance and input of technical working groups to be facilitated by the project. In addition, agreement is reached and applied on better alignment and financing of the Thai government programs for Mega Farms and Flood Retention Development together with government agencies and private sector actors for attaining SLM outcomes in rice landscapes. This process will require alignment of rice sector interests with protection of lowland and upland hydrological, carbon and biodiversity services to meet ongoing national policy objectives. Lastly, systems for reducing agrochemical pollution will be designed and introduced through public-private partnership on Extended Producer Responsibility (EPR) between the Thai government and private sector on reduced use and proper disposal of contaminated agro-chemical containers.

**Component 2** (GEF: \$1,377,581; Co-Financing: \$12,000,000; Total: \$13,377,581) addresses the development and implementation of landscape spatial management plans at provincial level which integrate sustainable agriculture with improved landscape conservation and restoration for key ecosystem services and biodiversity based on the national roadmap developed in Component 1. To

achieve this, the project will align with provincial technical working groups (ad-hoc basis, coordinated by the Governors) will be engaged to review existing landscape management plans in the target provinces, identify restoration opportunities, costs and financing opportunities ? specifically related to ongoing baseline programs such as the Mega Farm Scheme and assessing the best strategy in implementing SRP Standard in the context of landscape management. In addition, ongoing governmental activities for smart patrol of forests, prevention of encroachment, protection of biodiversity, carbon & water services as well as improved agricultural/rice production practices will be supported. Lastly, a gender-inclusive Agriculture Diversification and Development Program will be developed by the working groups and approved by provincial sub-committees to improve agriculture production and enhance the protection of upland forests and other habitats key for biodiversity and ecosystem services conservation and connectivity, including HCVF in Ubon Ratchathani and Chiang Rai. To do this, gender-sensitive studies will be conducted in each province on existing policies for crop diversification to identify gaps in local implementation and inform the design of these new programs as well as to develop a training manual for extension workers. Additionally, a study will be conducted on the market linkage opportunities of crop diversification and HCVF management in suboptimal rice farming communities ? suggested for coffee, fruit-crops, and agroforestry. The existing OTOP government program will be leveraged for synergies with established female occupation promotional groups in the target provinces to better market their products.

**Component 3** (GEF: \$ 1,823,313; Co-Financing: \$41,100,000; Total: \$42,923,313) will enable transformational change from conventional to sustainable rice farming by applying the National Policy as well as the Integrated Landscape Management planning process through demonstration, capacity building, and financing Good Agriculture Practices through the SRP Standard. The area under SRP Standard practices will be increased (by 90,000 ha) by introducing new technology and improved farming systems through capacity development, extension, gender-responsive farmer field school services, as well as provision of (financial) incentives. Crop diversification in sub-optimal rice farming systems will be enabled through provincial planning and support of ongoing governmental projects with a feasibility design and agreed investments on alternative production options and potential off-farm income for enhancing farmer livelihoods (ie: agro-tourism). To upscale sustainable rice production in the target provinces, three financial mechanisms will be established to incentivize service providers and farmers to implement laser-land leveling (LLL), sustainable soil and nutrient management (SSNM) and straw and stubble management (SSM) as components under the SRP Standard for sustainable rice production. These three financial mechanisms considered for the project include a revolving fund, BAAC's green loan program, as well as project sponsored feasibility design of Green Bonds (ProDoc Appendix 21). The revolving fund will provide pre-payments to service providers to provide services for farmers to implement the SRP Standard with an integrated landscape approach. The BAAC's established Green Loan program will cover any additional initial costs for service providers not covered by RF pre-payments (ie: tractors, equipment, etc.). A feasibility study on green bonds will be conducted to determine how to best develop this financing mechanism for sustainable rice production and landscape management. Toward project end, the economic and technical feasibility of the combined financial models with the SRP Standard integrated landscape approach will be proven and documented with highlighted success stories. Value chain actors will then promote these market-based solutions to other rice sector actors. All in all, the training on landscape preservation as well as SRP technologies to farmers and service providers funded by the GEF grant will be instrumental in building service providers interest in making investments as well as farmers desire for their services. Summed up, the GEF-funded costs (e.g. for project personnel, consultancies, studies, and logistic) related to training and linking farmers to markets amount to a total of about 880,000 USD.

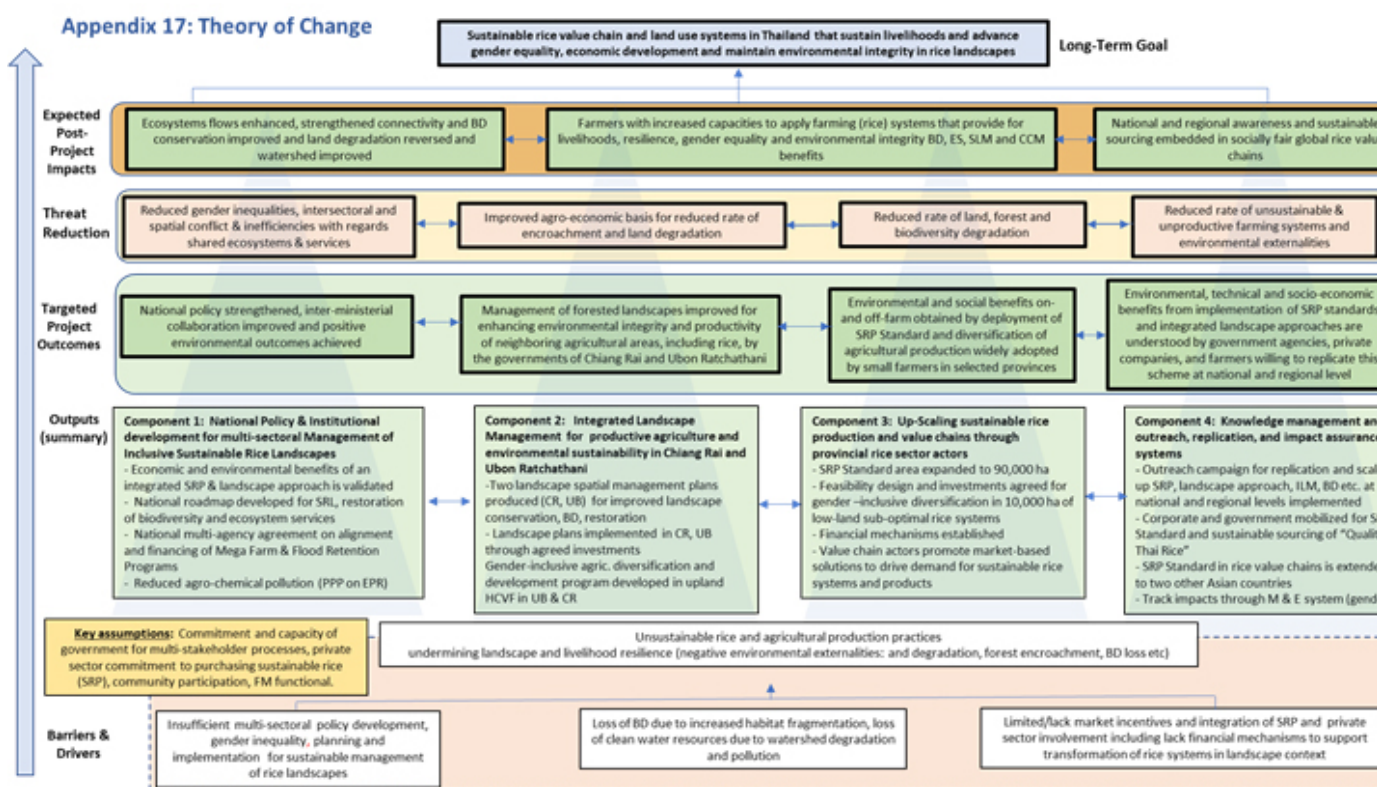
**Component 4** (GEF: \$1,349,248; Co-Financing: \$5,500,000; Total: \$6,849,248) steers knowledge management and outreach for national and regional replication of the adoption of the SRP Standard with an integrated landscape approach. A national outreach campaign will be developed and implemented to strengthen adoption of SRP Standard through national and regional partnerships, as well as governmental and farmer adoption of sustainable rice value chains with off-farm environmental protection, forest restoration and economic incentives for crop diversification and marketing. Through linkages with the global SRP partnership and the global FOLUR Platform, as well as partnerships with national and international supply chain actors with sharing of success stories from two companies,

corporate and government actors will be mobilized to adopt and replicate the SRP Standard complying with sustainable sourcing of 'Quality Thai Rice' under the New Theory Farming Policy. The concept of integrating SRP Standard implementation as part of a sustainable production landscapes approach, will be extended to two other Asia countries via SRP partnerships and South-South mechanisms. A gender sensitive M&E system will be developed and implemented during the project by use of 'standard' GEF project tracking tools (e.g. Results Framework (Appendix 4), Core Indicators ? Appendix 4a) as well as a custom-made M&E (including a proposed Sustainable Rice Landscapes Performance System, as well as tracking of gender mainstreaming and compliance). The M&E system will monitor impact and progress through the GEF Core indicators, FOLUR Global Platform indicators, Gender disaggregated indicators outlined in the Gender Mainstreaming Plan (Appendix 16), as well as custom-project indicators as listed in the results framework (Appendix 4).

A further aspect of the project that will constitute a major innovation at national and regional levels will be its **linkages to regional and global dynamics and opportunities**. For example, the active involvement of the Sustainable Rice Platform (i.e. the relevant Community of Practice) and its inclusion as a key partner in the Inclusive Sustainable Rice Landscapes project, will increase access by producers in the selected target landscapes to link into regional and global value chains, including 'green' value chains that reward environmental sustainability (Output 4.3 is dedicated to this task): inter-country collaboration (e.g. with China, Vietnam and Indonesia) will also allow countries to achieve a critical mass of influence on global and regional markets. Opportunities and mechanisms for constructive interactions between the Global Platform (GP) and the project 'docking' will be actively pursued to work effectively together on cross-country learning, supporting regional rice value chains and contribute to aggregating messages to global venues and players and other relevant audiences (see also budget item 3311). This 'docking' of the FOLUR child project (ISRL) with the Global Platform (reference: Program Document of the Global Knowledge to Action Platform) will occur on several levels: through the Program Management function and the annual work planning process of the Global Platform, through a dedicated liaison officer regularly engaging directly with the country project focal points, through annual and regional face-to-face meetings, and through sharing results and best practice generated by the M&E Process. Communication with the platform's Program Management will be mainly through the PMU Coordinator, the Thai Rice Department as well as UNEP Task Manager. The ISRL project will allocate staff time to enable regular communication and exchange with the platform liaison officer, participate in meetings, and align the relevant M&E functions with Global Platform requirements. Additionally, PMU staff, the Gender Coordinator, M&E staff, as well as key focal points with the project partners agencies especially Thai Rice Department will participate on training exchanges, webinars and other KM functions offered through the Platform[1]. At national level, the project will lead engagement with male and female producers, corporate sector, and local finance institutions (e.g. BAAC) to complement outreach and engagement at regional and global scale. The project will also collaborate with GP opportunities for engagement with national or multinational companies (e.g. Olam) and participate in relevant national or regional roundtables and other relevant multi-stakeholder platforms, roundtables etc. at country level. As elaborated under component 1, the project will identify and promote opportunities for policy reform in support of the transformation of the Thai rice value chain as well as enhanced multi-agency cooperation and public and private sector engagement in transformative processes. Additionally, as elaborated under component 3 the project will contribute ideas for innovation fund topics (e.g. green Bonds). Finally, the project will participate in periodic needs assessment surveys and FOLUR IP Annual Meetings to guide knowledge and outreach product development and contribute to the identification of opportunities for communications support on gender and private sector engagement based on local and national context.

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[1] A note of caution needs to be made that the Thailand FOLUR project, relative to the other country projects under the FOLUR portfolio, has one of the lowest GEF grants available, and this will of course restrict opportunity of engagement if to be funded fully through the project GEF grant.



The **Theory of Change** (figure above) illustrates how the ISRL project will catalyze sustainable transformation of the rice value chain. In the present situation, there are many negative environmental externalities arising from unsustainable rice and agriculture production practices. This is due to lacking inter-ministerial coordination in land use planning and sustainable land management, as well as lacking market incentives for farmers to engage in sustainable rather than conventional rice production. In the proposed alternative scenario, component 1 will focus on policy & institutional development, component 2 on integrated landscape management, component 3 scale up of the SRP Standard, and component 4 on outreach and knowledge sharing for sustainable rice production with an integrated landscape approach. With these key focal areas as project components, it is intended that national policies and interdepartmental collaboration will be strengthened, while this is paralleled by improvements in the management of forests, land and water resources, as well as reduced on- and off-farm environmental impacts from rice production, and lastly improved recognition and replication of the SRP Standard with an integrated landscape approach. These outcomes are expected to lead to the intended impacts, which include long-term establishment of incentive mechanisms and an enabling policy environment for inclusive sustainable rice landscapes, enhanced ecosystem services, increased area of SRP Standard rice, as well as national and regional awareness of sustainable sourcing to be embedded in global rice value chains. The ultimate goal is to interlink sustainable rice value chains with land use systems in Thailand that can sustain livelihoods, improve economic development while maintaining environmental integrity of these landscapes.

#### 4. Alignment with Focal Area or FOLUR Impact program strategies

GEF support is requested through the FOLUR IP program with which the project objective and outcomes are closely aligned. The project will directly and indirectly address the promotion of sustainable food systems in Thailand by reducing negative externalities and enhancing the rice value

chain. Through its activities in the area of crop diversification and promoting off-farm employment, reducing encroachment in forest lands (cassava, rubber, longan, sugarcane, maize), the project will contribute to supporting and promoting deforestation free value chains. Through the interventions under component 2, the project intends to directly address the FOLUR landscapes restoration and land-use objective as well as that of promoting ecosystems services and biodiversity protection. For IP FOLUR, the project will remove deforestation from the agricultural supply chains and will expand restoration of degraded lands through supporting disadvantaged farmers improving the agro-forestry system productivity and crop diversification.

Program BD 1-1 is concerned with mainstreaming biodiversity across sectors as well as landscapes. The proposed project will address the process of embedding biodiversity considerations into policies, strategies and practices of key public and private actors that impact or rely on biodiversity, so that it is conserved and sustainably used to secure the ecological integrity and sustainability of landscapes. The project intends to support activities such as the development of policy frameworks (Comp 1), introducing and upscaling adoption of the SRP Standard and sustainable landscape and forest management for stable ecosystem services (Comp 2 and 3). Further, under components 1 and 2 the proposed project aims to support the development of policies for ecological integrity and landscape management and contributes to developing national sector policies and plans as well as increase budgets directed towards supporting biodiversity at the landscape level.

For Program CCM 2-6 (demonstrate mitigation with systemic impacts IP FOLUR) the proposed project is concerned with the reduction of emissions through the application of AWD in lowland irrigated rice systems, SFM sequestration and reducing forest degradation.

For program LD-1-1 (mainstream/improve agro-ecosystems services to sustain food production) the project is concerned with improving soils health and reduced erosion and water pollution for example through supporting farmers to use less chemical and support sustainable rice farming. The project also intends to develop public private partnerships that contribute to reducing the use of agro-chemicals in Thailand. Under Component 2, the proposed project aims to restore forest and reduce forest degradation and improve ecosystems services to sustain food production in the targeted landscapes. The proposed project intends to support climate-smart agriculture activities such as multi-cropping, crop diversification and agro-forestry and improve ecosystem resilience through innovative SLM approaches, such as enhancing the resilience of agricultural land management systems to drought and/or flood, the diversification of crops and the adoption of innovative financial and market instruments to implement SLM practices that reduce GHG emissions and increase sequestration of carbon on smallholder farms. Finally the project will be scaling-up Sustainable Land Management through the Landscape Approach through the improvement of policies, practices, and incentives for improving production landscapes with environmental benefits, and the application of innovative tools and practices for natural resource management at scale (e.g.: innovations for improving soil health, water resource management, and vegetation cover in production landscapes systems).

## 5. Incremental Reasoning

The GEF/ISRL project will add incremental benefits to the existing baseline scenario and ongoing baseline projects by implementing multiple activities targeting the barriers described above (Appendix 3, Incremental cost analysis). In particular, the proposed project's activities will focus on addressing the barriers that hampers the transformation to sustainable rice production landscapes, based on interventions related to forest protection and restoration, land use planning, and financing for development including ecosystems services at a landscape level as well as SRP on-farm and off-farm. The approach of the proposed project is to build on existing (mainly government) baseline investments through participatory processes and institutional strengthening. In particular, the existing capacity in the selected landscapes (local government agencies, CRCs) will provide a baseline foundation for community-driven selection and implementation of activities. Ongoing initiatives (BRIA, HRDI etc.)



with a focus on upscaling adoption of the SRP Standard in the context of a landscape approach, forest restoration and land use planning, will provide a foundation for promotion of improved approaches and technologies for sustainable rice systems including e.g. Laser Land Leveling (LLL), Stubble Management etc.

The GEF/ISRL project will integrate the landscape approach and build upon (and align to) activities of ongoing baseline projects that relate to e.g. value chain development for quality and sustainably produced rice, management of forests, crop diversification, and biodiversity and other ecosystems work (watershed functions to sustain a.o rice production) through cooperation with community-based structures such as the Mega Farms, Community Rice Centers, Women Groups, community forest management/governance structure, Cooperatives etc. GEF incremental support toward the integration of the landscape approach / SRP Standard/sustainable farming into the ongoing activities of these baseline projects will focus on: i) upscaling adoption of the SRP Standard in Ubon Ratchathani and introducing the Standard in Chiang Rai ii) improved management and restoration of forests and rice landscapes ? especially with regards its ecological interconnectivity such as through water services, iii) developing financial mechanisms (Appendix 21, Financial mechanism) to support eco-systems (e.g. green bond issuance that focuses around securing the ecosystems that supply water to the Sirindhorn Dam in Ubon (notably water from the Phu Chong No Yoi National Park and surrounding forests) with the added aims of preserving biodiversity and enhancing livelihoods of rice farmers in the areas surrounding the dam.

Part of the green bond would be used to capitalize a revolving fund focused on financing services to upgrade rice farmers to adopt best practices (e.g. laser land levelling, soil nutrition management, straw & stubble management, etc). Advocated under the SRP Standard. Other uses of the green bond funds might include reforestation and forest stewardship employment to transform the role of poor rice farmers or forest encroachers towards e.g. profitable fruit producers or forest guards.

These activities will be supported with multiple capacity building and training activities at national, provincial and community level. Furthermore, the project will contribute to informing the policy making processes and knowledge management domains by undertaking and disseminating applied-research with a view to ?making nature?s values visible? through valuation and analysis towards various scenario and development options for these landscapes and the rice sector. This will be undertaken by an institution specialized in resource economics and valuation (yet to be selected) and being part of the Economics of Ecosystems and Biodiversity (TEEB) global initiative that aims to mainstream the values of biodiversity and ecosystem services into decision-making at all levels. It aims to achieve this goal by following a structured approach to valuation that helps decision-makers recognize the wide range of benefits provided by ecosystems and biodiversity, demonstrate their values in economic terms and, where appropriate, capture those values in decision-making of assessing, monitoring and evaluation of on the approaches and technologies demonstrated by the project. Knowledge products generated by the project, including research as well as training tools and policy briefs, will be hosted on a publicly accessible online platform.

## **6. Global Environmental Benefits**

The GEF alternative scenario will improve on the baseline by specifically enabling integration between the agriculture, forestry, land planning, and conservation sectors thereby building practice and replication for sustainable rice as well as market expansion for other sustainably produced crops. Building on SRP?s demonstrated success as a farm-level framework for sustainable best practice, GEF funding together with co-financing (ProDoc Appendix 12, co-financing letters) ? including significant investment funds ? will be used to focus greater attention on sustainable farming approaches combined with forest landscape management as a means to sustain agriculture production landscapes while significantly reducing externalities and improving the conservation and landscape integrity for GEB such as conservation of key biodiversity including wildlife , reduced pollution from agro-chemicals,

reduced emissions, and increased carbon sequestration as well as reduced land degradation. See ProDoc Appendix 4a for details on the targeted GEF Core Indicators. More specifically, the project is expected to generate the following types of GEB, based on the baseline analysis and proposed scope of project intervention:

? (LD/FOLUR) Area of land restored (ha) consists of 20,000 ha reforested land and 10,000 ha under crop diversification.

? (LD/FOLUR) Area of landscapes under improved practices for biodiversity, carbon and water services 25,000 ha, agroforest and multiple crops in uplands 25,000 ha, improved conservation in HCVF 20,000 ha, and sustainable SRP rice adoption 90,000 ha and diversified cropping in sub-optimal rice systems 10,000 ha. Here, improved conservation of HCVF relates to forest loss avoided as the know baseline trend in forest loss. Although the project is not working directly inside the conservation areas, interventions in the buffer zones and other surrounding areas with high biodiversity value, aim at halting forest loss within protected forests. For instance, based on the average yearly loss of forest cover in Thailand of approximately 0.22% - between 1973 and 2009 (see section ?key barriers?), this figure could serve as baseline against which the success of conservation efforts of the project will be assessed.

? (FOLUR) Maintaining and promoting the agro-ecological functioning of rice production systems, through the application of the SRP Standard that includes integrated pest management practices as an alternative to the intensive use of agrochemical inputs.

? (FOLUR) Reduced risks on human health and the environment through sound management of chemicals and waste of global concern especially by reducing pesticide contamination in rice farming systems through promoting the SRP Standard which includes measures such as integrated pest management that involve the recovery of natural interactions among biological components of the farming system (100 metric tons toxic chemicals reduced). Consequently, aquatic flora & fauna species conservation increases through reduced chemical inputs in rice production systems and reduced soil erosion in upland watersheds.

? (CCM/FOLUR) Reduced GHG emissions from AWD (a specific water management practice) implementation for lower impact on global climate (reduction of methane emissions). Reductions in the intensity of rice production, and modification of crop and water management practices in rice fields will lower methane emissions associated with flooded rice paddies. The promotion of agroforestry in farming systems will increase carbon stocks due to increases in the biomass of woody perennials.

? Carbon sequestration (CCM/FOLUR/LD) from improved forest management and restoration of degraded landscapes (916,149 tCO<sub>2</sub>e by end of Year 5; 5,496,894 tCO<sub>2</sub>e by end of year 20).

? (BD) Conservation and sustainable use of biodiversity services in productive landscapes (rice systems) and improved provision and restoration of agro-ecosystem and forest ecosystem goods and services will result in increased tree cover with canopy for bird species in upland forests as well as reduced soil and hillside erosion during the rainy season in upland landscapes with forest restoration and increased tree cover

- ? (BD) Reduced forest encroachment/deforestation/habitat loss through support of smart patrol around forest borders and protected areas, and adherence to provincial landscape plans (results in reduction in forest loss and forest degradation) and less forest fires (carbon emissions/habitat loss) by strengthening local forest patrol teams
- ? (BD) Enhanced habitat connectivity for species migration and population growth through implementation of provincial landscape management plans with support for biodiversity
- ? (BD) Prevention of poaching, hunting of endangered species and illegal logging through increased forest patrol
- ? (BD) Bee and pollinator presence increased through diversification of agricultural ecosystems with diversified food sources for insect species
- ? Improved soil quality and microbial activity with intercropping and cultivation of nitrogen-fixing crops
- ? Contribute to the FOLUR Impact Program to increase the global reach and impact of interventions by scaling up and out, and by mainstreaming results into improved policies and practices that become new business norms for transforming food systems, land use, and restoration.

## **7. Innovation, sustainability and scale up**

Innovation and financial sustainability of the project is ensured through the design of the three proposed financial mechanisms and its leveraging of existing fund structures and government programs to enable continuation past project funding. The revolving fund structure is already established and managed by the BAAC for the Thai Rice NAMA project with the farmers as investors and shareholders for long-term interest in its financial growth. The second structure leveraged by the project includes the BAAC's longstanding green loan program with reduced interest rates for service providers to invest in new equipment for providing ISRL services for farmers. The third structure focuses on establishment of a green bond model for development and implementation where farmers are monetarily rewarded for their implementation of the SRP Standard. The collective project financial mechanism is designed for long-term implementation past the project funding period as it builds on existing and ongoing structures. Furthermore, the green bond structure is foreseen to last 10 years or longer, as these funds are slowly paid back overtime following farmer's successful standard implementation to produce high-value, marketable rice and rice products.

The integrated, multi-sectoral, and multi-level approach towards the management of rice production landscapes applied throughout the project in Thailand will provide a model that can be replicated at national level (in other provinces), regionally, as already included by design in component 4, as well as at globally to ensure impactful outcomes and additional global environmental benefits. The establishment of investment pilot landscapes in Ubon Ratchathani and Chiang Rai will create model examples of the integrated landscape approach for rice production systems. The two case provinces are intended to contrast with each other given differences in land use planning, landscape and ecosystem structures, as well as differing rice production levels. The differences between these cases strengthen later replication processes to other Thai provinces by providing diverse implementation examples. In addition, the national Roadmap for integrated landscape management developed during project implementation is intended to provide an overarching enabling framework for applying the integrated landscape approach with sustainable rice farming to further Thai provinces post project

implementation. Knowledge sharing activities conducted toward the end of the project will include activities targeted at national governmental actors and the private sector to demonstrate replication opportunities, feasibility and long-term benefits of project replication through national structures and the global rice market.

Variations from PIF/Child document are summarized in Table 1 below:

Table 1. variations from the pif/child document

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Project Objectives</b>	Transforming Thai rice sector and value chain for environmental sustainability by upscaling Good Agriculture Practices through SRP Standard in an integrated landscape management context	To transform the Thai rice value chain for environmental sustainability by upscaling the Sustainable Rice Platform (SRP) Standard through an Integrated Landscape Management Approach	Changed transforming into ?to transform? and removed the word Sector, as in the context of the project this is perceived similar to Value Chain.
<b>Component 1</b>	National Policy and Institutional Development for integrated multi-sectoral management of inclusive sustainable rice landscapes	National Policy and Institutional Development for Integrated Multi-Sectoral Management of Inclusive Sustainable Rice Landscapes	none
<b>Component 2</b>	Integrated Landscape Management for productive agriculture and environmental sustainability in Chiang Rai and Ubon Ratchathani provinces	Integrated Landscape Management for productive agriculture and environmental sustainability in Chiang Rai and Ubon Ratchathani provinces	none
<b>Component 3</b>	Upscaling of sustainable rice production and value chains through model provincial rice sector investments	Upscaling sustainable rice production and value chains through provincial rice sector investments	Removed the words ?of and model?

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Component 4</b>	Knowledge management and outreach for national and regional replication and impact assurance systems	Knowledge management and outreach for national and regional replication and impact monitoring systems	Slight rewording to capture both the SRP assurance as well as the off-farm landscape impact performance monitoring systems to be developed by the project
<b>Project Outcome</b>			
<b>Outcome 1</b>	Strengthened national policy, inter-departmental collaboration, and environmental outcomes ? led by the Ministry of Agriculture, for sustainable rice landscapes ? under the framework of New Theory Farming Policy	National policy strengthened, inter-ministerial collaboration improved, and environmental outcomes achieved under the framework of New Theory Farming Policy	amended wording and removed MoAC for ownership reasons by e.g. MonRE (multi-stakeholder)
<b>Outcome 2</b>	Enhanced management of forest, land and water, for maintaining environmental integrity and production in agriculture landscapes ? specifically rice	Management of forested landscapes improved for enhancing environmental integrity and productivity of neighboring agricultural areas, including rice, by the governments of Chiang Rai and Ubon Ratchathani	Wording improved according to GEFSEC review request
<b>Outcome 3</b>	Reduced on- and off-farm environmental impacts through adoption and scaling up of sustainable rice practices (through the SRP standard and value chains)	Environmental and social benefits on- and off-farm obtained by deployment of SRP Standard and diversification of agricultural production widely adopted by small farmers in selected provinces	Wording. Removed text in brackets as perceived unclear by stakeholders.

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Outcome 4</b>	Improved recognition, adoption, and replication of SRP Standard, integrated landscape management, and land-use planning	Environmental, technical and socio-economic benefits from implementation of SRP standards and integrated landscape approaches are understood by government agencies, private companies, and farmers willing to replicate this scheme at national and regional level	none
<b>Project Outputs</b>			
<b>Output 1.1</b>	The economic case is produced and disseminated with relevant national and provincial government agencies to scale-up use of the SRP Standard for improved mainstreaming and spatial allocation of biodiversity and ecosystem services & values in land-use plans for the integrated management of rice production landscapes	The positive economic and environmental benefits of an integrated SRP and landscape approach have been demonstrated to and are acknowledged by national governmental agencies	Re-phrased according to GEFSEC review request
<b>Output 1.2</b>	Restoration Roadmap produced and agreed nationally, confirming targets, partnership, (impact-) financing, and methodology to enable restoration of vital ecosystem services including by biodiversity, for multi-functional rice production landscapes in Chiang Rai and Ubon Ratchathani provinces	A national roadmap is developed and agreed for integrated target setting, investments, management, and monitoring for sustainable rice landscapes as well as to enable restoration of biodiversity and ecosystem services at provincial level in Chiang Rai and Ubon Ratchathani	Wording/reformulated and simplified for clarity for improved understanding by Thai stakeholders, allowing buy-in: It remains consistent with the intended impacts of the project.

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Output 1.3</b>	National multi-agency agreement reached and applied on better alignment and financing of the Mega Farm and Flood Retention Development Programs with the interests of the rice sector as well as the protection of lowland and upland hydrological and forest BD services.	National multi-agency agreement reached and applied on better alignment of the Mega Farm and Flood Retention Development Programs for meeting the interests of both the rice sector with the financing and protection of lowland and upland hydrological and forest BD services	Wording/editing for better understanding of Thai counterparts. It remains consistent with the intended impact of the project.
<b>Output 1.4</b>	Public-Private-Partnership agreement reached and adopted for reducing agro-chemical pollution, including EPR regulation to include a disposal & reward program for collection/recycling of discarded plastic agrochemical containers	Reduced agro-chemical pollution through regulatory approaches and collaboration with the private sector (PPP) on Extended Producer Responsibility (e.g. proper disposal of contaminated containers).	Wording/editing for better understanding by Thai counterparts. It remains consistent with the intended impact of the project.
<b>Output 2.1</b>	Landscape spatial plans produced, and management agreed with provincial stakeholders, that integrates sustainable rice production and crop diversification, with reducing impacts to and restoration of ecosystem services and biodiversity - e.g. in HCVF (using FAO Land Resources Planning Toolbox, ROAM analysis)	Two spatial landscape management plans produced and agreed at provincial level that integrate sustainable agriculture with improved landscape conservation and restoration of ecosystem services and biodiversity	Removed reference to ROAM and FAO Land Resources Planning Toolbox to avoid exclusion of other potential useful tools. Reference to specific rice and diversification removed.



Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Output 2.2</b>	Landscape restoration and management plans implemented through agreed investments with Ministry of Agriculture and Cooperatives, Royal Forest Department and Provincial governments, to reduce impacts to and restore HCVF including for water supply to downstream rice production - integrated with Mega Farm schemes in at least two provinces	Government partners (MoAC, RFD, provincial administrations of UR&CR) implement landscape management plans through investments that reduce negative environmental impacts and restore ecosystem/water services of HCVF for agricultural areas such as Mega Farms.	Amended wording, no significant change in meaning.
<b>Output 2.3</b>	Gender-inclusive Agriculture diversification and development program designed and agreed (including coffee, fruit- crops, agroforestry) for enhanced farm productivity and farmer welfare in upland HCVF	Gender-inclusive agriculture diversification program designed and agreed (including coffee, fruit-crops, agroforestry) in upland HCVF in UB & CR	Removed the word ?development? to avoid that the project would need to consider investing in rural development infrastructure such as electrification, rural roads, storage facilities, etc.

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Output 3.1</b>	Sustainable rice production practices adopted and upscaled by lead government agencies and farmers (through capacity, extension and farmer school services including on alternate wetting and drying cultivation, phasing out straw burning, and reduced use of agro-chemicals) ? based on the SRP Standard and validated by impact indicators	The area under Sustainable Rice Platform (SRP) Standard practices is expanded through capacity building, extension and farmer field schools servicing 45,000 farmers	Rephrased and simplified according to GEFSEC review request
<b>Output 3.2</b>	Feasibility design and investments agreed with Thai Rice Department and local government agencies for crop-diversification program in sub-optimal rice production systems (e.g. intercropping, crop rotation, aquaculture, agro-forestry, etc.)	Feasibility design and investments agreed for diversification of agricultural production in sub-optimal rice systems	Removed Thai RD as more stakeholders involved i.e. (MOAC). Removed examples

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Output 3.3</b>	In three incremental phases (highlighted Project Overview and Approach, Section D) new impact finance generated to scale up sustainable rice value chains through farmer-buyer-consumer linkages (Book & Claim trading platform, PPP for credit access and de-risking [Agri-3 Fund], and government adoption and rollout of project's financial mechanism approach for farmers to adopt sustainable rice & diversification).	Financial instruments and investments mobilized and agreed with private sector, government partners and rice producers for scaling up sustainable rice value chains and landscapes (Revolving Fund, BAAC Green Loan Program, Green Bonds)	Text strengthened and shortened. Removed emphasis on Agri-3 and replaced with three BAAC financing mechanisms.
<b>Output 3.4</b>	Economic and technical feasibility proven and demonstration of new technology/incentive mechanisms for farmers adopting SRP Standard-based sustainable rice practices in an integrated landscape management approach	The economic and technical feasibility of new technologies and incentive mechanisms for linking the SRP Standard with an integrated landscape management approach is proven	Rewording. Focus on technology and other incentives with both environmental and financial benefits Rewording (yet not concerning direct financial mechanisms of 3.3)

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Output 3.5</b>	Value chain actors (including government, corporate, and financial sectors) promote market-based solutions ? through project facilitation that drives demand for sustainable rice systems and products	Value chain actors promote market-based solutions that drive demand for sustainable rice systems and products.	Wording/editing for better understanding of Thai counterparts. It remains consistent with the intended impact of the project.
<b>Output 4.1</b>	Development and roll-out of national outreach campaign by National Thai SRP Chapter to strengthen national and farmers? adoption of sustainable rice value chains, integrated landscape management and improved spatial planning for multiple services	A national outreach campaign implemented to strengthen governmental and farmer adoption of sustainable rice value chains and integrated landscape management for multiple services	Rephrased/shortened reference to National Thai SRP Chapter removed as not yet a legal entity/and needing further development
<b>Output 4.2</b>	Corporate and government mobilized for adopting and replicating SRP Standard-compliant Good Agriculture Practices and sustainable sourcing of ?Quality Thai Rice? under the New Theory Farming Policy	Corporate and government mobilized for adopting and replicating SRP Standard-compliant Good Agriculture Practices and sustainable sourcing of ?Quality Thai Rice? under the New Theory Farming Policy.	none

Summary of changes	PIF	ProDoc (new text)	Rationale
<b>Project Objectives and Components</b>			
<b>Output 4.3</b>	Two additional Asian countries adopt best practice on sustainable rice value chains and integrated landscape management through regional promotion and partnership under the SRP partnership (SRP secretariat/e.V.) and South-South mechanisms.	Concept of integrating SRP Standard integrated into sustainable rice value chains is extended to two other Asian countries (under the SRP partnership and South ? South mechanisms).	Slightly adapted to avoid that the project is perceived to be responsible for the fact that 2 other Asian countries need to adopt best practices as Thai government PPG members mentioned that this is politically beyond the influence of the project. The word ?extended? is acceptable because this does not entail any form of responsibility by the Thai to have other Asian nations to adopt best practices.
<b>Output 4.4</b>	A gender sensitive M&E system operational to track project progress & performance; and level of adoption of SRP/integrated landscape management approaches (including online platform)	A gender sensitive M&E system is implemented to track project performance and the level of adoption of SRP/Integrated Landscape Management approach	Semantics.

**Please note:** All targets remain the same except for GHG emissions (now extrapolated from 5 to 20 years) and the number of beneficiaries increased from 22,500 to 45,000.

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[1] Sustainable Rice Platform: <http://www.sustainablerice.org/About-Us/>

[2] the TEEB Agrifood Evaluation Framework was developed by over a hundred academics in many disciplines - in collaboration with UNEP - for agri-food assessment ? it is a toolkit for valuation, and helps identify what to value and why, focusing on four types of capital ? produced, natural, human and social).

[3] Royal Thai Embassy, Washington D.C. State Agro-bank to issue first green bonds, available at, <https://thaiembdc.org/2020/02/24/state-agro-bank-to-issue-first-green-bonds/>

[4] Royal Thai Embassy, Washington D.C. *State Agro-bank to issue first green bonds*. Available at <https://thaiembdc.org/2020/02/24/state-agro-bank-to-issue-first-green-bonds/>. Accessed on 28. February 2020

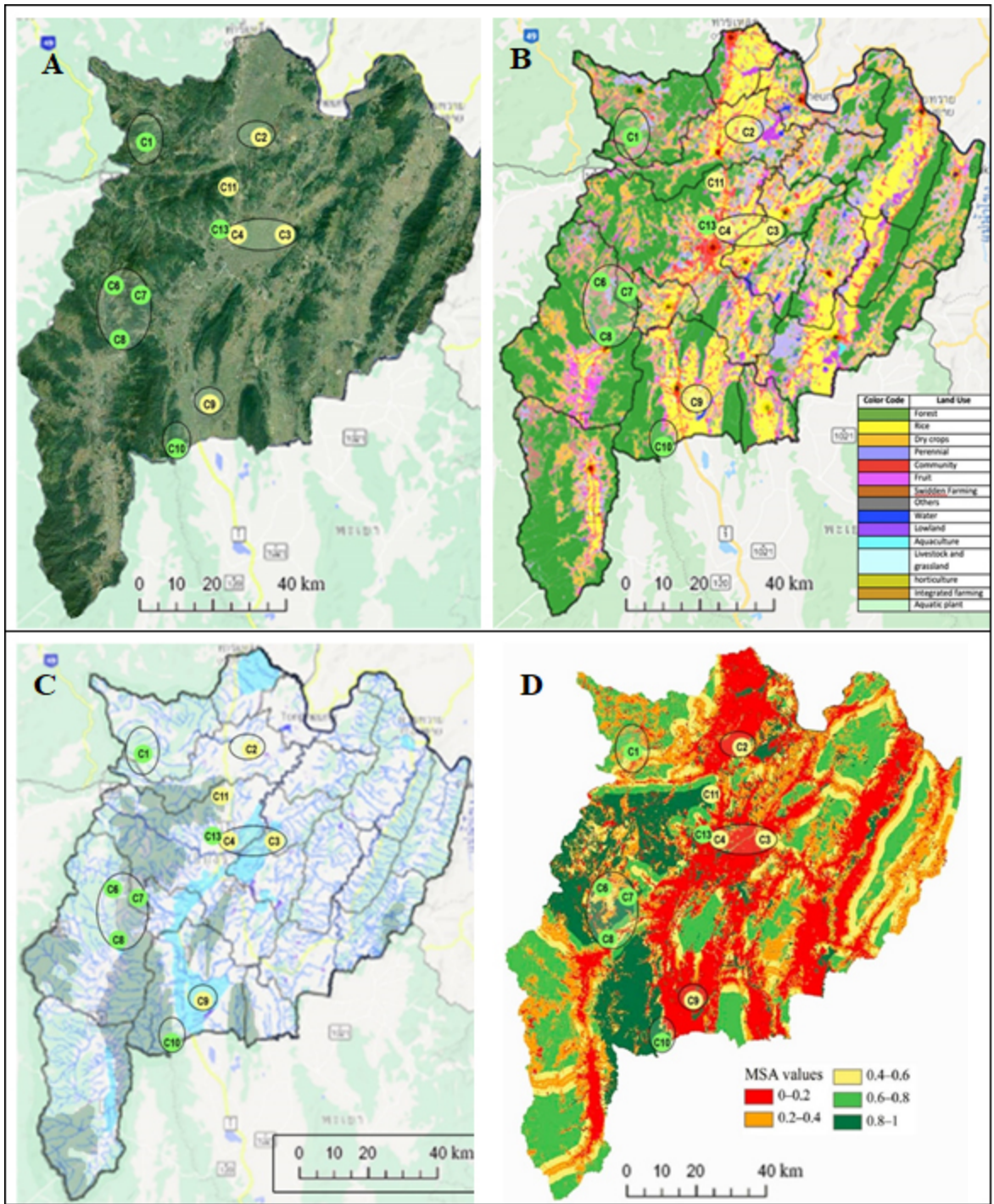
[5] Sustainable Rice Platform: <http://www.sustainablerice.org/About-Us/>

#### **1b. Project Map and Coordinates**

**Please provide geo-referenced information and map where the project interventions will take place.**

Please provide geo-referenced information and map where the project interventions will take place.  
See Annex E

**Chiang Rai:      Latitude: 19° 54' 30.89" N Longitude: 99° 49' 57.00" E**



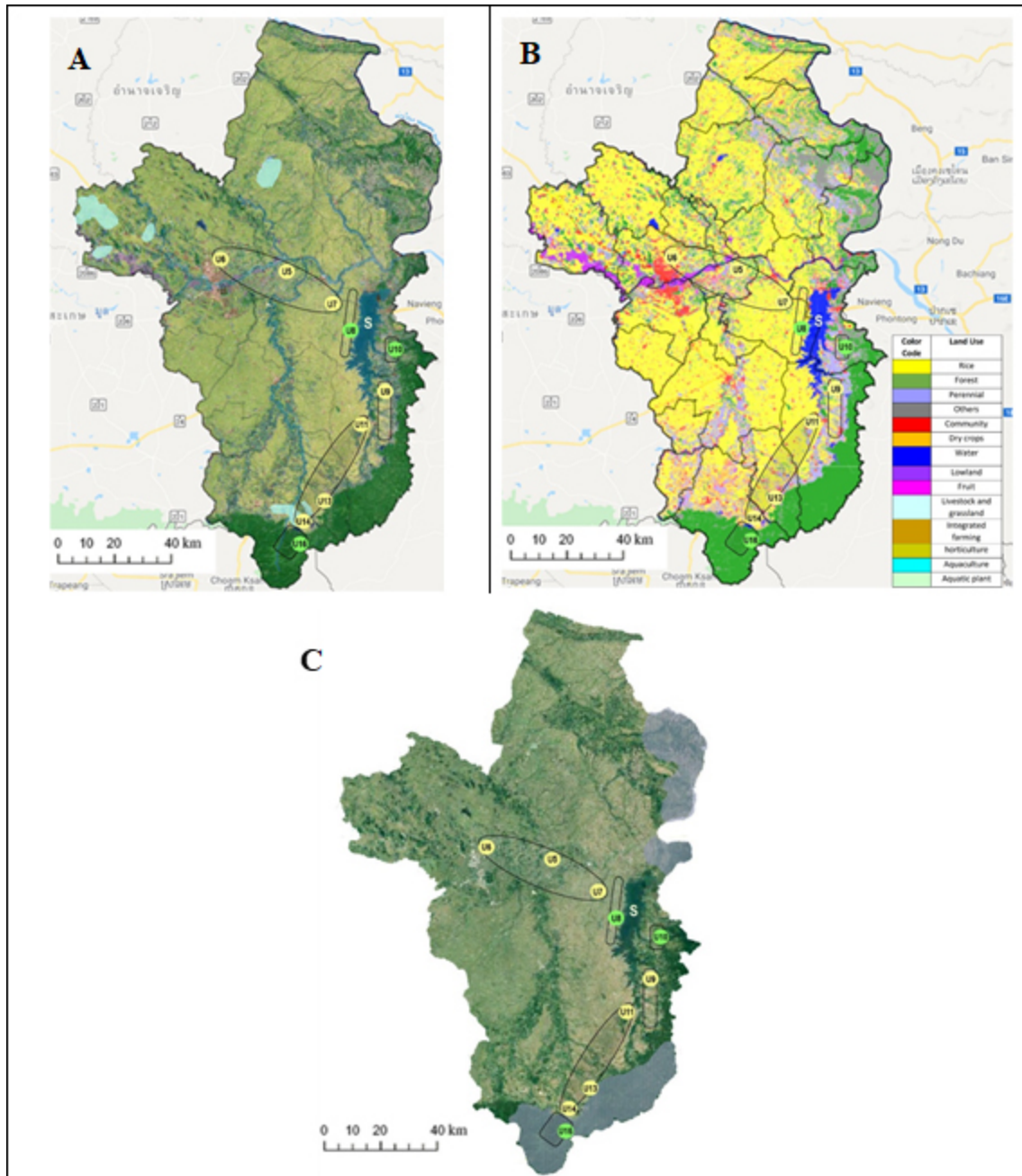
*Notes: Project sites in the province Chiang Rai as related to component 2 (green: conservation, restoration, diversification, biodiversity) and component 3 (yellow: SRP production systems), presented in different landscape contexts. Extent of the indicated areas approximately commensurate to the size of the intervention areas. A) Satellite image of the province showing topography; B) land use patterns of the province: note that the project sites of component 3 are located in the major rice-*

growing areas, while component 2 sites are mainly located at the interface between forested areas and agriculture; C) streams, watersheds, and irrigated rice areas (light blue) of Chiang Rai; note that the intervention sites of component 2 are mainly located upstream of component 3 sites (upscaling SRP rice); furthermore, component 2 sites are situated at the interface between **protected areas (dark shading)** and agriculture; D) Mean species abundance (MSA) index of Chiang Rai (after Akber & Shrestha 2013, Journal of Land Use Science, DOI:10.1080/1747423X.2013.807315), with 0.8-1.0 (dark green) indicating highest species abundance; note that component 2 sites are strategically situated in the vicinity of areas of high biodiversity.

**Ubon Ratchathani**

**Latitude:** 15° 14' 18.38" N **Longitude:** 104° 50' 55.18" E





*Notes: Project sites in the province Ubol Ratchathani as related to component 2 (green: conservation, restoration, diversification, biodiversity) and component 3 (yellow: SRP production systems), presented in different landscape contexts. Extent of the indicated areas approximately commensurate to the size of the intervention areas. A) Major water bodies (S = Sirindhorn Dam), rivers, and canals of Ubol Ratchathani in dark blue; note that project sites of component 2 are located in the watershed area of Sirindhorn dam and close to the forested area in the south (U16); the light blue shading indicates irrigated rice, which occupies a relatively small area of the province; B) project sites in the context of land use patterns of the province; note that component 3 sites (upscaling SRP) in the East and South are strategically situated in the vicinity of major watershed areas; C) satellite image with topography and **protected areas** such as National Parks of high biodiversity (**grey shading**).*

## **1c. Child Project?**

**If this is a child project under a program, describe how the components contribute to the overall program impact.**

GEF support is requested through the FOLUR IP program with which the project objective and outcomes are closely aligned. The project will directly and indirectly address the promotion of sustainable food systems in Thailand by reducing negative externalities and enhancing the rice value chain. Through its activities in the area of crop diversification and promoting off-farm employment, reducing encroachment in forest lands (cassava, rubber, longan, sugarcane, maize), the project will contribute to supporting and promoting deforestation free value chains. Through the interventions under component 2, the project intends to directly address the FOLUR landscapes restoration and land-use objective as well as that of promoting ecosystems services and biodiversity protection. For IP FOLUR, the project will remove deforestation from the agricultural supply chains and will expand restoration of degraded lands through supporting disadvantaged farmers improving the agro-forestry system productivity and crop diversification.

Program BD 1-1 is concerned with mainstreaming biodiversity across sectors as well as landscapes. The proposed project will address the process of embedding biodiversity considerations into policies, strategies and practices of key public and private actors that impact or rely on biodiversity, so that it is conserved and sustainably used to secure the ecological integrity and sustainability of landscapes. The project intends to support activities such as the development of policy frameworks (Comp 1), introducing and upscaling adoption of the SRP Standard and sustainable landscape and forest management for stable ecosystem services (Comp 2 and 3). Further, under components 1 and 2 the proposed project aims to support the development of policies for ecological integrity and landscape management and contributes to developing national sector policies and plans as well as increase budgets directed towards supporting biodiversity at the landscape level.

For Program CCM 2-6 (demonstrate mitigation with systemic impacts IP FOLUR) the proposed project is concerned with the reduction of emissions through the application of AWD in lowland irrigated rice systems, SFM sequestration and reducing forest degradation.

For program LD-1-1 (mainstream/improve agro-ecosystems services to sustain food production) the project is concerned with improving soils health and reduced erosion and water pollution for example through supporting farmers to use less chemical and support sustainable rice farming. The project also intends to develop public private partnerships that contribute to reducing the use of agro-chemicals in Thailand. Under Component 2, the proposed project aims to restore forest and reduce forest degradation and improve ecosystems services to sustain food production in the targeted landscapes. The proposed project intends to support climate-smart agriculture activities such as multi-cropping, crop diversification and agro-forestry and improve ecosystem resilience through innovative SLM approaches, such as enhancing the resilience of agricultural land management systems to drought and/or flood, the diversification of crops and the adoption of innovative financial and market instruments to implement SLM practices that reduce GHG emissions and increase sequestration of carbon on smallholder farms. Finally the project will be scaling-up Sustainable Land Management through the Landscape Approach through the improvement of policies, practices, and incentives for improving production landscapes with environmental benefits, and the application of innovative tools and practices for natural resource management at scale (e.g.: innovations for improving soil health, water resource management, and vegetation cover in production landscapes systems).

## **2. Stakeholders**

**Select the stakeholders that have participated in consultations during the project identification phase:**

**Civil Society Organizations**

## **Indigenous Peoples and Local Communities**

## **Private Sector Entities**

**If none of the above, please explain why:**

## **Please provide the Stakeholder Engagement Plan or equivalent assessment.**

The Project ? *Inclusive Sustainable Rice Landscapes in Thailand* proposes a multi-sectoral and multi-stakeholder process for the *transformation* of the Thai rice sector and value chain for achieving environmental sustainability by upscaling Good Agricultural Practices through SRP Standard in an integrated landscape management context. Thailand is a global leader in rice production (20.7 million tons) and exports (11.7 million tons). However, increased rice production over the past decades through adoption of new technologies without a sustainable landscape approach has resulted in significant GHGs emissions and declines in biodiversity and ecosystem services (e.g. freshwater provision, soil retention, and flood control functions). Regulatory incentives for chemical inputs on the one side and the lack of farmer incentives and insufficient international value chain actor involvement on the other side, have led to limited adoption of sustainable rice production practices and significant environmental impacts on rice production landscapes, e.g. by farmers encroaching on land to increase income. Intensive (rice) crop monoculture, and expansion of cash crops - particularly in the upper reaches of watersheds - have caused deforestation with negative impacts on wildlife habitat and connectivity between various Protected Areas (PA) in the landscape context.

To address these environmental challenges and in parallel ensure food security and enhance farmer livelihoods, the government is implementing the late King's Sufficiency Economy Philosophy principles formulating policies on sustainable development (including agriculture, forest, and water management) overseen by the National Committee for Sustainable Development and chaired by the Prime Minister. The Ministry of Agriculture and Cooperatives, including through its Rice Department, has launched the (i) Mega Farm Program ? a landscape-based multi-agency extension and resource mobilization program to improve the rice value chain; the (ii) New Agriculture Theory Policy ? enabling synergies among multiple crops, trees, livestock, and aquaculture as a foundation for self-reliance and to improve the quality of life for farmers whilst protecting natural resources and the environment; and the (iii) Policy for Diversification of Farmer Income & Reduction of Rice Farming in Dry Season ? promoting crop rotation and increasing the supply from other crops to reduce rice oversupply in the dry season. The 12th National Economic and Social Development Plan (NESDP - 2017-2021) provides a strategic framework for promoting green growth including increasing the country's forest area to 40% (55% by 2037) in order to maintain a balanced ecosystem and facilitate water management to alleviate water shortages, prevent and mitigate floods, and expand irrigation for crop lands. Recognizing forest loss and degradation as major causes of flooding, the government approved the Master Plan on Water Resources Management (2018-2037) which focuses on flood- and water-quality management by conservation and rehabilitation of denuded forest watersheds to prevent erosion. Additionally, the Royal Forest Department supports over 8,000 registered Community Forests to provide basic needs, generate income, and strengthen local capacities to manage natural resources.

The Thailand Sustainable Consumption and Production Roadmap promotes resource efficiency and reduced impact across sectors through enhanced chemical and waste management, improved environmental protection, green labelling, and other schemes.

There are four main Components of the project with the objective to transform the Thai rice sector and value chain for environmental sustainability by upscaling Good Agriculture Practices through SRP Standard in an integrated landscape management context. Component 1 is Enhancing National Policy and Institutional Development for Multi-Sectoral Management of Inclusive Sustainable Rice Landscapes. The main outcomes of this component are strengthened national policy, increased inter-departmental collaboration, and environmental outcomes led by the Ministry of Agriculture, for sustainable rice landscapes under the framework of New Theory Farming Policy. Component 2 is Integrated Landscape Management for productive agriculture and environmental sustainability in Chiang Rai and Ubon Ratchathani provinces. The main outcomes of this component contribute to enhanced management of forest, land and water, for maintaining environmental integrity and production in agriculture landscapes specifically rice. Component 3 entails the upscaling sustainable rice production and value chains through provincial rice sector investments. The intended outcomes are reduced on- and off-farm environmental impacts through adoption and scaling up of sustainable rice practices (through the SRP standard and value chains and introduction of financial mechanisms). The fourth component intends developing knowledge management and outreach practices for national and regional replication and impact assurance systems. The main outcomes of this component are improved recognition, adoption, and replication of the SRP Standard, integrated landscape management practices, and land-use planning systems.

The proposed project is designed for implementation at national, provincial (Chiang Rai and Ubon Ratchathani) and landscape levels involving government agencies and institutions, non-governmental organizations, private sector and local farming communities. Government agencies or institutions have their roles and responsibilities mandated by the Constitution, respective Laws or Decrees and require consultation for their support, cooperation and endorsements. Successful implementation of programmes and projects by national agencies at local level requires engagement and cooperation of the Local Councils.

This Stakeholder Engagement Plan has been drawn up for the project development process and builds upon the consultations and engagement with stakeholders during the Child Project development process (PIF). Discussions have been held with officials of stakeholder government agencies, including the Ministry of Agriculture and Cooperatives (Rice Department), Ministry of Natural Resources and Environment (through Office of natural resources and environment policy and planning) Kasetsart University, complementary project teams (NAMA Rice Project, BRIA project) and with stakeholders in the two selected Provinces including government agencies, private sector and farmers groups. The discussions were mainly directed towards the elaboration on the proposed project goals and objectives landscape/site selection/location, program activities and co-financing components and arrangements. Data collection was seriously impeded due to the outbreak of the COVID-19 pandemic early March 2020.

1. Gender and Environmental Social and Economic Safeguards Considerations

- ? These will follow UN Environment and GEF policy requirements
- ? Note that gender and safeguard assessments will be conducted once project demonstration areas are known and preliminary activities identified;
- ? PPG consultations will proactively seek to involve women, especially at local / landscape level;
- ? Free Prior Informed Consent consultations will be held with stakeholders in the capital Bangkok and in Chiang Rai and Ubon Ratchathani Provinces
- ? All PPG consultations will be documented with participant lists indicating gender (annexed to the project document)

2. Project Stakeholder Engagement Table

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List of Ubon Ratchathani Field Visit Participants

Monday 25 November 2019 (Ubon Ratchathani Provincial Agriculture Office)				
1.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
2.	Mr. Chatchai	Labantai	Officer	Ubon Ratchathani Provincial Agriculture Office
3.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
4.	Mr. Jacques	de Quaaf	Consultant	International Consultant to PPG ISRL Project
5.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
6.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
7.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
8.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Tuesday 26 November 2019 Buntharik District Agriculture Office				

1.	Ms. Prathumwan	Chaiya	Officer	Buntharik District Agriculture Office
2.	Ms. Krisana	Khampan	Officer	Buntharik District Agriculture Office
3.	Mr. Sunthorn	Homwan	Officer	Buntharik District Agriculture Office
4.	Mr. Ubon	Khodphong	Officer	Buntharik District Agriculture Office
5.	Mrs. Supaphon	Klongyut	Director	Buntharik District Agriculture Office
6.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
7.	Mr. Suwit	Boonkor	Officer	Ubon Ratchathani Land Development Station
8.	Ms. Mananya	Nantiraksa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
9.	Mr. Marut	Ongsathaporn	Chief	Operation and Maintenance Branch 5, Ubon Ratchathani Irrigation Project
10.	Mr. Taksakorn	Kaenla	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
11.	Mr. Chakraphon	Jangpattanakul	Officer	Ubon Ratchathani Irrigation Project
12.	Mr. Prakong	Phiwngsein		Village Agriculture Volunteer
13.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
14.	Mr. Montri	Phromlak	Consultant	GIZ
15.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
16.	Mr. Jacques	de Graaf	Consultant	International Consultant to PPG ISRL Project
17.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
18.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
19.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Tuesday 26 November 2019 Na Chaluai District Agriculture Office				

1.	Mr. Yanyong	Srimuangklang	Officer	Na Chaluai District Agriculture Office
2.	Ms. Bang-orn	Chantakod	Officer	Na Chaluai District Agriculture Office
3.	Mr. Precha	Larwiset	Officer	Ubon Ratchathani Irrigation Project
4.	Ms. Mananya	Nantiraksa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
5.	Mr. Suwit	Boonkor	Officer	Ubon Ratchathani Land Development Station
6.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
7.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
8.	Mr. Wittawat	Sukhansa	Officer	Ubon Ratchathani Irrigation Project
9.	Mr. Montri	Phromlak	Consultant	GIZ
10.	Mr. Jacques	de Graaf	Consultant	International Consultant to PPG ISRL Project
11.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
12.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
13.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
14.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant

Tuesday 26 November 2019 Nam Yuen District Agriculture Office

1.	Mr. Boonmee	BuaNgam	Officer	Nam Yuen District Agriculture Office
2.	Mr. Kittirat	Kaewbuapad	Officer	Nam Yuen District Agriculture Office
3.	Ms. Pattarawadi	Laosri	Officer	Nam Yuen District Agriculture Office
4.	Ms. Boonyung	Tarathorn	Officer	Nam Yuen District Agriculture Office
5.	Mr. Danai	Thongngok	Officer	Nam Yuen District Agriculture Office
6.	Mr. Suwit	Boonkor	Officer	Ubon Ratchathani Land Development Station

7.	Ms. Mananya	Nantiraksa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
8.	Mr. Precha	Larwiset	Officer	Ubon Ratchathani Irrigation Project
9.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
10.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
11.	Mr. Montri	Phromlak	Consultant	GIZ
12.	Mr. Jacques	de Graaf	Consultant	International Consultant to PPG ISRL Project
13.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
14.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
15.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
16.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant

Wednesday 27 November 2019 Phibun Mangsahan District Agriculture Office

1.	Mr. Weerapong	Thongngok	Officer	Forest Management Bureau No.7, Ubon Ratchathani, Royal Forest Department
2.	Ms. Cheundungjit	Sopat	Officer	Phibun Mangsahan District Agriculture Office
3.	Mr. Jakrapan	Atirat	Officer	Phibun Mangsahan District Agriculture Office
4.	Mr. Nawin	Pongkan	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
5.	Ms. Mananya	Nantiraksa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
6.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
7.	Ms. Piyanuch	Mongkolsriwittaya	Officer	Ubon Ratchathani Land Development Station
8.	Mr. Precha	Larwiset	Officer	Ubon Ratchathani Irrigation Project



9.	Mr. Attakorn	Nonthadi	Officer	Ubon Ratchathani Irrigation Project
10.	Mr. Wuttichai	Srithong	Officer	Ubon Ratchathani Irrigation Project
11.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
12.	Mr. Montri	Phromlak	Consultant	GIZ
13.	Mr. Jacques	de Graaf	consultant	International Consultant to PPG ISRL Project
14.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
15.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
16.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
17.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Wednesday 27 November 2019 Sirindhorn District Agriculture Office				
1.	Mrs. Penpit	Polsabsiri	Officer	Sirindhorn District Agriculture Office
2.	Ms. Kanokporn	Boonlerd	Officer	Sirindhorn District Agriculture Office
3.	Mrs. Wipawan	Jaiyason	Admin	Sirindhorn District Agriculture Office
4.	Mr. Weerapong	Thongngok	Officer	Forest Management Bureau No.7, Ubon Ratchathani, Royal Forest Department
5.	Mr. Nawin	Pongkan	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
6.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
7.	Mr. Marut	Ongsathaporn	Chief	Operation and Maintenance Branch 5, Ubon Ratchathani Irrigation Project
8.	Mr. Attakorn	Nonthadi	Officer	Ubon Ratchathani Irrigation Project
9.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
10.	Mr. Montri	Phromlak	Consultant	GIZ

11.	Mr. Jacques	de Quaaf	Consultant	International Consultant to PPG ISRL Project
12.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
13.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
14.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
15.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Wednesday 27 November 2019 Khong Chiam District Agriculture Office				
1.	Ms. Noppakun	Niyomkun	Officer	Khong Chiam District Agriculture Office
2.	Ms. Noppakun	Niyomkun	Officer	Khong Chiam District Agriculture Office
3.	Mr. Chaiyapan	Nuanmee	Officer	Khong Chiam District Agriculture Office
4.	Mr. Kittipong	Karnchanarak	Officer	Ubon Ratchathani Irrigation Project
5.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
6.	Mr. Nawin	Pongkan	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
7.	Mr. Weerapong	Thongngok	Officer	Forest Management Bureau No.7, Ubon Ratchathani, Royal Forest Department
8.	Ms. Piyanuch	Mongkolsriwittaya	Officer	Ubon Ratchathani Land Development Station
9.	Ms. Mananya	Nantiraksa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
10.	Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
11.	Mr. Montri	Phromlak	Consultant	GIZ
12.	Mr. Jacques	de Graaf	Consultant	International Consultant to PPG ISRL Project
13.	Ms. Rossakon	Keawsaard	Director	International Relation Section, RD

14.	Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
15.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
16.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Thursday 28 November 2019 Ubon Ratchathani Provincial Agriculture and Cooperatives Office				
1.	Mr. Anan	Preechawutthiwong	Director	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
2.	Mr. Paiwan	Lohatin	Officer	Ubon Ratchathani Rice Seed Center, RD
3.	Ms. Parichart	Sudhiprasit	Officer	Electricity Generating Authority of Thailand
4.	Mr. Arthid	Pornkuna	Officer	Electricity Generating Authority of Thailand, Sirinshorn Dam
5.	Ms. Sirilak	Suwanaked	Communication Officer	Electricity Generating Authority of Thailand
6.	Mrs. Rungtiwa	Wongsaen	Officer	Project Contract Management and Coordination Division
7.	Mr. Jakrapan	Atirat	Officer	Phibun Mangsahan District Agriculture Office
8.	Mrs. Supaphon	Klongyut	Director	Buntharik District Agriculture Office
9.	Mrs. Penpit	Polsabsiri	Officer	Sirindhorn District Agriculture Office
10.	Mr. Phawanon	Sophitcha	Director	Office of Conservation Management#9, DNP
11.	Mr. Marut	Ongsathaporn	Chief	Operation and Maintenance Branch 5, Ubon Ratchathani Irrigation Project
12.	Ms. Wanida	Poonsri		
13.	Mr. Mongkol	Saelim	Officer	Electricity Generating Authority of Thailand
14.	Mr. Kritsada	Jampapaeng	Officer	Electricity Generating Authority of Thailand
15.	Mr. Chaiyapan	Nuanmee	Officer	Khong Chiam District Agriculture Office

16. Ms. Thimaporn	Dikul	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
17. Mr. Precha	Larwiset	Officer	Ubon Ratchathani Irrigation Project
18. Mr. Kittipong	Karnchanarak	Officer	Ubon Ratchathani Irrigation Project
19. Mr. Wittawat	Sukhansa	Officer	Ubon Ratchathani Irrigation Project
20. Ms. Kattreeya	Nimsuwan	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
21. Mr. Taksa-on	Kaensa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
22. Mr. Prasarnsak	Wongsa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
23. Mr. Paisait		Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
24. Mr. Nawin	Pongkan	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
25. Ms. Kasorn	Sompoh		OLAM
26. Mr. Atthawit	Watcharapongchai		GIZ
27. Ms. Mananya	Nantiraksa	Officer	Ubon Ratchathani Provincial Agriculture and Cooperatives Office
28. Ms. Preechaya	Hancheungchai	Officer	Ubon Ratchathani Rice Seed Center, RD
29. Mr. Montri	Phromlak	Consultant	GIZ
30. Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
31. Mr. Thomas	Jaekel		GIZ-CIM/IRRI
32. Mr. Jacques	de Graaf	Consultant	International Consultant to PPG ISRL Project
33. Mr. Reuben	Jessop	Financial Advisor	GIZ
34. Ms. Charlene	Marek	Consultant	GIZ
35. Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project

36.	Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
37.	Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant

Appendix 19. PPG Consultation Participant List (continued)

List of Chiang Rai Field Visit Participants

Monday 16 December 2019			
1.	Mr. Nawin	Inthajak	Director Chiang Rai Provincial Agriculture Office Department of Agriculture Extension
2.	Mr. Apinan	Penpalung	Director Chiang Rai Rice Research Center, RD
3.	Ms. Siriluck	Jaiboonya	Officer Chiang Rai Rice Research Center, RD
4.	Mr. Kittipong	Chuen-ngam	Officer Chiang Rai Rice Research Center, RD
5.	Ms. Wipada	Pukdee	Officer Chiang Rai Rice Research Center, RD
6.	Mr. Samart	Kongsawas	Officer Chiang Rai Rice Research Center, RD
7.	Mr. Apirak	Suwanrak	Officer Chiang Rai Rice Research Center, RD
8.	Mr. Nimit	Daominta	Officer Chiang Rai Rice Research Center, RD
9.	Mr. Warakorn	Boontha	Officer Chiang Rai Irrigation Project

10. Mr. Chaiwat	Phumpuang	Officer	Office of Forest Management 2 (Chiang Rai)
11. Ms. Wanida	Thipsak	Director	Office of Chiang Rai Provincial Commerce
12. Mr. Suphanimit	Tengpe	Officer	Office of Chiang Rai Provincial Commerce
13. Mr. Sunthad	Putto	Officer	Chiang Rai Rice Research Center, RD
14. Mr. Boonchana	Wongchana	Officer	Chiang Rai Rice Research Center, RD
15. Mr. Wanchai	Parintrakul	Officer	Chiang Rai Provincial Agriculture Office
16. Ms. Preeyanuch	Thammakantha	Officer	Chiang Rai Provincial Agriculture and Cooperatives Office
17. Ms. Anothai	Chaisaenchomphu	Officer	Chiang Rai Provincial Agriculture and Cooperatives Office
18. Mr. Apiwich	Chaikam	Officer	Chiang Rai Provincial Agriculture Office
19. Ms. Anchalee	Srisuk	Officer	Chiang Rai Provincial Agriculture and Cooperatives Office
20. Mr. Somkiat	Puka	Director	Office of Conservation Area Management 15
21. Mr. Worakarn	Boontha	Chief	Deliver Water and Maintenance Section 4
22. Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
23. Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
24. Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Tuesday 17 December 2019 Mae Suai District			
1. Mr. Apinan	Penpalung	Director	Chiang Rai Rice Research Center, RD
2. Mr. Nimit	Daominta	Officer	Chiang Rai Rice Research Center, RD

3. Mr. Songsak	Boonsawad	Officer	Highland Development Project: Model Wawi Royal Project, Highland Research Development Institute (HRDI)
4. Ms. Siriluck	Jaiboonya	Officer	Chiang Rai Rice Research Center, RD
5. Mr. Panom	Udomsuk	Officer	Project on Baan Lak Nai Pa Yai, Ban Haui Sai
6. Mr. Nikom	Soiudom	Officer	Project on Baan Lak Nai Pa Yai, Ban Haui Sai
7. Mr. Wittaya	Pakdee	Officer	Chiang Rai Rice Research Center, RD
8. Mr. Apirak	Suwannarat	Officer	Chiang Rai Rice Research Center, RD
9. Mr. Samart	Kongsawad	Officer	Chiang Rai Rice Research Center, RD
10. Mr. Kitipong	Chuenngam	Officer	Chiang Rai Rice Research Center, RD
11. Mr. Chainarong	Chansaentor	Director	Chiang Rai Research Center and Agricultural Development
12. Mr. Somchai	Jaipin	Director	Mae Suai District Office of Agriculture
13. Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
14. Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
15. Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
16. Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Wednesday 18 December 2019 Mae Fa Luang District			
17. Mr. Dujdiew	Wongsawad	Director	Mae Fa Luang District Office of Agriculture
18. Ms. Supattra	Srimool	Officer	Highland Research and Development Institute (HRDI)

19. Mr. Kirapan	Pinya	Officer	Highland Research and Development Institute (HRDI)
20. Ms. Pinthip	Deangphai	Officer	Highland Research and Development Institute (HRDI)
21. Mr. Apirak	Suwannarat	Officer	Chiang Rai Rice Research Center, RD
22. Mr. Wittaya	Pakmee	Officer	Chiang Rai Rice Research Center, RD
23. Mr. Niwat	Khamma	Chief	Highland Research and Development Institute (HRDI)
24. Mr. Songsak	Boonsawad	Officer	Highland Research and Development Institute (HRDI)
25. Ms. Sirilak	Jaiboonma	Officer	Chiang Rai Rice Research Center, RD
26. Mr. Kittipong	Chuen-ngam	Officer	Chiang Rai Rice Research Center, RD
27. Mr. Nimit	Daominta	Officer	Chiang Rai Rice Research Center, RD
28. Mr. Nattapon	Thoobthien		Highland Development Project: Model Mae Salong Royal Project, Highland Research Development Institute (HRDI)
29. Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
30. Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
31. Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
32. Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Thursday 19 December 2019 Mae Chan District			
33. Mr. Prasit	Wongpha	Chief	Highland Research Development Institute (HRDI)
34. Mr. Kittipong	Chuen-ngam	Officer	Chiang Rai Rice Research Center, RD



35. Mr. Samart	Kongsawad	Officer	Chiang Rai Rice Research Center, RD
36. Mr. Wittaya	Pakdee	Officer	Chiang Rai Rice Research Center, RD
37. Mr. Apirak	Suwannarat	Officer	Chiang Rai Rice Research Center, RD
38. Mr. Nimit	Daominta	Officer	Chiang Rai Rice Research Center, RD
39. Ms. Sirilak	Jaiboonma	Officer	Chiang Rai Rice Research Center, RD
40. Mr. Panipan	Persea	Farmer	Highland Research Development Institute (HRDI)
41. Ms. Apinya	Pimdee	Officer	Highland Research Development Institute (HRDI)
42. Mr. Thomas	Jaekel	CIM	GIZ
43. Mr. Rueben	Jessop	Consultant	GIZ Financial Consultant
44. Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
45. Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
46. Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
47. Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant
Friday 20 December 2019 Maung Chiang Rai			
1. Mr. Nawin	Inthajuk	Director	Chiang Rai Provincial Agriculture Office Department of Agriculture Extension
2. Mr. Nopporn	Prathum-ngao	Chief	Doi Laung National Park (DLNP)
3. Mr. Apiwich	Chaikam	Officer	Chiang Rai Provincial Agriculture Office
4. Ms. Preeyanuch	Thammakhan	Officer	Chiang Rai Provincial Agriculture and Cooperatives Office

5. Mr. Theerakhon	Khanka	Officer	Chiang Rai Provincial Agriculture Office
6. Mr. Wanchai	Narintrakul	Officer	Chiang Rai Provincial Agriculture Office
7. Ms. Anothai	Chaiseanchompoo	Officer	Chiang Rai Provincial Agriculture and Cooperatives Office
8. Ms. Rossakon	Keawsaard	Director	International Relation Section, RD
9. Mr. Thomas	Jaekel	CIM	GIZ
10. Mr. Rueben	Jessop	Consultant	GIZ Financial Consultant
11. Ms. Wilailak	Suraphruk	Consultant	National Consultant to PPG ISRL Project
12. Ms. Patcharin	Sae-heng	Assistant	GIZ (Rice Department)
13. Ms. On-iriya	Fugthaworn	Assistant	Assistant to National Consultant

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In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

The primary stakeholders in this project are the Ministries of Agriculture and Cooperatives, the Ministry of Environment and Natural Resources (at both National and Provincial levels), provincial governments and local farmers' groups. Through establishment of inter-ministry dialogue, it is anticipated that wide involvement of other ministries and government departments will be assured, resulting in high level government adoption of the outcomes of the Inclusive Sustainable Rice Project such as the approval of the Integrated Landscape Management Plans. Local government will receive incremental support by the project in engaging with local stakeholders such as rice farmers and communities living in the vicinity of high biodiverse areas towards more sustainable cropping practices, crop diversification, agroforestry and forest restoration and protection. The GEF Project will include private sector enterprises by promoting and training identified local communities in the adoption of SRP Standard rice and support value chain development. The role of the private sector

enterprises is considered to be of great importance as this will facilitate the sustainable upscaling and rolling out of successful SRP activities to the broader farming community subsequent to project completion.

Beneficiary participation in the selected landscapes and project sites. The project will work through existing local organizational structures such as TAOs and PAOs, and other locally based organizations. Farmer organizations include both 'farmer groups' and 'farmer cooperatives', the latter having commercial marketing function. Both have the same organizational principles, including voluntary and open membership, democracy, autonomy, independence, cooperation, human resource development, information dissemination, and community spirit. Farmer groups and cooperatives are generally formed within villages and sub-districts (Tambon) and are linked at district and provincial levels through farmer networks and higher-level organizations. The project will include groups for rice farmers (CRC), field crop farmers and horticultural farmers, forest community centers etc. In addition, women's groups will also participate, for example through support under the One Tambon One Product (OTOP) program. The Government is supporting these enterprises through the provision of information, technologies, and marketing. The GEF project will adopt participatory approaches to fully engage the rural communities (including women) into the decision-making processes and project implementation. ProDoc Table 11 lists the responsible and supporting stakeholders at output level. Furthermore, see **Appendix 9 of the ProDoc** for all stakeholders involved at implementation stage.

Please also refer to ProDoc Section 2.5 – specifically the details provided in Table 3, as well as ProDoc Section 5 as captured in Table 11 on stakeholder roles and engagement.

In general, the project discloses of project information, including the safeguard documents, will be shared or made available to the stakeholders via the project website. The project-specific grievance redress mechanism is enabled through the established procedure at UNEP (reference to website) as well as the GIZ website.

ProDoc Appendix 19 contains a record of stakeholder consultations during the PPG phase.

The stakeholder consultations and engagement which began during project preparation (see ProDoc Section 5) will be continued throughout the project implementation stage. To achieve this, the project design includes several mechanisms, including the following:

#### *Project Steering Committee (PSC)*

The PSC is the main governance body of the project that will ensure the continued participation of key stakeholders in the project planning, implementation, and M&E. The PSC will consist of representatives of the main project partners and related governmental agencies bodies. The PSC will review the work plans and budget before being submitted to UNEP for final approval, be represented on recruitment processes of key project staff, and provide overall strategic guidance to the project including through co-financing partnerships. Other stakeholders may also be invited to participate in meetings of the Project Steering Committee, during which strategic guidelines and work plans will be discussed, negotiated, and approved by executing parties.

During the initial phase of project implementation, agreements will be made regarding the development of each of the expected activities. RD will take the lead for most of the activities and may include other institutions as partners in the implementation of the activities based on their roles and mandates within the environmental, natural resources, agriculture and other sectors related to the project.

#### *Project Management Unit (PMU)*

The PMU is the operational center of the project and has direct responsibility for its implementation. The PMU is responsible for the implementation of the stakeholder engagement plan, communications plan, gender mainstreaming action plan, grievance redress mechanisms, and M&E. Led by a Project

Manager who receives guidance from the PSC, the PMU ensures the participation of all stakeholders and addresses stakeholder conflicts.

#### *Provincial Technical Working Groups*

The PMU will liaise and work closely with partner institutions to ensure good coordination with other complementary national (baseline) programmes and initiatives. The provincial level Technical Working Groups provide key mechanisms for such engagement, linking with national government agencies, technical experts, academics and NGOs to guide and support specific workstreams and the development of key deliverables.

#### *Communications and Dissemination of Information Strategy*

The SRP in support of PMU and the project, will implement an outreach and communication plan as part of Output 4.1. for the project to ensure communication with all stakeholders. The medium will be stakeholder specific and utilize both traditional methods such as meetings and telephone calls with newer methods such as a listserv, WhatsApp broadcast messaging, SMS, etc. Attention will be given to jargon-free language and translation of technical information into the Thai language. Additionally, the PMU will have active knowledge management with the documentation of processes and lessons learned, which will be shared with all stakeholders. Component 4 of the project is devoted to knowledge management and M&E.

#### *Local community stakeholder participation*

Participating local communities, particularly through representatives of TAO and PAO, community rice centers, mega farms groups and cooperatives, community SME groups, sustainable agriculture groups and forest management committees (fincs) will be actively involved in the implementation of the project including in decision making processes.

#### *Gender Mainstreaming Plan*

This will secure the involvement of especially women in environmental, on-farm, off-farm and natural resource-based activities. The Gender Mainstreaming Action Plan will address the impacts of project activities and account for their specific means. It will also seek to empower women to not only participate in the rice sector but to extend their social nurturing roles into advocacy for better environmental practices. The Gender Mainstreaming Action Plan, included as Appendix 16, will be guided by the principle of equality or equity. There will be equitable participation of women on local level committees and groups related to project activities including community co-management, training and awareness activities.

The project would allocate budget for a gender study to explore and implement the following issues and activities:

- ? Determine the vulnerability and capability of different social groups characterised by age, gender, ethnicity, job and location to cope with different climatic hazards and land restoration issues;
- ? Review land use policies through a gender sensitive approach;
- ? Facilitate gendered participation in planning and monitoring ecosystem - based land and water management measures.
- ? Assess the implications of introducing (or further supporting) the Sustainable Rice Standard on women and men farmers, including participation of women farmers in Community Rice Centres and other local organizational structures such as farmer cooperatives, megafarms etc.
- ? In the context of the COVID-19 pandemic, the project will also collect sex disaggregated data and will pursue an inclusive approach of gender analytical data to support the delivery of equal-right-based

policy responses to zoonotic threats, including by addressing ecosystem connectivity and integrity, transformational change of the rice value chain to ensure safeguarding of environmental support systems, and providing alternative livelihoods for the most vulnerable and disadvantaged including women and girls.

#### *Grievance Mechanism*

In addition, to the mechanisms established under UNEP, A grievance mechanism will be facilitated for conflict resolution and planning process and published online so that all stakeholders are aware of its existence. It will be operated as part of the TAO (Tambon Administrative Organization as government institution at local level) but until this has been formalized, the Project Manager at PMU will be responsible for receiving and responding to grievances in consultation with UNEP and GIZ.

#### *Activities, Training and Engagement Plans*

All training programmes and engagement plans will use a participatory approach that is rights-based and integrates the perspectives of all users using bottom-up approaches, integrating the different views of local stakeholders and beneficiaries with those of institutions, authorities, and decision makers. It will also be gender responsive.

**Select what role civil society will play in the project:**

**Consulted only;**

**Member of Advisory Body; Contractor;**

**Co-financier;**

**Member of project steering committee or equivalent decision-making body;**

**Executor or co-executor;**

**Other (Please explain) Yes**

Farmers and other project related communities (agroforestry, forest protection etc.) are the main targeted beneficiaries (up to 45,000), fully consulted, their capacity build, as well as being key implementers through e.g. farmer field schools, and other mechanisms summarized above.

### **3. Gender Equality and Women's Empowerment**

**Provide the gender analysis or equivalent socio-economic assesment.**

(See: Appendix 16 (ProDoc) - Gender Mainstreaming Plan)

Having assessed the socio-economic status of women in the country and in the project locations in the two provinces through the desk study, stakeholder meetings and field visits it was established that most

of the women are employed in the informal sector, through agricultural and home-based economic activities. Therefore, the project will ensure that women and women's groups are engaged and receive benefit from the project activities.

In the PPG stakeholder meetings and during the field visits / discussions it was inquired as to how the project could facilitate empowerment of women, promote equal rights and facilitate engagement of youth. The following recommendations were made.

The project would allocate budget for a gender study to explore and implement the following issues and activities:

? Determine the vulnerability and capability of different social groups characterised by age, gender, ethnicity, job and location to cope with different climatic hazards and land restoration issues:

? Review land use policies through a gender sensitive approach:

? Facilitate gendered participation in planning and monitoring ecosystem - based land and water management measures:

? Assess the implications of introducing (or further supporting) the Sustainable Rice Standard on women and men farmers, including participation of women farmers in Community Rice Centres and other local organizational structures such as farmer cooperatives, megafarms etc.

Such gender studies/assessments are important to the programme for three reasons. Firstly, their findings will inform the development of gender-sensitive land use policy, as well as interventions and implementation processes at the sectoral level. Secondly, the project could use the study findings to develop gender indicators to monitor the progress of gender mainstreaming. Lastly, assessments and studies provide data that help address the under-representation of women in policy planning processes at the national policy level. Obviously, the project should partner with NGOs and civil society organization that are working on women and gender issues to facilitate and integrate gender-sensitive planning and implementation processes at the local landscape level.

The Gender Mainstreaming Action Plan for the project is based on above mentioned principles and will ensure:

a) That the project team and recruitment of staff for the project management unit will take gender into consideration and that opportunities are provided wherever possible, targeting women in the two selected project sites.

b) During the project design, formulation and implementation, women are engaged and represented in discussions at all levels and the institutions established to promote the wellbeing of women and guarantee their involvement on land and ecosystems management:

c) The project considers the livelihood activities of women during its technical and financial support while contributing to the sustainable development goals through sustainable food systems, conservation of biodiversity and landscape restoration.

d) Assessments / study are facilitated throughout the project implementation phase.

e) Activities design will allow females to participate to support equality and equity of gender.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?**

Yes

**Closing gender gaps in access to and control over natural resources; Yes**

**Improving women's participation and decision making Yes**

**Generating socio-economic benefits or services or women Yes**

**Does the project's results framework or logical framework include gender-sensitive indicators?**

Yes

#### 4. Private sector engagement

##### **Elaborate on the private sector's engagement in the project, if any.**

The private sector will be a very important stakeholder group in the ISRL project, participating in all components but most prominently in component 3, upscaling sustainable rice production and value chains through provincial rice sector investments and set up of appropriate financial mechanisms. Linkage to and incentivization of farmers and growers will follow a model that is currently implemented under the Thai Rice NAMA Project. Because many farmers are already in debt, they are not able or willing to take on significant additional financial burden. Even if farmers are convinced of the benefits of sustainable agricultural practices, they are unlikely to change without significant incentive. Therefore, farmers will be offered free trainings (financed by a revolving fund, see below) on sustainable farm technologies and practices under the SRP Standard provided by the local implementing government and corporate partners. These trainings will ensure farmers become confident that their change towards sustainability will be beneficial to them. Corporate partners like Olam and Urmatt already expressed keen interest in a sustainable rice value chain towards sustainable sourcing. Participation of corporate partners in the project can be arranged in different ways. With regard to Urmatt Limited, a contractual arrangement through a public-private partnership is envisaged. In the case of Olam, the company is already an integral part of the baseline projects/partnerships of GIZ, e.g. the Thai Rice NAMA and the BRIA 2 Projects, the latter of which is already operating in Ubon Ratchathani. Olam is one of the leading players in the global rice trade, involved across the entire value chain from origin to distribution. Following the Olam Livelihood Charter (OLC), Olam works to support small-holder farmers in improving crop quality and yield to provide customers with consistent volumes of sustainable products. Olam strives to bring sustainability standards to smallholder farmers to balance long-term costs with near-term needs, securing the ability for future generations to produce rice. Olam International has formed partnerships with the Thai Rice Department, partnered with UNEP, UN Environment Program, GIZ/NAMA facility and IRRI on the Sustainable Rice Platform (SRP) as a governing member to define internationally accepted, scientific solutions to the climate impacts of rice agriculture. The company has also assured this by guiding the SRP Standard committee to adopt more holistic standards including water use, land use, labor standards, GHG emissions, and reducing chemical inputs while maintaining yields. To make a tangible impact on livelihoods, Olam has begun to upscale tested solutions with targets to reach 35,000 farmers by 2023. Olam's outgrowers' project in Ubon Ratchathani, Thailand, has produced the world's first sustainable rice, fully verified by a third-party. Olam will be a key corporate partner to the ISRL project especially under outcome 3, Upscaling the SRP Standard rice. The upscaling of the SRP Standard will have far-reaching positive impacts on the rice value chain in Thailand and abroad. Hence, this part of the project work could be described as 'vertical', along the rice value chain, with companies supporting sustainable sourcing of high-quality rice and promoting investments by financial providers to support sustainable rice production and landscape management through strengthening landscape governance structures and feasibility studies to de-risk investments.

Beyond the boundaries of the rice value chain, the ISRL will establish 'horizontal' landscape-scale alliances with stakeholders in forest protection, biodiversity conservation, land use planning, natural resource management and other sectors in view of sustainable management of (rice) landscapes. This will include providing incremental support to baseline programs in the field of restoration for reducing negative impacts on natural ecosystems and enhancing biodiversity on- and off-farm. While improvements regarding on-farm biodiversity will build on crop diversification (included in components 2 and 3) and follow agro-ecological principles already established under the SRP Standard, off-farm biodiversity conservation and watershed protection will be pursued in alliance with governmental (e.g., Royal Forestry Dep., Dep. National Parks), non-governmental institutions (e.g. Highland Research and Development Institute), and the private sector.

It is anticipated that the private sector will collaborate with the government Bank for Agriculture and Agricultural Cooperatives (BAAC) and the Rabobank in facilitating the use of a), a revolving fund

system, b), Green Loan Program, and c), a recently announced USD 640 million Green Bond issuance for developing and investing into rice value chain service providers (such as laser land levelling, alternate wetting and drying, site specific nutrient management and straw and stubble management). Specifically, BAAC will provide funds from its Green Bond issuance to capitalize the revolving fund, which will probably be at a certain interest rate. The potential contribution from Rabobank will most likely come from this bank working with its commercial clients (e.g. Olam) and Olam's work in turn with farmers who are growing the SRP rice that it desires to purchase. The revolving fund by financing for instance land laser levelling services to its farmers will make this possible. Furthermore, the Green Bond mechanism would promote the issuance of bonds to finance other project outcomes, e.g. protection of ecosystems like watersheds, forests and biodiversity, expansion of the SRP Standard and reduction of the use of hazardous chemicals. The Green Bond Issuer would be a Thai state enterprise (i.e. EGAT). The proceeds of a state enterprise Green Bond could be used for renewable energy generation (e.g. EGAT), capitalization (equity and/or debt) of the revolving fund with an overall focus on sustainability, and national environmental preservation priorities (e.g. watershed and ecosystems protection).

#### 5. Risks to Achieving Project Objectives

**Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):**

Key Risks	Relevance	Main Actors
<p><b>Risk 1:</b> Final implementation sites do not quantify to the targeted hectares (ha) due to lacking stakeholder support</p>	<p>GEF Core Indicators 3, 4 &amp; 6</p>	<p>Provincial agencies &amp; farmers</p>
<p><b>Risk 1 Mitigation Strategy</b></p> <p>While provincial agencies and farmers have been actively engaged during the PIF and PPG phases, there is still a risk that they will not actively engage during project implementation.</p> <p>The project has aimed to ensure stakeholder support by conducting 3 field visits during the PPG: 2 field visits in each province, as well as national workshops in the provinces. Project sites have been selected, mapped out and approved in close coordination with government agencies and farmers in the target provinces during the PPG phase with site finalizations during the second national workshops. Continuous stakeholder engagement through the project lifetime, the national outreach campaign, and capacity building within MoAC, MoNRE, local provincial government, and other key actors at national, provincial and district level will sustain national support and enhance the capacity for project implementation within the relevant agencies. Strong participatory stakeholder consultation will be undertaken to ensure reasonable project expectations and clarified roles and responsibilities for commitment at the local level.</p>		



Key Risks	Relevance	Main Actors
<p><b>Risk 2:</b> Landscape management plans are not enforced within the provinces, and business as usual land uses within forests continue</p>	<p>GEF Core Indicator 3</p>	<p>Provincial government agencies &amp; local businesses</p>
<p><b>Risk 2 Mitigation Strategy</b></p> <p>As the provincial landscape plans will limit forest use within provinces, there may be drawbacks on farmer &amp; local business current management of forest resources. It could be that some farmers and local businesses choose to still encroach on forest borders and further degrade natural habitats.</p> <p>To counter this, the project supports and expands upon ongoing forest patrol projects in the provinces conducted by government agencies. These projects place forest stewardship into the hands of communities through ownership under community forest structures, making restoration of degraded lands and conservation of HCVMs in the best interest of communities and farmers by delegating responsibility for these resources to the local level which is most responsive in observing and absorbing the impacts of actions taken. Further, through promotion of the SRP Standard and agriculture diversification programs within the target provinces, the project seeks to improve the profitability of agriculture for rice and diversified crops. It is intended that these increased values and profitability reduce the necessity of encroachment on forest borders.</p>		
<p><b>Risk 3:</b> Farmers are not convinced of economic benefits /market interest in crop diversification and therefore do not implement diversification nor benefit HCVM</p>	<p>GEF Core Indicator 4</p>	<p>Farmers, government extension agencies, private sector actors</p>
<p><b>Risk 3 Mitigation Strategy</b></p> <p>Although farmers will be involved in the development of gender-inclusive agriculture &amp; agroforestry diversification and development programs targeting HCVMs protection and restoration objectives within the target provinces, as well as plans for diversifying agricultural production in sub-optimal rice production systems through gender-sensitive participative community consultations, they may not be convinced of the economic incentives of diversifying their production, which may prevent them from participating in already-existing government programs for crop diversification. There may also be additional costs for switching their production patterns.</p> <p>The project seeks to address these hindrances to crop diversification by establishing demonstration sites in the target provinces for improved land management. There will be two sites within each province focused on crop diversification within sub-optimal rice systems for education and outreach to farmers. These sites will demonstrate the ecological advantages of diversification on-farm as well as the financial advantages of diversification (growing a second crop after rice production, planting nitrogen-fixing plants to enhance soil quality, agro-forestry, etc.).</p>		

Key Risks	Relevance	Main Actors
<p><b>Risk 4:</b> Farmers are unable or unwilling to implement the SRP Standard &amp;/or GHG mitigation practices</p> <p><i>(AWD, which contributes largely to the project's mitigation potential, as well as reducing N inputs, crop diversification and agro-forestry practices)</i></p>	<p>GEF Core Indicators</p> <p>4 &amp; 6</p>	<p>Government agencies (e.g. extension services), private sector actors, farmers</p>
<p><b>Risk 4 Mitigation Strategy</b></p> <p>Farmers in Ubon Ratchathani are familiar with the SRP Standard and thus related mitigation strategies and sustainable rice production through prior projects. However, further mitigation activities such as crop diversification, a landscape approach and implementing agro-forestry may be new to farmers. Respectively, the SRP Standard and its mitigation strategies are new in the Chiang Rai province, and crop diversification and agro-forestry are not yet widespread. Therefore, there is a high risk that the targeted farmers in both Ubon Ratchathani and Chiang Rai will have challenges learning and implementing new practices. If farmers are unable to implement the SRP Standard and mitigation practices, it will have severe impact on the ISRL project's forecasted mitigation potential (CCM) and the GEF Core Indicator 6.</p> <p>Farmers will receive training on the SRP Standard and mitigation practices in both provinces. Furthermore, the demonstration sites are intended to act as living examples of practice implementation for farmer outreach and education. The ISRL project will provide active support and monitoring of farmers practices throughout implementation. Furthermore, the establishment of the project's financial mechanism will motivate service providers to enter the market and provide these services to farmers.</p>		
<p><b>Risk 5:</b> Dependency on agrochemicals is not able to be addressed in multi-stakeholder processes between the government, private sector &amp; farmers</p>	<p>GEF Core Indicator 9</p>	<p>Multi-stakeholder: government, private sector &amp; farmers</p>

Key Risks	Relevance	Main Actors
<p><b>Risk 5 Mitigation Strategy</b></p> <p>Farmers in Thailand often follow high-input practices with the goal of generating high outputs and thus profits. Thai farmers have been reliant on the agrochemical industry for decades and it is a significant risk of the ISRL project that they will remain unwilling to reduce their agrochemical input practices. This threaten the project's ability to reduce the production and use of chemicals of global concern and thus address the GEF Core Indicator 9. A chemical ban was shortly announced and then revoked in November 2019 in Thailand. This event will provide a basis for bringing stakeholders together to discuss beneficial alternatives to these chemicals (e.g. organic inputs, less toxic alternatives).</p> <p>To address this, the farmer trainings and demonstration sites will be key for supporting farmers in transitioning their practices. Regular project monitoring will record farmer practices to react to ongoing needs and concerns. Furthermore, with support from the private sector by guaranteeing purchase of SRP rice produced with less chemical use, will incentivize farmers to reduce their agro-chemical use. Further, organic farming and diversified cropping will be rewarded through premiums. A multi-stakeholder process will be conducted as an ongoing activity during the project to guide transition to reduced toxic chemical use in agriculture for sustainable land management and reduced externalities on embedded landscapes.</p>		
<p><b>Risk 6:</b> The project is unable to engage with 50% female stakeholders (as farmers &amp; within project governance structures) during implementation</p>	<p>GEF Core Indicator 11</p>	<p>Women  (within project governance structures (e.g. technical working groups, provincial sub-committees) &amp; as farmers)</p>
<p><b>Risk 6 Mitigation Strategy</b></p> <p>Every effort has been made to choose project sites which include female farmers for inclusivity within the ISRL project. However, it is possible that during implementation, farmers decide to not engage with the project due to various reasons (lack of interest, access to service providers and thus difficulty in implementation practices, or inability to participate in SRP trainings).</p> <p>To address this, multiple strategies have been implemented during the PPG and will be applied in project implementation. During the PPG, female farmers have been engaged and consulted to identify interest in partaking in the ISRL project. This has allowed the project to determine target group demographics and ensure 50% engagement with female farmers through project activities. This relationship building with the target group is crucial for ensuring active engagement during project implementation. A further potential challenge for female farmers to participate in the project is access to service providers. This will rely on whether service providers exist and are implementing services, which relies on the successful establishment of the project financial mechanisms, especially the RF. While this is a general challenge for all farmers participating in the project, it will have to be closely monitored with female farmers through strong relations to the target group and timely intervention to ensure service provision. A last challenge may be female farmers' inability to partake in SRP trainings. Therefore, female farmers will be consulted at project start to determine best training times given their schedules, ensuring active participation and thus implementation of SRP Standard and mitigation practices. Women (farmers or other community members) will also be actively supported in assuming leadership roles within project structures (e.g. technical working groups, provincial sub-committees) and a gender expert will be responsible for gender-sensitive project implementation.</p>		

Key Risks	Relevance	Main Actors
<p><b>Risk 7:</b> The Revolving Fund Structure of Thai Rice NAMA cannot be quickly transferred to the ISRL project.</p> <p>Service providers are unable to provide ISRL services due to lack of financial incentives without an established RF, which prevents farmers from implementing the SRP Standard</p>	<p>GEF Core Indicators</p> <p>4 &amp; 6</p>	<p>BAAC, government agencies</p>
<p><b>Risk 7 Mitigation Strategy</b></p> <p>A significant risk to the ISRL project is the possibility that the RF will not be established quickly at project start. It is intended that the RF structure established by the Thai Rice NAMA project will be transferred to the ISRL project by opening an additional account underneath the umbrella RF structure. This will ensure the immediate implementation of the RF and service provision to farmers.</p> <p>To ensure the RF is able to be quickly established at project start, coordination and arrangement of this has been conducted during the PPG phase with BAAC.</p>		
<p><b>Risk 8:</b> Initial start-up capital for the RF is not obtained</p> <p>Service providers are unable to provide ISRL services due to lack of financial incentives without an established RF, which prevents farmers from implementing the SRP Standard</p>	<p>GEF Core Indicators</p> <p>4 &amp; 6</p>	<p>Private sector, MoAC, BAAC</p>
<p><b>Risk 8 Mitigation Strategy</b></p> <p>A significant risk to the ISRL project is the possibility that the RF will not be established quickly at project start due to lacking start-up funds.</p> <p>Negotiations with the private sector have been ongoing during the PPG phase of project development. An agreement is anticipated to be reached at the start of the ISRL project upon successful GEF funding, as private partners are hesitant to invest without project confirmation.</p>		
<p><b>Risk 9:</b> Lack of engagement from government agencies aside from the Thai Rice Department</p>	<p>GEF Core Indicators</p> <p>3, 4, 11</p>	<p>Government agencies</p>

Key Risks	Relevance	Main Actors
<p><b>Risk 9 Mitigation Strategy</b></p> <p>As the project has a strong rice focus and RD was most involved during the preparation of the child document and during the PPG phase, it may be other government agencies have little motivation to take a co-lead role during project implementation, which may not be conducive for achieving a multi-stakeholder, multi-governance level and multi-disciplinary approach and the actions necessary to meet FOLUR objectives and results.</p> <p>To proactively address this, government agency stakeholders have been consulted during two field visits during the PPG to Ubon Ratchathani and Chiang Rai for consultation on their on-going projects and interests for future projects. It is anticipated that given this engagement with local provincial structures during project development in the PPG phase and integration of provincial interests in project design, that these agencies will have substantial interest to co-lead and actively participate in project implementation through project governance structures and activities.</p>		
<p><b>Risk 10:</b> The project is unable to obtain necessary funds, specifically related to private investment due to various reasons including lacking financial commitment from partners</p>	<p>All GEF Core Indicators</p>	<p>Private &amp; public partners</p>

Key Risks	Relevance	Main Actors
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**Risk 10 Mitigation Strategy**

The project has conducted an extensive stakeholder process during the PPG phase with both public and private partners through stakeholder workshops, project site visitations for collection of baseline data, joint consultations and smaller meetings (one on one) with private partners. This process is documented in **Appendix 9** and discussed in **Section 2.7**. In this way, the project has invested extensive effort in the stakeholder buy-in process with collective project design development and the consideration of partners' needs and interests in project development. Additionally, the pre-feasibility consultations conducted with banks (e.g. BAAC and Rabobank) towards additional impact financing, confirmed the need for extended work during the project implementation phase towards feasibility design, negotiations as well as bringing in corporate partners such as sustainable sourcing companies ? which cannot be expected to be secured during a modest PPG process. This process has also involved the agreement on and collection of stakeholder co-financing agreement letters with stated interest and commitment to the project as part of the finalization of the GEF project document. However, it is important to state that these letters are non-binding and therefore changes in management and staff at both private and public organizations have a significant impact on the guarantee of these funds for investment into the GEF-7 project. This is outside the control of the project, but close contact with partners throughout project finalization and submission while awaiting project approval from GEF-SEC will allow for addressing any arising key changes in staff.

<b>Risk 11: Outbreak of COVID-19 pandemic</b>	All GEF Core Indicators	Private & public partners
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**Risk mitigation strategy:**

The COVID-19 pandemic has sparked not only a health crisis but also an economic crisis, which together pose a serious threat to food security, particularly in poorer countries. The global pandemic is affecting global poverty and food security and nutrition, food trade and supply chains, gender, employment, environment, biodiversity, and a variety of policy interventions, as well as reflections on how to better prepare for future pandemics is urgently required. The need to provide clear risk assessments to decision-makers places significant strain on ministries of health and effective communication with the public is challenging. Sharing of data on COVID-19 and access to vaccines and other benefits are also crucial in containing the further spread of the pandemic. The project will therefore seek to support stakeholders' efforts in the context of unexpected crisis and emergency management efforts to contain such pandemics. The project has already addressed the following issues to mitigate the risk of the pandemic:

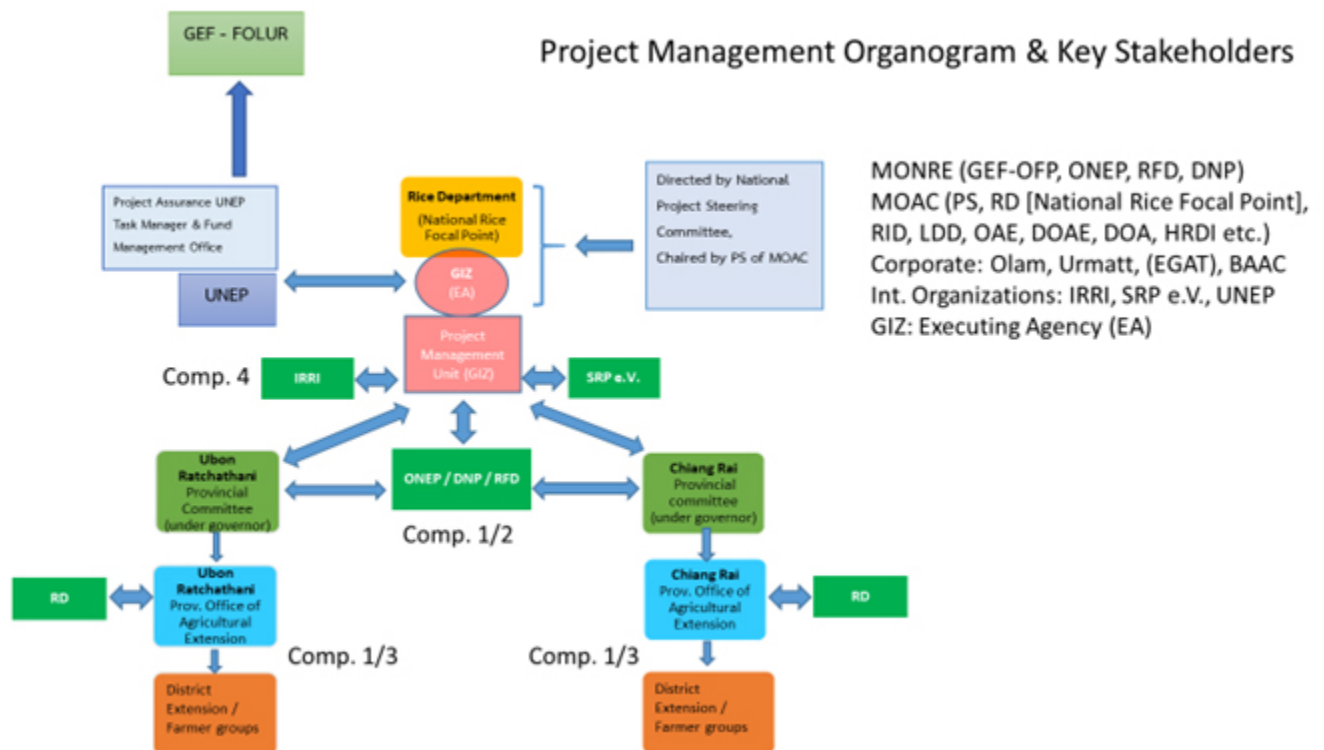
1. The project will adopt a 'green recovery' approach throughout implementation thereby inherently pursuing major change in the relationship between environment and economy. The 'greening' of rice value chains, e.g. though removing deforestation from the value chain and reducing chemical inputs are major components/interventions of the project. More specifically, the project will support sustainable investments into SRP (by corporate and government partners), pursue an inclusive landscape approach, support to emission mitigation and adaptation through SRP standard adoption by female and male farmers and supporting circular economy efforts (e.g., through collaboration with Urmatt), landscape restoration, soil and water management and biodiversity and conservation interventions (component 2) and introducing sustainable financing models for farmers and green/impact investments.
2. The project will invest in climate change adaptation activities (e.g. SRP Standard) thereby supporting resilient livelihoods and infrastructure to support green recovery and future resilience. The project will fully engagement with the private sector to enhance opportunities for accelerating new 'green' based businesses models that incorporate green recovery activities. Concrete activities include the support of decarbonization pathways including through zero- or low-carbon technologies such as AWD, SSNM, LLL, and innovative straw management technologies. Additionally, land degradation will be halted through supporting climate smart agriculture, SLM, and landscape restoration, thereby generating multiple GEB as well as livelihood benefits and green jobs. The project will intensively support the introduction of NRM practices that generate GEBs, food security and resilience to climate change with livelihood benefits. The transformation of the Thai rice sector to low-emission and sustainable rice production is a major change towards future resilience, greening and sustainability potentially affecting thousands of female and male farmers both in Thailand and abroad through regional cooperation.
3. The project will minimize human health risks while reducing land, air and water pollution though the

## 6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

See for full details on institutional set up and coordination section 4 of the UNEP Project Document, including Appendix 10 of the ProDoc.

ISRL project organogram



Effective project implementation will depend on the support and participation of multiple stakeholders, including representatives of the involved government agencies, the private sector, NGO's and local communities. Furthermore, at a local level the project will require the logistic and technical support of technical service providers to act as facilitating partners in participation with provincial departments of line ministries. Communities are represented by representatives of their organizations such as Community Rice Centers, TAO, community SMEs groups and community forests managed by local communities. In addition to the important roles played by technical service providers and government representatives in providing support to local communities, the project will also rely on the involvement of academic institutions (including valuation experts as part of the global TEEB partnership) to conduct applied research such as Valuation of Ecosystems and Biodiversity and on the M&E of the Performance Indicators of the SRP Standard. The Ministry of Agriculture and Cooperatives (Rice Department) will be the National Rice Focal Point for the project. A senior officer of Rice Department will act as National Project Director (NPD) and will closely cooperate with the PMU. The NPD will take the overall fiduciary responsibility of the project as well as forming, leading and supporting the National Project Steering Committee (NPSC). Rice Department has proposed GIZ to become the lead EA of the project

There are four tiers in the management structure of the project. The first tier is the contractual relationship between the lead EA (GIZ) and UNEP. With UNEP as GEF IA, providing oversight and quality control, whilst having the authority to approve project plans, budgets, expenditures, as well as changes to the GEFSEC endorsed project plan (ProDoc). The second tier is the National Project Steering Committee with policy decision stakeholder members coming from both national and provincial levels, as well as including representatives from technical, governance and academic institutions well representing the projects' sustainable rice landscapes approach (convened by the National Project Director); the third tier includes the Project Management Unit (PMU), which will coordinate and implement the project at a day-to-day basis; and a fourth tier at provincial level where a Project Implementation Unit (PIU) staffed with the Provincial Project Coordinator with support from flexible Technical Working Groups (convened as needed) will coordinate the implementation of local activities. The National Project Steering Committee will meet not less than twice each year of which one meeting specifically dedicated to review the project and approve the annual workplans, budgets, and address significant implementation issues. The Provincial Steering Committees will be convened by provincial Governor Office (supported by the Provincial Project Coordinator at the PIU) as required and meet on demand according to the related project work streams. Additionally, Working Groups will provide guidance to implementation of the relevant work streams and the sharing of knowledge and project results among sectoral agencies and related projects. The day-to-day administration of the project will be carried out by GIZ including a Project Management Unit (PMU) physically hosted by the Rice Department of the Ministry of Agriculture and Cooperatives, consisting of the co-financed National Project Director (NPD) as well as office space. Staff of the PMU includes the Project Manager (PM) with expertise in integrated landscape management and agriculture, an Assistant Manager for Administration and Finance, two provincial program coordination and agriculture development specialists, and other staff. The project staff will be recruited following EA and UN Environment Programme recruitment procedures (terms of reference are provided in appendix 11 to the ProDoc).

(Note: On planned coordination with relevant GEF and non-GEF initiatives please find a full description under section 2.7 of the ProDoc.)

## **7. Consistency with National Priorities**

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The policies of the Royal Thai Government reflect its growing support to sustainable agricultural production and for conservation of the natural resource base. Thailand is a signatory to the CBD, UNFCCC and UNCCD under which the proposed project is consistent with the country's Master Plan for Integrated Biodiversity Management (2015- 2021) and the related National Biodiversity Strategy and Action Plan, Second National Communication to the UNFCCC and National Action Programme of the UNCCD so as to contribute to biodiversity conservation, climate change mitigation and adaptation and sustainable land management in the wider landscape. The Master Plan for Integrated Biodiversity Management (2015-2021) is the principal biological diversity plan of Thailand, developed in compliance with Article 6 of the Convention on Biological Diversity, under which it states that each Contracting Party shall develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity. In line with the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, which were adopted by the Conference of the Parties to the Convention of Biological Diversity at its tenth meeting, the



Master Plan was formulated to address the underlying causes of biodiversity loss by aiming at conserving, restoring and protecting biodiversity and ecosystem services, as well as enhancing the benefits from them, along with raising public awareness and understanding of the roles and importance of biodiversity to human well-being, and collaborating with all relevant sectors in integrated landscape management.

The Royal Thai Government and the United Nations Country Team in Thailand prepared the United Nations Partnership Framework (UNPAF) in 2017. The document (2017 – 2021) provides a coherent strategic framework for the joint Thailand-UN effort to ensure that on the path to sustainable development, the country's vulnerability pockets are understood and adequately addressed. The UNPAF is in line with the 12th National Economic and Social Development Plan (NESDP) for 2017-2021, Thailand's aspiration to achieve the Sustainable Development Goals (SDGs) by 2030, and the country's international commitments and obligations. The Partnership intends to strengthen systems, structures and processes for effective, inclusive and sustainable policymaking and implementation. The Partnership entails the collaboration at national and sub-national levels to strengthen systems, structures and processes for effective, inclusive and sustainable policymaking and implementation. The Partnership also intends to enable a strong civil society sector, especially inclusive of the most marginalized. It also recognizes and stresses the importance to engage the private sector as a collaborator in national development. Finally, the Partnership expand the methodical exchange of expertise and technology available regionally/ globally to support social, political and economic development. The GEF project is fully consistent with the UNPAF Framework (strengthening food systems and inclusive policy processes, inclusiveness and enabling both public and corporate sectors to engage in national development, exchange of information and knowledge at national and regional level with respect to SRP, sustainable value chains and landscape approaches) .

The project's goal, objective, and outcomes will support the goals of the United Nations Partnership Framework with the Kingdom of Thailand 2017-2021 by promoting inclusive systems, structures and processes advance sustainable people-centred, equitable development for all people in Thailand through capacity building at local levels for environmental management, more sustainable resource use, and cleaner energy. The outcome will be achieved through support to enhanced policymaking, collaboration in strengthening participation in national development of civil society and the private sector cooperation.

The ISRL project is also consistent with Thailand's GEF approach of targeting projects providing support to the implementation of the 12th National Economic and Social Development Plan, (2017-2021). The plan focuses on holistic development within the framework of sustainable development and uses the Sufficiency Economy Philosophy as a guideline for balanced development stressing stability, transparency, accountability, equal development distribution, sustainable natural resources and environmental management and enhancement of national competitiveness. The plan emphasizes the importance of watershed management, land-use planning and sustainable livelihoods into production landscapes. At the provincial level, the new provincial planning decree places stronger emphasis on integration of environment and sustainable development criteria into development planning and budgetary processes at the local level, and this is further backed by the Decentralization Act, requiring local governments from the provincial to sub-district levels to take greater responsibility over natural resources and environmental management.

The governmental policies and programs have been elaborated in Section 2.4. but the outcomes of the ISRL project can be more specifically linked to the following national priorities and plans:

? The government is implementing the late King's Sufficiency Economy Philosophy principles formulating policies on sustainable development (including agriculture, forest, and water management) overseen by the National Committee for Sustainable Development and chaired by the Prime Minister.

? The Ministry of Agriculture and Cooperatives, including through its Rice Department, has launched and prioritized activities under the (i) Mega Farm Program ? a landscape-based multi-agency extension and resource mobilization program to improve the rice value chain in a sustainable manner; the (ii) New Agriculture Theory Policy ? enabling synergies among multiple crops, trees, livestock, and aquaculture as a foundation for self-reliance and to improve the quality of life for farmers whilst protecting natural resources and the environment; and the (iii) Policy for Diversification of Farmer Income & Reduction of Rice Farming in Dry Season ? promoting crop rotation and increasing the supply from other crops to reduce rice oversupply in the dry season for increased resilience. The most ambitious policy drive to meet the challenge of land degradation has been the five-year Land Development Department Strategy (2017-2021). It is specifically crafted to address five strategic issues: (1) mainstreaming land use planning to relevant stakeholders with appropriate support from relevant geospatial data and other information sources; (2) achieve better soil and water conservation through the rehabilitation of degraded lands; (3) develop research and technology transfer on land development; (4) establish and strengthen viable networks on land development; and (5) provide and enabling administrative framework for the administration of land development projects. The National Action Plan for Water Resources (Flood Management) is being implemented under the Office of National Water Resources (ONWR) and covers a 20-year period (2018 ? 2037). The plan addresses, amongst others, flood and droughts problems and the management of watershed areas. These targets are based on six strategies. They are the management of water use; security of water production; inundation control; water quality conservation; afforestation in watershed areas; prevention of soil damage; and managerial approach. The GEF project is aligned to the objectives under this Master Plan especially to the priority areas given respect to the restoration and protection of forests, reducing soil erosion, flood management, and developing integrated water/landscape management plans for the sustainable management of natural resources.

? The Royal Forest Department supports over 8,000 registered Community Forests to provide basic needs, generate income, and strengthen local capacities to manage natural resources. The ISRL project is aligned with the Royal Forest Department Strategy (2016-2021) which focusses and prioritizes the promoting forest conservation, forest restoration with the main goal to increasing forest area from 33.6% to 40% of the total country area in the next 10 years.

? The Ministry of Natural Resources and Environment (MoNRE) is responsible for the protection of natural resources and is one of the agencies involved in land use planning. It has established 16 Regional Environmental Offices (REOs) in four spatial administrative divisions based on Thailand's four hydrological regions reflecting the country's division on landscape level, with 24 large catchment basins that sustain various flora, fauna and ecosystem functions. In order to mainstream various environmental aspects like biodiversity conservation, watershed management, sustainable landscapes and land use planning, each REO brings together and coordinates important stakeholders, e.g. Royal Department of Forestry, and the Department of National Parks, Wildlife and Plant Conservation under the Five-Year Regional Environmental Management Plan of MONRE. The Ministry of Natural Resources and Environment takes a responsibility for natural resources and environmental issue, including the Thailand Sustainable Consumption and Production Roadmap (SCP). The Thailand SCP promotes resource

efficiency and reduced impact across sectors through enhanced chemical and waste management, improved environmental protection, green labelling, and other schemes.

(MONRE) Department of National Parks, Wildlife and Plant Conservation (DNP): Responsible to promote and restore forest, wildlife and plant resources in conservation areas to protect the original forest and restore degraded forest areas. With the strategy to promote, stimulate and raise awareness amongst rural and forests communities the DNP aims to increase their participation in sustainable resource management and protection. The ISRL Project is aligned with these policies.

Thailand as a Non-Annex I Party to the United Nations Framework Convention on Climate Change (UNFCCC), is obligated to submit National Communications (NCs) every 4 years and Biennial Update Reports (BURs) every 2 years. Thailand submitted its first BUR on 29 December 2015, its second on 29 December 2017, and a third 2019 BUR was published recently. Thailand has actively implemented climate actions and shares the results to UNFCCC and the global community. Thailand has established the inter-ministerial committees to oversee climate policy development and implementation and comprehensive national systems to monitor, evaluate and report on progress. Climate change has been included into the national economic and social development plans since 2007. Climate change is currently addressed at the highest policy level under the National Strategy (2018-2037) to ensure a long-term continuity of the issue alongside other economic and social considerations. The Climate Change Master Plan 2015-2050 encompasses climate change mitigation, adaptation, capacity building and enabling environment issues. Thailand submitted its Nationally Appropriate Mitigation Action (NAMA) pledging to reduce its GHG emissions in the energy and transportation sectors by 7-20% from business-as-usual (BAU) levels by 2020. To date, Thailand has made substantial progress in implementing its mitigation measures under NAMA and has successfully achieved a GHG emissions reduction of 57.84 MtCO<sub>2</sub>eq in 2018, approximately a 16% reduction compared to BAU. The Thai Rice NAMA project, a baseline project contributing to ISRL, is commissioned to develop an MRV system for GHG emissions of the rice sector until 2023. This includes direct measurement of GHG emissions in agricultural areas (by the RD), including laboratory capacity in target areas of the ISRL project (Ubon Ratchathani), for defining emission factors (EF) that will serve to calculate the emissions produced in northern Thailand. Furthermore, implementation of the SRP Standard and other sustainable rice growing practices, in particular water management and soil preservation, will be a major contribution to CC adaptation.

Land Degradation Neutrality (LDN) has been defined by the parties to the UNCCD Convention as: "A state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems". Thailand, as a member of UNCCD, belongs to the group of countries that is affected by desertification and drought. Furthermore, the country struggles since many years with an increasing percentage of severe chemical erosion/degradation of soils, especially due to the mis- and overuse of chemical fertilizers over the last decades. LDD reports up to 70% of the arable land affected by degradation. For this reason, ISRL has selected soil preservation and improvement as a central element of good agricultural practice, for instance reflected in the SRP Standard, organic farming, and the New Theory farming approach. The pesticide reduction policy under component 1 of ISRL and field implementation of sustainable farming under components 2 and 3 will directly contribute to a betterment of the degradation issue. Additionally as already captured under section on GEB the project will directly contribute to achieving the Thailand LDN targets by improved forest management and conservation which will both reduce forest loss, soil erosion as well as conservation of water ecosystem services, key to attaining sustainable production landscapes.

## **8. Knowledge Management**

**Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.**

The project's focus on upscaling adoption of sustainable practices among rice smallholders and other value chain actors in and beyond Thailand for sustainable food systems and productive landscapes will be

implemented through component 4 and related budget items on knowledge management (specifically output 4.2. and 4.3.) and leveraged through linkages and synergies with the FOLUR IP Global Platform. This will be accomplished through the following Knowledge Management approaches.

Targeted Technical Assistance to other countries: As previously noted, the SRP global network includes over 100 members and 1,500 direct dialogue partners, thereby providing a foundation for targeted outreach and consensus building to share best practice, tools, and systemic approaches. Through measures to link smallholder producers and value chain actors to the SRP Standard and Performance Indicators, the project will also engage a consortium of private sector commodity buyers and traders, NGOs, international development organizations, and governments working to promote more sustainable rice products that can be integrated into other FOLUR commodity projects incorporating the SRP Standard in Indonesia, and Vietnam as well as countries outside of the FOLUR IP. The respective networks of SRP Consortium members will be mobilized to maximize stakeholder outreach for technical assistance, training, communications, and knowledge-sharing in other rice-producing countries. This will represent a substantive contribution to the effectiveness of the FOLUR IP Global Platform in translating knowledge to grass-roots action and policy advocacy.

Diversification / integrated landscape management: the project will compile lessons learned through the project's experience at policy and grass roots levels in implementing integrated landscape management in diverse rice production landscapes. These lessons and success stories will be made available and shared in the form of practical guidance for practitioners and policymakers via the Global IP Knowledge-to-Action platform. This knowledge base, supported by project M&E data, will provide a robust evidence base to support and inform targeted technical assistance, policy advocacy and strategic knowledge management, and communications.

Engagement with key Global Policy Drivers: the project's policy advocacy will be delivered through close linkages with policy influencers and decision-makers at the national and regional levels as well as alignment with key policies and programs. These include the UNFCCC Thailand Climate Change Master Plan, ASEAN and its Guidelines on the Regulation, Use, and Trade of Biological Control Agents (also through its National Action Plan) as well as the ASEAN Guidelines on Soil and Nutrient Management, the New York Declaration of Forests and the Bonn Challenge, the Mekong River Commission, and the ASEAN Agreement on Cooperation for Sustainable Development of the Mekong River Basin which commits to improving utilization, conservation, and management of sub-regional water resources. Specifically, the project is fully aligned with the Thailand UNCCD LDN targets (MoAC, 2017, Land Degradation Neutrality (LDN) Targets report) related to:

? Target 1: Increase the proportion of national forest cover through reforestation and rehabilitation degraded forest including headwater and mangrove forests by participation of local community (through Comp 2 on landscape management)

? Target 2: Restore and rehabilitate degraded land to be productive land, emphasized on sustainable agriculture (through Comp 3 sustainable rice)

? Target 3: Reduce soil carbon loss and increase soil carbon sequestration by soil and water conservation and promote awareness raising and community participation in land management (through Comp 2 and 3)

National and regional platforms to drive scale: knowledge gained, and approaches validated through the intervention will be scaled by establishing and mobilizing multi-stakeholder partnerships at country level, using the Thailand National SRP Chapter (under formation) as a model. Such national-level initiatives will be crucial in serving as national focal points for disseminating best-practice knowledge from the Global Knowledge Platform so as to mobilize national-level resources to drive local collaborative initiatives, to provide training, to manage implementation of the SRP Standard at national level, and to establish the national-level commitment and 'ownership' necessary for meaningful engagement, long-term sustainability, and impact.

Value chain linkages: supply-side interventions to drive best practice adoption will be complemented by parallel demand-side efforts targeting domestic, regional, and global supply chains. With emerging interest among downstream actors in sustainable rice procurement to mitigate supply chain risks and to satisfy shifts in consumer expectations, the project will leverage its links with global food agribusinesses, millers, traders, exporters, retailers, and producer organizations to establish a clearinghouse function that can match supply and demand.

In addition, the below efforts are geared to ensure that information being produced through the project is used, accessible, shared, and available for comment/feedback.

? External Content Availability: This includes creating systems and protocols for collecting monitoring and evaluation reports, research reports, scientific and social findings, and other content generated through the project; and then cataloguing it and making it accessible.

? Important project materials should be made available in Thai (need translation costs in budget) language as to the minimum requirements for sharing knowledge for local audiences

? Knowledge to be shared (written or filmed) and accessible forms (e.g. via the web) and by taking advantage of existing, multiple opportunities (e.g. school libraries).

? Knowledge is catalogued, resulting in a bibliography at the end of the project of content generated through the project.

? A system should be in place to inform project partners and the public about the availability of new Knowledge Products.

The knowledge management inputs, and activities have been integrated into the project Workplan (Appendix 5 to the ProDoc), as well as GEF budget (Appendix 1 to the ProDoc) and will come out of the Project's technical activities rather than acting as stand-alone activities.

The table below presents the Key Deliverables and timeline of Component 4.

Outcomes & Outputs	Key Deliverables	Benchmarks
<b>Component 4:</b> Knowledge management and outreach for national and regional replication and impact assurance systems		
<b>Outcome 4:</b> Improved recognition, adoption, and replication of the SRP Standard, integrated landscape management and land-use planning		

<p><b>Output 4.1</b></p> <p>A national outreach campaign implemented to strengthen governmental and farmer adoption of sustainable rice value chains and integrated landscape management for multiple services</p>	<ul style="list-style-type: none"> <li>? Project website established with SRP e.V.</li> <li>? Outreach channels, media and messages identified, communicated and shared at annual stakeholder forums on SRP Landscapes</li> <li>? Media coverage of stakeholder forums and other project events and publications, including demonstration site visits</li> <li>? success stories (gender sensitive) and lessons learned developed and shared at annual forums on the SRP-ISRL project (FOLUR -IP) as well as posted on-line/website</li> <li>? Set up clear communication lines with regional and International fora including FOLUR IP for global lessons learning</li> <li>? Youth camps for ISRL organized and training provided to youth (50% female)</li> <li>? One national outreach campaign plan completed and approved for sustainable rice value chains and improved spatial planning</li> </ul>	<ul style="list-style-type: none"> <li>? YR1 Q4 ? YR5 Q2</li> <li>? YR 1 Q4 ? YR 5 Q2 (ongoing-annually)</li> <li>? YR 1 Q4 ? YR 5 Q2 (ongoing-annually)</li> <li>? YR1 -Q2-3</li> <li>? YR4 ? Q1 Q4</li> <li>? YR3 ? Q1 and YR4 -Q1</li> <li>? YR 2 Q2 ? Q3</li> </ul>
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<p><b>Output 4.2</b></p> <p>Corporate and government mobilized for adopting and replicating SRP Standard-compliant Good Agriculture Practices and sustainable sourcing of ?Quality Thai Rice? under the New Theory Farming Policy</p>	<p>? Partnerships national and international supply chain actors established</p> <p>? Institutional partnerships (documented) between ISRL project, SRP Global Partnership and Global FOLUR platform</p> <p>? Field trip between UR and CR and potential other provinces for upscaling conducted and lessons learned internalized and communicated</p> <p>? Bi-annual SRP Global Sustainable Rice Conference and Exhibition to showcase SRP</p> <p>? Two companies? source sustainable SRP rice from 90,000 ha included in the project landscapes</p>	<p>? YR2 Q1</p> <p>? YR2 Q1</p> <p>? YR4 Q1 ? Q4</p> <p>? Biannual</p> <p>? YR5 Q1</p>
<p><b>Output 4.3</b></p> <p>Concept of integrating the SRP Standard into sustainable rice value chains is extended to two other Asian countries (under the SRP partnership and South ? South mechanisms).</p>	<p>? SRP Standard with the integrated landscape approach is introduced and promoted in two additional countries</p> <p>? Field trips conducted with Asian country representatives</p> <p>? Documented agreement between the Global rice sourcing companies to support SRP and landscape management in other South countries where they are sourcing rice</p>	<p>? YR3 Q3 ? YR5 Q2</p> <p>? YR3 Q3 ? YR5 Q2</p> <p>? YR 5 ? Q1</p>

<p><b>Output 4.4</b></p> <p>A gender sensitive M&amp;E system is implemented to track project performance and the level of adoption of SRP/Integrated Landscape Management approach</p>	<p>? Data collection systems established for on-farm and off-farm monitoring (e.g. based on Bioversity International Toolkit for the <i>Indicators of Resilience in Socio-Ecological Production Landscapes and Seascapes</i>)</p> <p>? One gender sensitive M&amp;E system is established, up and running and operates systematically</p> <p>? Gender sensitive data collected during field visits, trainings, awareness work, etc. compiled, analyzed, and documented and shared with all stakeholders</p> <p>? Project data base established, up and running</p> <p>? Trainings prepared for gender responsive trainings on FOLUR best practices (video, FB, produced, available and used)</p> <p>? Thailand Sustainable Rice Landscapes Performance System incorporated into project M&amp;E Plan</p> <p>? Gender Mainstreaming Manual developed by expert</p>	<p>? YR1 Q4</p> <p>? YR1 Q2? YR5 Q2</p> <p>? YR1 Q1 onwards</p> <p>? YR1 Q1-2</p> <p>? YR 2 Q4 onwards</p> <p>? YR4 Q2</p> <p>? YR2 Q1 ? Q4</p>
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## 9. Monitoring and Evaluation

### Describe the budgeted M and E plan

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 7 of the ProDoc (Costed M&E plan). Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets, as well as the GEF-7 core indicators (also provided in Appendix 4a). These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan (Appendix 7) and are fully integrated in the overall project budget.



The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team (PMU), but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The project Steering Committee will receive annual reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

A mid-term review or evaluation will take place at midterm of the project, as indicated in the project milestones in the results framework. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (Section 2.6). The project Steering Committee will participate in the mid-term review and review the proposed management response to the findings and recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

In-line with the GEF and UNEP Evaluation requirements, the project will be subject to an independent Terminal Evaluation (TE). The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation will be charged against the project evaluation budget. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office to feed into the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The final determination of project ratings will be made by the Evaluation Office when the report is finalised.

The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the project manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalisation of the Recommendations Implementation Plan.

The **Costed M&E plan** is shown below.

Type of M&E Activity		Responsible Parties	GEF Budget USDS (Excluding PMU staff costs)	Timeframe
1.	Inception Report	PMU (Project PM) – supported by Project Director and PCs	M&E -At no additional cost (under general stationary)	4 weeks after Inception Workshop
2.	Measurement of Means of Verification for Project Framework Indicators (outcome, progress and performance indicators, GEF Core Indicators, SRP Standard indicators)	PMU PM and PIU PCs – supported by SRP and IRRI through sub-contracts	35,000 (BL 5502 Comp 4)	Outcome indicators: Start, mid and end of project Progress/performance indicators: annually
3.	Monitoring of environmental and social risks in relation to ESERN (Appendix 15)	PMU PM & PIU PCs	M&E - none	ongoing
4.	End-of-project impact performance survey & report	Consultancy, PMU	45,000 (BL 5508 Comp 4)	End-of project
5.	Ubon Ratchathani and Chiang Rai Provincial sub-committee meeting & report	PIU - PCs Local government (Governor's office)	9000 (B 5503 Comp 4)	quarterly
6.	Mid-term Review	UNEP TM External MIR Consultant PMU PM & PIU PCs	25,000 (BL 5504 Comp 4)	Q1 in year 3
7.	Terminal Evaluation	UNEP Evaluation Office, with input by PMU External TE Consultant(s)	30,000 (BL 5505 Comp 4)	Within 3 months of the end of project implementation
8.	Project Terminal Report (produced by consultant; high quality printing and generation of web-compatible presentation)	PMU PM, PIU PC External Consultant	15,000 (BL 5201 Comp.4)	Within 1 month of the end of project implementation
<b>TOTAL indicative COST (M&amp;E)</b>			<b>US\$ 159,000</b>	

## 10. Benefits

**Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCE/SCCF)?**

The ISRL project is foreseen to have multiple positive socio-economic impacts on farmers and local communities. For farmers, the project emphasizes the importance of livelihoods and enabling transition to sustainable production practices. Sustainable production practices, namely implementation of the SRP Standard, are supported through the project's financial mechanism which initiates a Revolving Fund to incentivize service providers to provide ISRL services and contribute to service provider livelihood. The creation of this new market equates to new forms of employment, and BAAC green loans enable service providers to invest in new equipment and technologies to provide these services in the long-term. Furthermore, green bonds are envisioned to further incentivize farmers to transition to sustainable production practices by rewarding successful implementation of the SRP Standard, whilst also in and generating environmental benefits at landscape level such as reforestation and forest protection. In addition, emphasis on agro-forestry and crop diversification in the highland HCVFs and sub-optimal rice systems (referred to above), will have positive impact on farmer livelihood by enabling farmers to produce additional crops for additional income despite off-seasons or degraded agricultural lands.

Given a gender mainstreaming plan and the GEF Core Indicator 11, the project will engage with at least 40% female beneficiaries to promote inclusion in transitioning to sustainable rice value chains and other on-farm and off-farm work such as agroforestry. Women will be supported to take positions of authority within the project governance structure and a gender consultant will prepare project gender mainstreaming and monitoring guidelines to ensure the representation and participation of women during project implementation. Gender equality, social issues and needs relevant for the project were studied as part of the project development process through desk study, consultative meetings with major stakeholders including Women Organic Rice Farmers Groups and other community-based groups. The objectives of the gender assessment were to assess the current situation regarding gender equality, and to identify gender equality, capacity building and gender accountability activities for inclusion in the project activities and budget. The results of the Gender Assessment are included and presented in detail in the project Gender Mainstreaming Plan (ProDoc, Appendix 16).

Social sustainability (which includes the gender dimensions), and consequently the durability of the uptake and impacts of the proposed management models, will be promoted through the application of a sustainable livelihoods approach, with a focus on integrating sustainably managed rice and ?diversification? alternatives into diverse farm economies and farming systems that will allow farm families to satisfy their multiple livelihood needs (including nutritious food and cash income) in a sustainable, resilient and low-risk way. The definition of such socially sustainable options will be supported through the application of the Farmer Field School model under the New Farming Theory, which emphasizes farm diversification and participatory problem analysis and farmer-based experimentation and technology validation. The project will contribute to national and provincial/landscape level socio-economic benefits, which will include: Sustained livelihoods for people dependent on the sustainable use and management of land resources (soil, water, biodiversity): The project will pay special attention to assessing the impacts of land degradation on vulnerable groups (women, indigenous peoples) and identifying sustainable gender sensitive solutions.

Socio-economic sustainability will be a pre-requisite to achieve environmental sustainability of the project, which focuses on landscape planning/management and implementation/financing of sustainable rice production (SRP Standard) and sustainable management of other crops. The ISRL project leverages ongoing governmental projects for environmental and forest conservation and management, as well as those focusing on farming (Mega Farms, Flood Retention, etc.) and livelihoods (OTOP, Diversification of Farmer Income, etc.). To ensure environmental sustainability, it is key to focus on farmer livelihood to effectively address forest encroachment, monoculture production (rather to incentivize production diversification), as well as unsustainable farming practices and related land degradation (ie: overuse of fertilizer and pesticide inputs leading to water contamination). The environmental impacts of the project, namely preservation of forests and contribution to reforestation/forest patrol, as well as the reduction in harmful farm practices which have off-farm impact on the surrounding landscape (through SRP Standard implementation), will be institutionalized through policy reform and integration.

## **11. Environmental and Social Safeguard (ESS) Risks**

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

**Overall Project/Program Risk Classification \***

<b>PIF</b>	<b>CEO Endorsement/Approva I</b>	<b>MTR</b>	<b>TE</b>
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<b>Medium/Moderate</b>
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**Measures to address identified risks and impacts**

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

**Supporting Documents**

Upload available ESS supporting documents.

Title	Module	Submitted
<b>Appendix 15 Thailand Rice SRIF- rev</b>	<b>CEO Endorsement ESS</b>	
<b>Appendix 15 SRIF UNEP_cleared</b>	<b>CEO Endorsement ESS</b>	

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

**Annex A: Project Results Framework**

SMART Indicators				Means of Verification	Risks and Assumptions
Objectively Verifiable Indicators	Baseline	Mid-Term Target	End of Project Target		
<b>Objective: To transform the Thai rice value chain for environmental sustainability by upscaling the Sustainable Rice Platform (SRP) Standard through an Integrated Landscape Management approach.</b>					
<b>GEF Core Indicator 3</b> Area of land restored	0	10,000 ha	30,000 ha  ? <i>Newly restored forest land: 20,000 ha</i>  <i>Lowland: 5,000 ha</i> <i>Highland: 15,000 ha</i>  ? <i>Diversified cropping in sub-optimal rice systems: 10,000 ha</i>	RFD & DNP land use maps and documents  Ha reforestation with seedlings (alive after 1-year) or improved forest cover/condition for landscape connectivity	<u>Risk</u> ? Final implementation sites do not quantify to the targeted ha due to lacking stakeholder support  <u>Assumptions</u> ? Provincial, national and private sector stakeholders support land restoration activities ? Provincial landscape plans will be agreed and implemented

<p><b>GEF Core Indicator 4</b> Areas of landscapes under improved practices (excluding Protected Areas (PA))</p>	<p>0</p>	<p>85,000 ha</p>	<p>160,000 ha</p> <p>? <i>Improved practices for BD, carbon &amp; water services: 25,000 ha</i></p> <p>? <i>Agroforests/ multi-crop in uplands (SLM): 25,000 ha</i></p> <p>? <i>Improved conservation in HCVFs: 20,000 ha</i></p> <p>? <i>Adopt SRP: 90,000 ha</i></p>	<p>Official designation documents from Monitoring reporting</p> <p>GIS Data</p> <p>Annual progress reports</p>	<p><u>Risks</u></p> <p>? Farmers face challenges and/or are unable to implement the SRP Standard and/or crop diversification</p> <p>? Farmers and/or communities do not find value in preservation/restoration of forest landscapes and continue business as usual land uses</p> <p><u>Assumptions</u></p> <p>? Local stakeholders support proposed changes for improved practices and adoption of new technologies &amp; practices</p> <p>? Environmental improvements are readily measured and linked to project activities</p>
<p><b>GEF Core Indicator 6</b> Greenhouse gas emissions mitigated</p>	<p>0</p>	<p>183,230 tCO<sub>2</sub>e by end of Year 2</p>	<p>916,149 tCO<sub>2</sub>e by end of Year 5</p> <p>5,496,894 tCO<sub>2</sub>e by year 20</p>	<p>MRV System accounting (<i>synergy with Thai Rice NAMA project</i>)</p> <p>Ex-Ante Carbon-balance Tool (EX-ACT) (FAO)</p> <p>Farmers records book and farmers surveys</p>	<p><u>Risk</u></p> <p>? Farmers are unable to implement AWD, which contributes largely to the project's mitigation potential, as well as reducing N inputs, crop diversification and agro-forestry practices</p> <p>? Forest restoration as well as improved forest management are not implemented as planned</p> <p><u>Assumption</u></p> <p>? The Thai Rice NAMA MRV System will be successfully expanded to the provinces Chiang Rai &amp; Ubon Ratchathani</p>

<p><b>GEF Core Indicator 9</b> Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in process, materials and products</p>	<p>Baseline: 333 tons active ingredients of hazardous herbicides &amp; pesticides used on 90K ha rice)</p>	<p>50 metric tons toxic chemicals reduced</p>	<p>100 metric tons toxic chemicals reduced</p>	<p>Calculating farmer's responsible disposal of containers  Reduced applications recorded through farm books, SRP assurance system (by applying the SRP standard)</p>	<p><u>Risk</u> ? Farmers are unable/unwilling to reduce their dependency on agro-chemicals as well as contribute to responsible disposal of contaminated containers <u>Assumptions</u> ? An agreement on responsible disposal of contaminated containers is reached with the private sector for implementation during the project period ? Agro-chemical companies will be collaborative in promoting reduced use of their products and/or proper disposal of contaminated containers for less pollution</p>
<p><b>GEF Core Indicator 11</b> Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment</p>	<p>0</p>	<p>20,000 beneficiaries</p>	<p>45,000 beneficiaries (50% female beneficiaries)</p>	<p>Project progress and PIR reports  M&amp;E Plan with gender mainstreaming plan</p>	<p><u>Risk</u> ? The project is unable to engage with 50% female beneficiaries during implementation <u>Assumption</u> ? Beneficiaries have the interest and commitment to participate in project activities.</p>
<p><b>SMART Indicators</b></p>				<p><b>Means of Verification</b></p>	<p><b>Risks and Assumptions</b></p>
<p><b>Objectively Verifiable Indicators</b></p>	<p><b>Baseline</b></p>	<p><b>Mid-Term Target</b></p>	<p><b>End of Project Target</b></p>		
<p><b>Component 1. National Policy and Institutional Development for Integrated Multi-Sectoral Management of Sustainable Rice Landscapes</b></p>					
<p><b>Outcome 1.</b> National policy strengthened, inter-ministerial collaboration improved, and environmental outcomes achieved under the framework of New Theory Farming Policy</p>					

**Output 1.1**

The positive economic and environmental benefits of an integrated SRP and landscape approach have been demonstrated to and are acknowledged by national governmental agencies.

**Output 1.2**

A national roadmap is developed and agreed for integrated target setting, investments, management, and monitoring for sustainable rice landscapes as well as to enable restoration of biodiversity and ecosystem services at provincial level in Chiang Rai and Ubon Ratchathani

**Output: 1.3**

National multi-agency agreement reached and applied on better alignment of the Mega Farm and Flood Retention Development Programs for meeting the interests of both the rice sector with the financing and protection of lowland and upland hydrological and forest BD services

**Output: 1.4**

Reduced agrochemical pollution through regulatory approaches and collaboration with the private sector (PPP) on Extended Producer Responsibility (EPR) (e.g. proper disposal of contaminated containers)

<b>Outcome Indicator:</b> Number of policies and regulatory approaches adopted by the government, to implement a national roadmap for sustainable rice landscapes, enable restoration of biodiversity and ecosystems services.			At least 2 rice production landscapes with SRP and Landscape Approaches in each province		-
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<p><b>Indicator 1.1 a</b> Number of coordinated Government agencies and stakeholders that adopt integrated SRP &amp; Landscape Approaches</p> <p><b>Indicator 1.1.b</b> Number of capacity development plans designed and implemented</p>	<p>0 At present no government agencies have validated and adopted an Integrated SRP &amp; Landscape Approach for increasing their management capacity to support multi-sectoral and multi-agency policy-making processes</p>	<p>50% of involved / relevant government agencies</p> <p>? draft plans designed and tested</p>	<p>All involved / relevant government agencies</p> <p>at least 2 capacity development programs implemented to improve government agencies' management capacity for supporting multi-sectoral and multi-agency policy-making processes for a landscape approach</p>	<p>Reports from workshops and validation meeting and attendance registers.</p> <ul style="list-style-type: none"> <li>- Bi-annual updates and annual reports by EA.</li> <li>- Capacity development plans available and Implemented</li> </ul>	<p><u>Risk</u> ? Agencies do not value the integrated SRP &amp; landscape approach</p> <p><u>Assumption</u> ? Interested agencies will actively participate in trainings.</p> <p>? Low rate of turnover of senior representatives and staff of stakeholder agencies</p>
<p><b>Indicator 1.2</b></p> <p>A national roadmap document for SLM has been developed and is endorsed by the relevant authorities</p>	<p>No roadmap</p>	<p>A draft proposal ready</p>	<p>Final roadmap document</p>	<p>Number of studies and research elaborated; stakeholders meeting minutes</p>	<p><u>Risk</u> ? Baseline data not available to inform the design of a national roadmap to inform locally appropriate land management plans</p> <p><u>Assumption</u> ? Relevant line ministries recognize the importance of developing and implementing land use and restoration plans</p>

<p><b>Indicator 1.3</b> Number of national multi-agency, multi-stakeholder policy documents</p>	<p>At present there is no policy document on integrated landscape management, sustainable food production, conservation and restoration of habitats. Furthermore, there is no strategy of financing of related</p>	<p>Draft available for peer review and consultations</p>	<p>1</p>	<p>Policy document available</p>	<p><u>Risk</u> ? Common interests in integrated landscape management are not identified/recognized by the private sector and government agencies <u>Assumption</u> ? The rice sector and government agencies come to agreement on how to address both sector interests and environmental restoration &amp; conservation in future policy planning</p>
<p><b>Indicator 1.4. ?</b> <b>GEF Core Indicator 9</b> Number of agreements with private sector established that pertain to reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in process, materials and products</p>	<p>Baseline: 333 tons active ingredients of hazardous herbicides &amp; pesticides used on 90K ha rice)</p>	<p>50 metric tons toxic chemicals reduced</p>	<p>100 metric tons toxic chemicals reduced</p>	<p>Calculating farmer's responsible disposal of containers  Reduced applications recorded through farm books, SRP assurance system</p>	<p><u>Risk</u> ? Farmers are unable/unwilling to reduce their dependency on agro-chemicals as well as contribute to responsible disposal of contaminated containers <u>Assumptions</u> ? An agreement on responsible disposal of contaminated containers is reached with the private sector for implementation during the project period ? Agro-chemical companies will be collaborative in promoting reduced use of their products and/or proper disposal of contaminated containers for less pollution</p>
<p><b>Component 2. Integrated Landscape Management for productive agriculture and environmental sustainability in Chiang Rai and Ubon Ratchathani</b></p>					
<p><b>Outcome 2.</b> Management of forested landscapes improved for enhancing environmental integrity and productivity of neighboring agricultural areas, including rice, by the governments of Chiang Rai and Ubon Ratchathani</p>					

**Output 2.1**

Two spatial landscape management plans produced and agreed at provincial level that integrate sustainable agriculture with improved landscape conservation and restoration of ecosystem services and biodiversity

**Output 2.2**

Government partners (MoAC, RFD, provincial administrations of UR&CR) implement landscape management plans through investments that reduce negative environmental impacts and restore ecosystem/water services of HCVF for agricultural areas such as Mega Farms.

**Output: 2.3**

Gender-inclusive agriculture diversification and development program designed and agreed (including coffee, fruit-crops, agroforestry) in upland HCVF in Ubon Ratchathani & Chiang Rai

<b>Outcome Indicator</b> Quantity of land under integrated landscape spatial management plans and gender inclusive, diversified agriculture practices-improved farmers' welfare in the selected provinces.	Land areas: 0  Farmers' welfare: Baselines to be established in year 1		For land area values see output indicators below;  Farmers' welfare: 25% increase over baseline (disaggregated by gender, 50% women)		-
<b>Indicator 2.1</b> Percentage increase in government budget allocated for investments through implementing landscape management plans	Baseline to be established in year 1	5 % increase over baseline	15% increase over baseline	Project monitoring reports	<u>Risk</u> ? Diverse interests among stakeholders? delay agreement on landscape planning <u>Assumption</u> ? Stakeholders will be able to reach agreement on provincial management plans before the middle of the project timeline so they can be implemented

<p><b>Indicator 2.2.1 ?</b>  <b>GEF Core</b>  <b>Indicator 3.2</b>  Area of land restored</p>	0	10,000 ha  <i>Lowland: 2,500 ha</i> <i>Highland: 7,500 ha</i>	30,000 ha  ? <i>Newly restored forest land: 20,000 ha</i>  <i>Lowland: 5,000 ha</i> <i>Highland: 15,000 ha</i>  ? <i>Diversified cropping in sub-optimal rice systems: 10,000 ha</i>	RFD or DNP maps used for their project monitoring and project monitoring reports  Project data on ha reforestation with seedlings for landscape connectivity	<u>Risk</u> ? Final implementation sites do not quantify to the targeted ha due to lacking stakeholder support <u>Assumption</u> ? Extension agents and local communities will be willing to adopt a participatory approach and work collaboratively to implement landscape management plans (including these restoration targets)
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<p><b>Indicator 2.2.2 ?</b>  <b>GEF Core</b>  <b>Indicator 4.1</b>  Area under improved management for BD, carbon and water services</p>	0	12,500 ha	25,000 ha	RFD or DNP maps used for their project monitoring and project monitoring reports	<u>Risk</u> ? Final implementation sites do not quantify to the targeted ha due to lacking stakeholder support <u>Assumption</u> ? Extension agents and local communities will work collaboratively to implement landscape management plans
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<p><b>Indicator 2.2.3 ?</b>  <b>GEF Core Indicator 4.3</b>  Area of agroforests/ multiple crop systems under improved production (SLM)</p>	0	12,500 ha upland cropping	25,000 ha upland cropping	HRDI maps from their monitoring of encroachment in Chiang Rai uplands	<p><u>Risk</u>  ? Farmers are not convinced of economic benefits /market interest in crop diversification and therefore do not implement diversification</p> <p><u>Assumptions</u>  ? The commodity market will reward and embrace crop diversification  ? Farmers already have or will receive access to the resources necessary (finance, technical support, market linkage) to for transitioning to diversified production</p>
<p><b>Indicator 2.2.4 ?</b>  <b>GEF Core Indicator 4.4</b>  Area under improved conservation management in HCVF and other key habitats</p>	0	10,000 ha	20,000 ha	RFD or DNP maps used for their project monitoring and project monitoring reports	<p><u>Risk</u>  ? Final implementation sites do not quantify to the targeted ha due to lacking stakeholder support</p> <p><u>Assumption</u>  ? Extension agents and local communities will work collaboratively to implement landscape management plans</p>

<p><b>Indicator 2.3</b></p> <p>Number of programs developed regarding gender-inclusive agriculture diversification and development</p>	<p>0</p> <p>At present there are no gender-inclusive agriculture diversification and development programs (including coffee, fruit-crops, agroforestry) in upland HCVF in UB &amp; CR</p>	<p>0</p>	<p>2 gender-inclusive agriculture diversification and development programs are agreed upon by stakeholders and available for implementation (1 in UB, 1 in CR)</p>	<p>Diversification Programs publicly available/ accessible (e.g. website)</p> <p>M&amp;E reports</p>	<p><u>Risk</u></p> <p>? Diverse interests among stakeholders? delay agreement on diversification programs</p> <p><u>Assumption</u></p> <p>? Programs will build off of existing government programs (specifically OTOP, female occupational promotional groups)</p>
<p><b>Indicator 2.4</b></p> <p>The proposed Thailand sustainable rice landscapes performance system able to capture data on the environmental integrity and productivity of project landscapes.</p>	<p>System would build upon existing landscape and farm resilience/performance measurement systems such as e.g. SRP PI, LandScale and others</p>	<p>Draft system designed for peer review[1]</p>	<p>System pilot tested and generating useful data for review</p>	<p>System operational</p>	<p>? Data availability and stakeholders support for data collection processes</p>
<p><b>Component 3. Upscaling sustainable rice production and value chains through provincial rice sector investments</b></p>					
<p><b>Outcome 3.</b> Environmental and social benefits on- and off-farm obtained by deployment of SRP Standard and diversification of agricultural production widely adopted by small farmers in selected provinces</p>					

**Output 3.1**

The area under Sustainable Rice Platform (SRP) Standard practices is expanded through capacity building, extension and farmer field schools servicing 45,000 farmers

**Output 3.2**

Feasibility design and investments agreed for diversification of agricultural production in 10,000 ha of low-land sub-optimal rice systems

**Output 3.3**

Financial instruments and investments mobilized and agreed with private sector, government partners and rice producers for scaling up sustainable rice value chains and landscapes (Revolving Fund, BAAC Green Loan Program, Green Bonds)

**Output 3.4**

The economic and technical feasibility of new technology and incentive mechanisms for linking the SRP Standard with an integrated landscape approach is analyzed and proven

**Output 3.5**

Value chain actors promote market-based solutions that drive demand for sustainable rice systems and products

<b>Outcome Indicator</b> Increased area under SRP Standard and integrated landscape management approaches and level of funding from financial mechanisms and investments made available to farmers	Area under SRP Standard = 0  Percentage of total amount targeted (USD 20 million) of (combined) financing generated and secured through the financing mechanisms = 0		90,000 ha (approximately 45,000 farmers, with 50% female beneficiaries,  50% of targeted amount (USD 10 million)		-
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<p><b>Indicator 3.1.1 ?</b>  <b>GEF Core Indicator 4</b>  Area under SRP  Standard is increased, in the selected target areas</p>	<p>0</p>	<p>45,000 ha (approximately 20,000 farmers engaged with project)</p>	<p>90,000 ha (approximately 45,000 farmers benefitting through capacity building, agriculture services or finance)</p>	<p>Monitoring of farmer implementation of SRP</p>	<p><u>Risk</u>  ? Farmers are unwilling / unable to implement the SRP Standard  <u>Assumptions</u>  ? Farmers will be motivated to implement the SRP Standard  ? Farmers will not face major challenges during implementation given project support</p>
<p><b>Indicator 3.1.2 ?</b>  <b>GEF Core Indicator 6</b>  Reduction tCO<sub>2</sub>e from rice production following SRP standard with the integrated landscape management approach</p>	<p>0</p>	<p>183,230 tCO<sub>2</sub>e by end of Year 2</p>	<p>916,149 tCO<sub>2</sub>e by end of year 5  5,496,894 tCO<sub>2</sub>e by year 20</p>	<p>MRV system connecting to the existing Thai Rice NAMA project MRV System</p>	<p><u>Risk</u>  ? Farmers are unable to implement AWD, which contributes largely to the project's mitigation potential, as well as reducing N inputs, crop diversification and agro-forestry practices  ? Forest restoration as well as improved forest management are not implemented as planned  <u>Assumption</u>  ? The Thai Rice NAMA MRV System will be successfully expanded to the provinces Chiang Rai &amp; Ubon Ratchathani</p>



<p><b>Indicator 3.2</b> Number of plans agreed in UB &amp; CR for transforming sub-optimal rice systems into sustainable &amp; diversified systems and area of diversified cropping adopted within sub-optimal rice systems <i>(GEF Core Indicator 4)</i></p>	<p>0 At present there are no plans for transforming sub-optimal rice systems into sustainable diversified systems  Area: 0</p>	<p>2 (1 in UB, 1 in CR)  5,000 ha</p>	<p>2 (1 in UB, 1 in CR)  10,000 ha</p>	<p>Plans for agricultural diversification in sub-optimal rice systems  PMU will monitor farmer's changes from monoculture to diversified cropping  HRDI maps in Chiang Rai, RFD maps in Ubon</p>	<p><u>Risk</u> ? Stakeholders are not interested in crop diversification for rice systems <u>Assumption</u> ? Availability of financing by the government or other actors to incentivize plan development  <u>Risk</u> ? Farmers are not convinced of economic benefits /market interest in crop diversification and therefore do not implement diversification <u>Assumptions</u> ? The commodity market will reward and embrace crop diversification ? Farmers already have or will receive access to the resources necessary (finance, technical support, market linkage) for transitioning to diversified production</p>
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<p><b>Indicator 3.3</b></p> <p>Engaging with financiers for possible impact and blended financing</p>	<p>0%</p> <p>0</p>	<p>Advanced discussions with 2-3 financiers for future funding post project</p> <p>7 million EUR 7,738,535 USD\$</p>	<p>At least one business plan and financing package agreed for post project, benefitting investments in sustainable rice production practices and landscape protection</p> <p>7 million EUR 7,738,535 USD\$</p>	<p>Revolving Fund/finance mechanisms confirmed by BAAC records</p> <p>Green Loans are confirmed by BAAC records</p> <p>Green Bond agreements between issuers and beneficiaries</p> <p>BAAC records, co-financing agreements</p>	<p><u>Risks</u></p> <p>? The RF Structure of Thai Rice NAMA cannot be quickly transferred to the ISRL project</p> <p>? Feasibility design and reviews of Green Bonds advanced to securing corporate partner interest</p> <p>? Green Bonds are still an innovation in Thailand and thus difficult to design &amp; implement</p> <p><u>Assumptions</u></p> <p>? Revolving fund structure will be quickly agreed and established with BAAC to support service providers in UB &amp; CR</p> <p>? A Green Bond issuer will be quickly identified at project start</p> <p><u>Risk</u></p> <p>? Service providers are unable to provide ISRL services due to lack of financial incentives without an established RF, which prevents farmers from implementing the SRP Standard</p> <p><u>Assumption</u></p> <p>? Initial capital for the RF is identified quickly at project start</p>
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<p><b>Indicator 3.4</b></p> <p>Number of appropriate technologies that have been tested as economically viable and show positive impacts on landscape ecology according to performance indicators</p>	<p>IRRI to establish in year 1 the methodology for landscape performance indicators for environmental outcomes</p>	<p>1 new technology/incentive mechanism introduced with proven positive landscape environmental outcomes</p>	<p>At least 2 new technology/incentive mechanism adopted with proven positive landscape environmental outcomes</p>	<p>IRRI report available and accessible online)</p>	<p><u>Risk</u>  ? The SRP Standard with integrated landscape approach is unable to be implemented during the project  ? Innovative models (green bonds, intrinsic economic value method (PES method) are difficult to assess/research due to lacking data and existing examples)  <u>Assumption</u>  ? A government agency or a private company will be interested to become a green bond issuer  ? There will be success stories arising from the project to report and promote among stakeholders</p>
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<b>Indicator 3.5</b> Demand for sustainable rice systems and products increasing by 10% over life of project through corporate alliances and market-mechanisms	0	Expanded or new corporate alliances established	10% increase in market demand for sustainable rice and systems (ha) products (tons)	Memorandums of understanding (MoUs) signed between mentor and mentee companies	<u>Risk</u> ? The financial mechanisms established/researched by ISRL are unsuccessful or unfavorable for private sector actors <u>Assumption</u> ? Mentor and mentored companies will be identified and interested to promote the financial mechanisms to drive demand for sustainable rice
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**Component 4. Knowledge management and outreach for national and regional replication and impact monitoring systems**

**Outcome 4.**

Environmental, technical and socio-economic benefits from implementation of SRP standards and integrated landscape approaches are understood by government agencies, private companies, and farmers willing to replicate this scheme at national and regional level

**Output 4.1**

A national outreach campaign implemented to strengthen governmental and farmer adoption of sustainable rice value chains and integrated landscape management for multiple services

**Output 4.2**

Corporate and government mobilized for adopting and replicating SRP Standard and sustainable sourcing of ?Quality Thai Rice? under the New Theory Farming Policy

**Output 4.3**

Concept of integrating the SRP Standard into sustainable rice value chains is extended to two other Asian countries (under the SRP partnership and South ? South mechanisms).

**Output 4.4**

A gender sensitive M&E system is implemented to track project performance and the level of adoption of SRP/Integrated Landscape Management approach

<p><b>Outcome Indicator</b> SRP Standard with integrated landscape approach is increasingly recognized and expanded at national and regional level</p>	<p>Baseline national: UR &amp; CR; baseline regional: 0</p>		<p>National level: 1 additional Thai province; regional: see output indicator 4.3</p>		<p>-</p>
<p><b>Indicator 4.1</b> Increased knowledge and awareness levels of targeted communities, government, corporate and civil society</p>	<p>0 Baseline KAP (Knowledge, Attitudes and Practices) scores to be determine in year 1 disaggregated by group</p>	<p>N/A</p>	<p>80% increase over baseline scores (target audiences including 50% women)</p>	<p>project M&amp;E/ KAP reports</p>	<p><u>Risk</u> ? KAP assessments may not accurately reflect real changes in knowledge and awareness levels in the targeted groups <u>Assumption</u> ? Government and private actors will actively engage and contribute to the overall campaign</p>
<p><b>Indicator 4.2</b> Number of companies that source sustainably produced rice from the ISRL project</p>	<p>0</p>	<p>1</p>	<p>2 <i>Source sustainable or SRP rice from 90,000 ha included in the project</i></p>	<p>Recorded through company purchases</p>	<p><u>Risk</u> ? Companies decide to source sustainable rice from farmers outside the project scope <u>Assumption</u> ? Sustainably produced rice will be available for purchase before project end</p>

<p><b>Indicator 4.3</b> SRP Standard with the integrated landscape approach is adopted in additional countries, including through ASEAN Forum</p>	0	1 country	At least 2 countries	The SRP Standard integrated with the landscape approach is a method utilized in current project proposal developments	<p><u>Risk</u> ? Projects in other countries are interested to implement different sustainable standards and planning objectives other than our proposed approach</p> <p><u>Assumption</u> ? Countries in the region are interested to adopt the SRP standard and be linked to project proposals in the design phase which will be interested to implement this method</p>
<p><b>Indicator 4.4.1</b> Farmer-based data collection systems (ie: farm books) are established to contribute to the SRP validation &amp; quality assurance system, as well as monitoring of on-farm &amp; off-farm environmental impacts of SRP practices</p>	0	1	2	<p>Farm books</p> <p>IRRI collection data for off-farm impacts on landscapes</p>	<p><u>Risk</u> ? Farmers do not want to record their practices ? Data may not be regularly updated if not done by the project itself</p> <p><u>Assumption</u> ? Farmers will accurately report their practices ? Off-farm impacts will be noticeable and measurable</p>
<p><b>Indicator 4.4.2?</b> same as indicator 2.4</p>					-

<b>Indicator 4.4.3 ?</b> <b>GEF Core Indicator 11</b> Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	0	20,000 beneficiaries	45,000 beneficiaries (50% female beneficiaries)	Project reports M&E Plan with gender mainstreaming plan	<u>Risk</u> ? The project is unable to engage with at least 50% female beneficiaries during implementation <u>Assumption</u> ? Beneficiaries have the interest and commitment to participate in project activities.
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[1] The targeted indicators, data sources and reporting lines to be determined during system design.

## **ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).**

WB Global FOLUR team review (2 May 2019) with regards Thailand Child project in PFD:

Other issues to be addressed in the PPG phase:

Thailand: The period of (GHG) calculation recommended is 20 years (and not 5), unless a strong justification is provided; the GHG mitigation is not expressed in tons in the core indicators worksheet p.370; no beneficiaries informed in the core indicators worksheet p. 373.

Response in PPG (Sept 2020):

? The GHG calculation is now using a 20-year projection; respective Core Indicator in both ProDoc and CEOER have been updated.

? Core Indicator worksheet (Appendix 4a, Annex F) and summaries in ProDoc and CEO ER have been updated and # of beneficiaries increased from 22,500 to 45,000 farmers and other landscape stakeholders; of which a targeted 50% being women.

### **Responses to STAP Review: (28 Apr 21)**

*STAP comment: Climate resilience not addressed in detail, though mentioned in the section on risks. The proposed*

*response to climate change is quite general at this level; more detail expected in development of country projects and in program-level monitoring and targeted capacity support functions. (see also response under GEF Council comments)*

According to data from 1994 to 2013, Thailand is ranked the 11th country most affected by climate-related impacts. Due to changes in rainfall patterns, shifting seasons, and increased occurrence of natural disasters, particularly floods and droughts, climate change is causing significant impacts on rice

and agricultural production in Thailand. Rain-fed rice farming in Thailand has developed over generations based on seasonality, specifically the arrival and departure of the Monsoon rains. Farmers usually plant their first rice crop at the start of the rainy season in May. However, in recent years the Monsoon rains have arrived later than in the past, exposing rice crops to drought, with farmers having to delay planting or watch crops fail entirely. The Meteorological Department of Thailand reported that the country experienced the worst drought in a decade, as average precipitation across large swaths of the country has fallen far behind the monthly average, particularly in the north and northeastern provinces as well as in the Central Plains - all of which are important crop growing regions. Future droughts pose threats to the national economy, which is heavily reliant on natural resources, with a large percentage of its population engaged in agriculture. Rice farming is particularly sensitive to rainfall and temperature variability and salinity intrusion from sea level rise and extreme weather events.

Presently, agriculture is the second largest GHG emitting sector in Thailand and is at the same time highly vulnerable to adverse climate change effects. The Thai rice sector is not only responsible for almost 60 percent of Thailand's emissions from agricultural activities (approximately 9% of national emissions) but is also the world's 4th largest emitter of rice-related GHG - mainly methane. The project will support investments in climate change adaptation activities (Climate Smart Agriculture, Sustainable Rice Platform Standard (SRP) thereby supporting resilient livelihoods and infrastructure to support green recovery and future resilience. The project will fully engage with the private sector to enhance opportunities for accelerating new "green" based businesses models that incorporate green recovery activities. Concrete activities include the support of decarbonization pathways including through zero- or low-carbon technologies such as AWD, Site-Specific Nutrient Management (SSNM) and innovative straw management technologies that would reduce the on-farm burning of rice straw. Additionally, land degradation will be halted through supporting climate smart agriculture, SLM, and landscape restoration, thereby generating multiple GEB as well as livelihood benefits and green jobs. The project will intensively support the introduction of NRM practices that generate GEBs, food security and resilience to climate change with livelihood benefits. The transformation of the Thai rice sector to low-emission and sustainable rice production is a major change towards future resilience, greening and sustainability potentially affecting thousands of female and male farmers both in Thailand and abroad through regional cooperation. In addition, the project will contribute to GHG emissions from AWD implementation for lower impact on global climate (reduction of methane emissions). Reductions in the intensity of rice production, and modification of crop and water management practices in rice fields will lower methane emissions associated with flooded rice paddies. The promotion of agroforestry in farming systems will increase carbon stocks due to increases in the biomass of woody perennials. The project will support carbon sequestration from improved forest management and restoration of degraded landscapes (916,149 tCO<sub>2</sub>e by end of Year 5; 5,496,894 tCO<sub>2</sub>e by end of year 20). (see SRIF, Appendix, 15).

*STAP comment: More thinking about possible technological, financing, and business model innovations would be desirable, from which each country and the IP as a whole could benefit.*

The Better Rice Initiative Asia (BRIA) project is in the GIZ consortium and is a co-financier to the GEF / ISRL project. The GEF project will benefit from the experiences of the BRIA project such as setting up innovative advisory services and strengthening delivery mechanisms for building on local innovation, technology transfer and upscaling through training and extension on Climate Smart Agriculture and Sustainable Rice Production.

The projects approach to the method of financing is innovative as the project will implement, and scale-up, three financial mechanisms (FMs) in component 3, as well as look into a third financial innovation (Green Bonds) to support transformation of the Thai rice value chain for environmental sustainability.

The financial mechanisms include:

- 1) Farmer-owned Revolving Fund (RF)
- 2) Low-interest Green Loans from BAAC



### 3) Green Bonds

The first FM is a farmer-owned revolving fund (RF) facilitates adoption of the Sustainable Rice Platform (SRP) Standard and incentivizes crop diversification. The second FM expands the Bank for Agriculture and Agricultural Cooperatives (BAAC) Green Loan Program by linking ISRL service providers with the bank, enabling them to acquire the equipment needed to provide ISRL services such as laser land levelling (LLL), alternate wetting and drying (AWD), site-specific nutrient management (SSNM) and straw and stubble management (SSM) (e.g. rice balers) as well as provide general working capital to the service providers. The third FM promotes Green Bond issuance to finance project outcomes (e.g. protection of ecosystems like watersheds, forests, and biodiversity; reduction of hazardous chemicals). The issuer could be the Thai government (e.g. MoF), state enterprises (e.g. EGAT, BAAC, etc.), and/or a private company (e.g. Olam). The proceeds of a Thai government Green Bond could be used by Thai ministries (e.g. MoAC and MoNRE) and/or for the capitalization of the RF as well as for other national environmental preservation priorities (e.g. watershed protection for maintaining sufficient EGAT dam levels and/or floating solar plants. SRP Certificates can be monetized through inclusion in the Green Bond structure, proposed for feasibility design under Output 3.3. The third FM relates to Green Bonds. The Bank for Agriculture and Agricultural Cooperatives (BAAC) announced that it will be going green in Thailand as the Finance Minister approved plans by the state-run) to issue \$640 million in green bonds to fund community projects that will protect forests and promote sustainable farming. BAAC was the first institution allowed to issue green bonds for environment development, in line with the bonds' international standard, as stated by the Minister of Finance Uttama Savanayana. These bonds are checked and guaranteed by related organizations. The bonds will be sold to Thai financial institutions first, and they are expected to buy up the entire tranche. The BAAC will use the money raised to provide low-interest loans to rural small and medium-size enterprises or those involved in green businesses. The funds will also go to community enterprises, and farmers planning green projects. Increasingly, Thai farmers are growing more organic produce, and transitioning towards more sustainable and environmentally friendly farming methods. Financing through bonds is a tool to help community projects that promote that transition, and ones that do more to protect the country's forests. Agriculture, although it contributes a relatively small percentage to the gross domestic product, is vital to the Thai economy and Thai culture. It generates employment for over 40 percent of the population, supplies the country with a treasure trove of natural resources and raw materials for biotechnology and biosciences, and advances the nation's reputation because of the high quality of its commodities. Thailand is the only net food exporter in Asia and a key pillar in regional food security. The country ranks among world leaders in shipments of rice, sugar, cassava, seafood, and other agricultural goods.

The project will proactively engage and strengthen interaction between the Global Platform and the project in Thailand for enhanced mutual learning and benefit. The project will lead on country level engagement with male and female producers, corporate sector, local finance institutions (e.g. BAAC) to complement outreach and engagement at regional and global scale. The project will also collaborate with GP opportunities for engagement (and scaling-up) with national or multinational companies (e.g. Olam) and participate in relevant national or regional roundtables and other relevant multi-stakeholder platforms, roundtables etc. at country level. As elaborated under component 1, the project will identify and promote opportunities for policy reform in support of the transformation of the Thai rice value chain as well as enhanced multi-agency cooperation and public and private sector engagement in transformative processes. The project will participate in periodic needs assessment surveys and FOLUR IP Annual Meetings to guide knowledge and outreach product development and contribute to the identification of opportunities for communications support on gender and private sector engagement based on local and national context.

*STAP comment: Moreover, a view on the different ways to scale (see notes on scaling out, up or deep in STAP priority criteria document) would also ask whether there are cultural norms or other cultural barriers which require innovative responses as well, for example, in areas such as consumer demand, rule enforcement, or indigenous peoples' rights. These may not be the most salient barriers, but it is useful to explicitly consider these.*

The project activities will be sustainably scaled up through the existing Mega Farms and Community Rice centers (CRCs). Chiang Rai has 36 CRCs (8 CRCs are under the responsibility of the Rice Department and 28 CRCs are under the responsibility of the Agricultural Extension Office, Department of Agricultural Extension). Currently, there are 1,418 farm households which have joined the CRCs in Chiang Rai. An average Mega Rice Farm consists of 100-150 farmers with a planting area of around 480 ha. Currently, there are 8 Mega Farms and 177 CRCs in the Ubon Ratchathani Province and one Mega Farm and 36 CRCs in Chiang Rai Province. The proposed project intends to support climate-smart agriculture activities such as multi-cropping, crop diversification and agro-forestry and improve ecosystem resilience through innovative SLM approaches, such as enhancing the resilience of agricultural land management systems to drought and/or flood, the diversification of crops and the adoption of innovative financial and market instruments to implement SLM practices that reduce GHG emissions and increase sequestration of carbon on smallholder farms. **The local people of the targeted upland areas (e.g., in Chiang Rai) are upland inhabitants with Thai citizenship that have settled in villages that are officially recognized under the Tumbol Administration Organization (TAO). These villages receive common governmental support from the province administration.** Finally the project will be scaling-up Sustainable Land Management through the Landscape Approach through the improvement of policies, practices, and incentives for improving production landscapes with environmental benefits, and the application of innovative tools and practices for natural resource management at scale (e.g.: innovations for improving soil health, water resource management, and vegetation cover in production landscapes systems).

*STAP comment: Potential of gender considerations hindering full participation of an important stakeholder group? No hindrance indicated, but this merits deeper analysis during full program preparation, particularly regarding barriers to gender-equitable resource access and tenure rights, and to inclusive decision-making in landscape-level planning and policy formulation.*

To maximize inclusivity, gender equality, social issues and needs relevant for the project were studied as part of the project development process through desk study, consultative meetings with major stakeholders including Women Organic Rice Farmers Groups and other community-based groups. The objectives of the gender assessment were to assess the current situation regarding gender equality, and to identify gender equality, capacity building and gender accountability activities for inclusion in the project activities and budget). The results of the Gender Assessment are included and presented in detail in the project Gender Mainstreaming Plan (appendix 16, in ProDoc). The detailed Inclusive and participatory Gender Mainstreaming Action Plan has been designed to ensure that the project team and recruitment of staff for the project management unit will take gender into consideration throughout all phased of project implementation and that opportunities are provided wherever possible, targeting and fully integrating women in the two selected project sites. The project considers the livelihood activities of women during its technical and financial support while contributing to the sustainable development goals through sustainable food systems, conservation of biodiversity and landscape restoration. For example, gender consultants, will conduct various analytical assessments in the selected landscapes and activities have been designed that will allow females from all ages to participate in project activities in order to mainstream gender equality. In addition, the project will assess the implications of introducing (or further supporting) the Sustainable Rice Standard to female farmers, including the participation of women in decision-making at Community Rice Centres and in other community-based groups. From the study, the project may develop a gender manual for training of project staff and key partner agencies. During the PPG stakeholder meetings and discussions, it was also inquired as to how the project could facilitate the engagement of youth into the various activities of the project. Finally, gender aspects will be tracked as part of the project's monitoring and evaluation (M&E) system, including through indicators and targets as part of the project results framework (ProDoc, Appendix 4) as well as the costed M&E plan (ProDoc, Appendix 7).

## **Responses to GEF Council Member comments**

*Canada*

*How could agricultural activities at the forest/agriculture interface be best developed and channeled in a way that they would not result in further encroachment on forests?*

The question was discussed intensively during stakeholder consultation. It has been addressed in the ISRL project concept by focusing on sustainable, **forest-based livelihood promotion**, e.g. through community forests and other agroforestry approaches that try to erect and maintain buffer zones around protected areas of high biodiversity. With regard to the project's crop diversification approach, selection of suitable crops will be based on **site-specific criteria that will especially consider the vulnerability of the forest ecosystem**.

*Council members Germany, Norway, Denmark: These countries mentioned the importance of soils and also recommended considering adaptation benefits.*

The ISRL Project is about upscaling of sustainable rice production in a landscape context. On farm, the main tool for changing farming practice is implementation of the SRP Standard, which combines practices that, among others, bring along mitigation and adaption benefits at the same time. All four promoted new technologies (AWD, LLL, SSNM, SM) have significant adaptation potential; in particular **Site-Specific Nutrient Management** and **Straw Management** revolve around improving **soil health**, a major factor for making farmers more resilient to CC. At the landscape level, ISRL focuses on water management and watershed protection: this will provide **adaptive** countermeasures to the already precarious drought situation that farmers in Thailand have to endure since recent years.

### **ANNEX C: Status of Utilization of Project Preparation Grant (PPG).**

**(Provide detailed funding amount of the PPG activities financing status in the table below:**

PPG Grant Approved at PIF: <b>120,000</b>			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Consultants/personnel	72,000	72,000	0
Travel	14,027	14,207	0
Stakeholder Workshops	12,500	12,500	0
Sundries	21,473	16,473	5000
<b>Total</b>	<b>120,000</b>	<b>115,000</b>	<b>5,000</b>

If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake exclusively preparation activities up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date. Agencies should report closing of PPG to Trustee in its Quarterly Report.

### **ANNEX D: Project Map(s) and Coordinates**

**Please attach the geographical location of the project area, if possible.**

### Chiang Rai Geo-reference

Latitude: 19° 54' 30.89" N

Longitude: 99° 49' 57.00" E



### Ubon Ratchathani Geo-reference

Latitude: 15° 14' 18.38" N

Longitude: 104° 50' 55.18" E



## **ANNEX E: Project Budget Table**

**Please attach a project budget table.**

Please find uploaded project budget table

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### **ANNEX F: (For NGI only) Termsheet**

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

### **ANNEX G: (For NGI only) Reflows**

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

### **ANNEX H: (For NGI only) Agency Capacity to generate reflows**

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agency's capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).