



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Pre-Concept for a Regional Project

Countries/Region: Malaysia and the Philippines

Project Title: Strengthening Climate Resilience and food security through South-South Cooperation in adaptive rice production in Malaysia and the Philippines

Thematic focal area: Food security

Implementing Entity: United Nations Industrial Development Organization (UNIDO)

Executing Entities: The Department of Agriculture, the Philippines, the Malaysian Bioeconomy Development Corporation, and Asia Disaster Preparedness Center (ADPC)

AF Project ID:

IE Project ID:

Reviewer and contact person: Daniel Gallagher

IE Contact Person(s):

Requested Financing from Adaptation Fund (US Dollars): 13,779,500

Co-reviewer(s): Yuki Shiga

Technical Summary

The project "Strengthening Climate Resilience and food security through South-South Cooperation in adaptive rice production in Malaysia and the Philippines" aims to address climate-related threats to food security of rice farmer communities in Malaysia and the Philippines. This will be done through the four components below:

Component 1: Medium and large-scale climate-smart technologies and practices deployed through public-private partnerships to increase and diversify production, and to build the resilience of rice farming communities (USD 5,000,000).

Component 2: Strengthened integrated information & climate intelligence for farmers and institutions (USD 3,500,000)

Component 3: Institutional capacity building for localized adaptation strategies to create enabling environment for investments in Agriculture Marketing Services (USD 2,500,000).

Component 4: Knowledge management for scaling up and regional coordination platform and global outreach (USD 500,000).

	<p><u>Requested financing overview:</u> Project/Programme Execution Cost: USD 1,200,000 Total Project/Programme Cost: USD 12,700,000 Implementing Fee: USD 1,079,500 Financing Requested: USD 13,779,500</p> <p>The proposal includes a request for a project formulation grant of USD 20,000.</p> <p>The initial technical review raises several issues, such as the rationale for selecting a regional approach, benefits of the regional approach to coordination and mutual learning, and long term sustainability, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.</p>
Date	17 August 2023

Review Criteria	Questions	Comments
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol, or the Paris Agreement?	Yes.
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	Yes. Malaysia is vulnerable to climate-related sea level rise, floods, droughts, and storm surge. The Philippines is also subject to these threats as well as increased frequency of extreme weather events, temperatures and rainfall.
Project Eligibility	1. Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?	Yes. As per the Endorsement letter dated 7 July 2023 (Philippines) and 18 July 2023 (Malaysia).
	2. Has the pre-concept provided necessary information on the problem the proposed project/programme is aiming to solve, including both the regional and the country perspective?	Yes. As per information on p.2-3.

	<p>3. Have the project/programme objectives, components and financing been clearly explained?</p>	<p>CR1: Please clarify how the total project financing requested is to be allocated between countries and on what basis.</p> <p>Response: the detailed budget of each component will be discussed during the proposal development phase in consultation with wider stakeholders in both countries. At this stage, the initial allocation for each component is stated in the pre-concept note based on following criteria.</p> <ol style="list-style-type: none">1: Climate risks & adaptation need2: Target pollution of rice farmers in each proposed location3: Cost of implementation to reach each location4: Potential South-South Transfer of technology such as from Malaysia to the Philippines. Therefore, for the Component 1 a higher allocation is given to Malaysia in expectation of the South-South Technology and Knowledge transfer.
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	<p>4. Has the project/programme been justified in terms of how:</p> <ul style="list-style-type: none"> - it supports concrete adaptation actions? - it builds added value through the regional approach? - it promotes new and innovative solutions to climate change adaptation? - it is cost-effective? - it is consistent with applicable strategies and plans? - it incorporates learning and knowledge management? - it will be developed through a consultative process with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund? - it will take into account sustainability? 	<p>Partially.</p> <p>CR2: Please clarify the rationale for limiting the project to two target countries and not other neighbouring countries in the same region facing similar climatic-related food security issues. In doing so, please justify why a regional approach is preferred, and what benefits the regional approach is expected to generate, when compared with the alternative of separate single country projects.</p> <p>Response:</p> <p>1) A 2022 article in Nature¹ shows that Philippines is a major centre of rice research in the ASEAN region over the last two decades while, in comparison, Malaysia is devoid of major collaborations on rice research. Additionally, a World Bank Report in 2020 showed a decline in funding for research and development, particularly in Malaysia (https://www.worldbank.org/en/country/malaysia/publication/assessing-the-effectiveness-of-public-research-institutions-in-fostering-knowledge-linkages-and-transferring-technology-). This is limiting growth in agricultural productivity and hindering the enhancement of adaptive capacity and resilience to foreseeable climate change impacts. Thus, a regional approach has been taken up to encourage regional cooperation in rice industry R&D between these two countries in order to bring significant benefits, particularly for Malaysia, through applied research.</p> <p>2) Both countries share similar geographical plantation locations including highland rice plantation, tropical and rainforest weather, while Malaysia could achieve higher productivity. Having this two-country approach could foster knowledge sharing and benefit from cross-country experience between the two countries. For instance, the Philippines proposes the conversion of paddy wastes into bio-packaging materials, with the technology of Malaysian Bioeconomy Development Corporation through the “big brother-small brother” partnership makes the project ideal for regional approach.</p> <p>3) this proposed project stemmed from other past and ongoing collaborations between these two countries as the following.</p> <ul style="list-style-type: none"> a) The strongest regional partnerships are Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) in which
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¹ Cuaton, G.P., Delina, L.L. Two decades of rice research in Indonesia and the Philippines: A systematic review and research agenda for the social sciences. *Humanit Soc Sci Commun* 9, 372 (2022). <https://doi.org/10.1057/s41599-022-01394-z> (Figure 7).

there is a pillar for food security, the Food Basket Pillar; paddy being one of the 5 priority commodities.

- b) Further to the above, as strong ASEAN nations, both nations were signatories to the MEMORANDUM OF UNDERSTANDING ON ASEAN COOPERATION IN AGRICULTURE AND FOREST PRODUCTS PROMOTION SCHEME, in which the objectives of the Scheme are to: i) Strengthen the collective bargaining position of ASEAN on matters affecting agriculture and forest products trade in the world markets; ii) Expand agriculture and forest products exports through product diversification, intensification of downstream processing and higher value added activity; iii) Continue upgrading the quality of ASEAN Agriculture and Forest Products; iv) Lay down the foundation for a bigger and closer economic ties between ASEAN Member Countries; and v) Maintaining agriculture and forest products resources to ensure the sustainable supply of raw materials.
- c) The Malaysia-Philippines Agricultural Technical Exchange Program (MASTEP): This program was established in 2008 to promote cooperation between the two countries in agricultural research and development. MASTEP has funded a number of projects on rice production, including the development of new rice varieties, the improvement of irrigation systems, and the control of pests and diseases.
- d) The Malaysia-Philippines Joint Research Program on Climate Change and Agriculture: This program was established in 2017 to study the impact of climate change on agriculture in the two countries. The program is jointly funded by the governments of Malaysia and the Philippines, and it is being implemented by the Malaysian Agricultural Research and Development Institute (MARDI) and the Philippine Rice Research Institute (PhilRice).
- e) The Malaysia-Philippines Paddy Rehabilitation Project: This project was launched in 2021 to rehabilitate degraded paddy fields in the two countries. The project is funded by the Asian Development Bank (ADB), and it is being implemented by MARDI and PhilRice.

As a continuation of these efforts, the Adaptation Fund would be critical to allow on-the ground deployment of adaptation solutions to the farmers.

- f) Further in July 2023, the Philippines and Malaysia agreed to convene the next Philippines-Malaysia Joint Commission Meeting in October to discuss priority cooperation in various areas of mutual interest. Both countries agreed to convene the Joint Commission Meeting to give Philippine and Malaysian government an avenue to discuss cooperation in detail, especially regarding transnational crimes, agriculture, Halal industry, Islamic banking, education, tourism and culture, sports, and the digital economy.

CR3: Please clarify how the project would complement, and avoid duplication with, other adaptation projects focusing on agriculture and rice production in the region. These include, among others, GEFID10207: Building climate resilient livelihoods in vulnerable landscapes in Bangladesh (BCRL); GEFID10177: Promoting Climate-Resilient Livelihoods in Rice-Based Communities in the Tonle Sap Region; GEFID10187: Climate Smart Agriculture alternatives for upland production systems in Lao PDR; GEFID10929: Public-Private Blended Finance Facility for Climate-Resilient Rice Landscapes (Bangladesh, Cambodia, Vietnam).

Response:

- 1) The adaptation projects cited are implemented neither in Philippines nor in Malaysia which gives an opportunity for the proposed project to fill a gap. Moreover, as these projects have already been initiated and are at different phases of implementation, an opportunity exists for cross-learning and regional cooperation amongst the project partners. Each of the cited GEF projects has a strong element of promoting financial instruments and providing government and private finance to support climate adaptation and SDGs which complements the objective (iv) of this project.

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| | <ol style="list-style-type: none">2) Currently no GEF funded projects on rice landscape are being implemented in Philippines and Malaysia which gives an opportunity to for the proposed project to fill a gap as well as learn from other project and programs in the Southeast Asia region.3) During the project proposal preparation phase, we will reach out to these GEF funded projects listed so to seek their inputs, and lesson learned.4) We will invite project proponents of these GEF funded projects to be part of the Regional Knowledge Platform listed in the Component 4 to share knowledge and cultivate cross-country experience sharing on resilience for rice plantation. |
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CR4: Please clarify how the project would plan to ensure long term sustainability after project completion. In doing so, please explain how risks of maladaptation would be managed as it relates to new seeds, varieties, and climate-smart technologies. This should include an explanation of what the Farmer Climate Field Living lab entails and how it contributes to long term sustainability of project outcomes.

Response:

- 1) The long-term sustainability of the project will be ensured through institutional collaboration between the two countries especially R&D organizations who are directly connected to the extension services of the Agriculture Ministries and Departments of the two countries.
- 2) The Farmer Climate Field Living lab (FCFLL) has thus been introduced to establish collaboration between organizations in the two countries e.g. the Philippines Rice Research Institute (PhilRice at <https://www.philrice.gov.ph/> and the Malaysian Agriculture Research and Development Institute (MARDI at <https://www.mardi.gov.my/>) who will jointly host the living lab to exchange knowledge and field evidences between the countries with an overall guidance by agencies e.g. International Rice Research Institute (IRRI). As both PhilRice

		<p>(Department of Agriculture) and MARDI (Ministry of Agriculture and Food Industry) are part of the Agricultural Department the knowledge generated in the Climate Field Living Lab can be transferred to the farmers through extension services of the Agriculture Ministries / Departments as well as Farmer's Self-help group (e.g. NAFSA in Malaysia).</p> <ol style="list-style-type: none">3) The Living Lab will also act as one stop agency to ensure farmers especially small holders are not forced to use seeds, varieties, or CSA practices which has a risk of maladaptation. The FCFL being part of government entity and linked to Farmer's self-help group, confidence of farmer's will be higher as well risk of maladaptation can be reduced. Additionally, being part of government, fund availability after the project period is likely to be higher for long term sustainability. As the FCFL concept will be embedded in the existing institutes (PhilRice and MARDI) with an international / regional collaboration mechanism, long term sustainability is likely to be more effective.4) Lastly, training of cooperatives in business management and accounting can also bring sustainability of the project for which there could be cross-learning from GEF funded Tonle Sap project.
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	<p>5. Does the pre-concept briefly explain which organizations would be involved in the proposed regional project/programme at the regional and national/sub-national level, and how coordination would be arranged? Does it explain how national institutions, and when possible, national implementing entities (NIEs) would be involved as partners in the project?</p>	<p>Yes.</p> <p>However, the proposal may be improved by enhanced regional level coordination, for instance on learning between countries under the Project Steering Committee.</p> <p>CAR1: Please elaborate on the arrangements that will promote mutual learning through regional level coordination.</p> <p>Response:</p> <ol style="list-style-type: none">1) The Project Steering Committee is proposed to consist of members from each of Ministry of Agriculture and Food Industry, Malaysia, the Department of Agriculture, Philippines, PhilRice and MARDI, and each national and regional project team. The project steering committee will be the platform to promote regional cooperation which may be further enhanced by having discussions with IRRI, FAO and other similar organizations who are running complementing projects in the regions e.g. the GEF funded projects mentioned under section 4.2) A learning approach is integral to the project though the Farmer's Field Labs. These Labs link pilot activity to regional R&D, and embrace farmers, extension workers, and national research personnel. The Lab is to be hosted jointly by PhilRice and MARDI with cross learning from R&D agencies like IRRI and the projects being funded in the region by GEF.5) The ADPC and UNIDO will establish Regional Knowledge Platform consisting of the members of the project steering committee as well as other relevant institutes and individuals to take part in the platform. We will invite project proponents of these GEF funded projects in in CR 3 to be part of the Regional Knowledge Platform to share knowledge and cultivate cross-country experience sharing on resilience for rice plantation.
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		3)
Resource Availability	6. Is the requested project / programme funding within the funding windows of the programme for regional projects/programmes?	Yes.
	7. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?	Yes.
Eligibility of IE	8. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes. UNIDO is an accredited multilateral implementing entity of the Adaptation Fund.



PRE-CONCEPT FOR A REGIONAL PROJECT/PROGRAMME

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Strengthening Climate Resilience and food security through South-South Cooperation in adaptive rice production in Malaysia and the Philippines

Countries: Malaysia, the Philippines

Thematic Focal Area¹: Food security

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: UNIDO

Executing Entities: The Department of Agriculture, the Philippines the Malaysian Bioeconomy Development Corporation, and Asia Disaster Preparedness Center (ADPC)

Amount of Financing Requested: 13,779,500 (in U.S Dollars Equivalent)

Project Formulation Grant Request: Yes No

Amount of Requested financing for PFG: 20,000 (in U.S Dollars Equivalent)

Letters of Endorsement (LOE) signed for all countries: Yes No

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

- This pre-concept has been submitted before
- This is the first submission ever of the pre-concept

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

Please note that pre-concept should not exceed 5 pages (in addition to this first cover page)

¹ Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

Project/Programme Background and Context:

1) The Philippines' rank 4th in the Long-Term CRI Index². By contrast, Malaysia Long-Term CRI Index rank is 116th with score 105.67. Although Malaysia is not a highly disaster-prone country compared to Philippines, studies have shown that rice farmers have limited perception of climate change and variability and they require water management innovation, moisture deficiency protection, plantation innovations and finding out varieties that are climate tolerant. The Climate Change Adaptation Framework (CCAF) for Water Sectors, 2021³ acknowledges that climate change is now a fundamental threat in Malaysia. The three most significant climate-related hazards in the two countries are sea level rise, flood & drought, and storm surge. Philippines is highly vulnerable to the impacts of climate change, including sea level rise, increased frequency of extreme weather events, rising temperatures and extreme rainfall. The impacts of climate changes on rice production in Philippines has been well researched and analysis of weather and rice yield data suggest warming temperature negatively impacting rice yield with 10% decline in yield with every 1-degree C rise over 30-degree C temperature⁴. Climate change induced drought especially during the El Nino years also has a compound effect⁵. The potential impact of climate change in Malaysian context includes reduced crop yield, sea level rise and biodiversity loss⁶. The identified and measurable impacts of climate change mentioned earlier are expected to worsen and intensify vulnerability factors contributing to food insecurity. The effects of climate change will lead to increasingly negative variability in crop yields throughout the region, causing ripple effects from the climate to the environment, productivity, and economic and social dimensions. To safeguard food system, it is crucial to undertake significantly expanded efforts to respond to climate change immediately. Unfortunately, the lack of funding for research and development, particularly in Malaysia, hinders the enhancement of agricultural productivity to build climate resilience and adaptive capacity against foreseeable climate change impacts⁷. Without adequate financial support, the ability of food systems to safeguard food security is at risk. The Philippines recorded the greatest number of food insecure people in Southeast Asia⁸. The above has been exacerbated by the impacts of climate change. 2) Rice cultivation is the primary temporary crop in the two countries in terms of land parcels, and the agriculture sector lies at the cornerstone of both countries' economy, being the third most important economic sector after the manufacturing and service sectors. In the Philippines, more than half of the holdings/farms (3.2 million) had sizes of less than 1.0 hectares. The Philippines reported a total of 5.4 million households, with at least one member identified as a farm holder had an average earning of PhP 8,000 per month⁹ which is below national poverty threshold. In Malaysia, rice is produced in small holdings (2 hectares per family) and rice farmers make up almost 40% of the food subsector. The average monthly income from paddy cultivation is around RM 1,000 which is less than 50% of the national poverty line of RM 2,208 per month in 2020¹⁰. 3) Philippines and Malaysia are both impacted by climate change with different severity; flood and drought and sea-level rise are the common climate induced hazard the two countries share. Philippines and Malaysia will face a warmer climate by mid-century, with average temperature rise of 1.2 to 1.9°C in most seasons. Rainfall patterns will become more intense and variable, leading to reduced yields and hence affecting food security. Studies have shown that Peninsular Malaysia, Sabah and Sarawak regions experienced surface mean temperature increase of 0.14°C–0.25°C per decade. An increase in rainfall is projected and is expected to be larger in Sabah and Sarawak than in Peninsular Malaysia while frequency and

² <https://reliefweb.int/report/world/global-climate-risk-index-2021>

³ <https://www.kasa.gov.my/resources/Climate-Change-Adaptation-Framework-for-Water-Sectors.pdf>

⁴ [doi: 10.1057/s41599-022-01394-z](https://doi.org/10.1057/s41599-022-01394-z)

⁵ (Stueckler et al., 2018). doi: 10.1371/journal.pone.0201426

⁶ Rahman 2018. Climate Change Scenarios in Malaysia: Engaging The Public International Journal of Malay-Nusantara Studies 1(2) <https://journal.unhas.ac.id/index.php/IJoM-NS/article/view/5518/3051>

⁷ <https://www.worldbank.org/en/country/malaysia/publication/assessing-the-effectiveness-of-public-research-institutions-in-fostering-knowledge-linkages-and-transferring-technology->

⁸ 2020 State of Food Security and Nutrition in the World

⁹ <https://psa.gov.ph/content/family-income-and-expenditure-survey-fies-0>

¹⁰ Household Income Estimates and Incidence of Poverty Report, Department of Statistics Malaysia, 2020

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intensity of heat waves experienced in Malaysia is projected to increase significantly due to a warming climate. Malaysia will experience a decrease in monsoon precipitation in the southeast and an increase in the northwest during the southwest monsoon season¹¹. Modelling also suggests that occurrence of droughts and floods early in the rice-growing season could reduce yields by up to 60%¹². Analysis of historical temperature data of Philippines indicate a warming trend since the mid-20th century, with average annual mean temperature increasing by approximately 0.6°C and a significant increase in hot days and warm nights. Northern and central Philippines will get wetter, while the south will get drier¹³. ~~Rice cultivation is especially vulnerable to climate change impacts.~~ Both increased flooding and the increased likelihood of droughts could impact the rice cultivation land, and yield¹⁴. Rice farming communities need adaptation and mitigation measures to build resilience as rice yield is vulnerable to temperature increases. 4) Aiming to address vulnerabilities of rice farmers in the Philippines and Malaysia as a result of climate impacts, the project has identified target locations in each country based on preliminary data. **Malaysia:** States projected to experience rice productivity loss due to climate impacts include Kedah, ~~Perlis, Selangor~~ Perlis, Selangor, Sarawak, Kelantan and Perak.¹¹⁵³ In the **Philippines**, initial five target locations proposed are the top five rice producing regions facing most severe natural hazard events: Cagayan Valley, Central Luzon, Central Visayas, Mimaropa and Soccskargen¹⁶.

Project/Programme Objectives: The main objectives of this project are to address this threat to food security. The specific objectives are –

- i) support marginalized rice farmer communities in Malaysia and the Philippines through enhanced extension services;
- ii) enhance rice farmer's adaptation capacity through community-level agricultural climate adaptation plans implemented at community level by empowering local leadership in pursuing effective action on climate change adaptation following the Local-led adaptation principles of access and equity;
- iii) develop socially inclusive localized adaptation strategies by ensuring clear expectations between implementing entities and local partners, building trust with marginalized and vulnerable farmers group, involving local government and sensitization on locally-led approaches¹⁷; and
- iv) create an enabling environment for investments in agriculture sector.

To avoid or minimise maladaptation which might arise during project implementation phase, the project will address maladaptation concerns following the frame work of IPCC 6th assessment report from the inception phase¹⁸ by adhering to criteria to identify adaption measures which are equitable, effective with human, ecosystem and mitigation co-benefits. Time and resources will be dedicated to identify any potential maladaptation of the project during the implementation of the project. Rectification on such identified potential maladaptation will be made in the final project design considering the IPCC AR6 framework and criteria. The Climate Living lab will also ensure maladaptations are minisized.

Project/Programme Components and Financing:

The Component 1 and 2 of this proposed project will complement the GCF funded Adapting Philippine Agriculture to Climate Change project especially on the aspect of climate services.

¹¹ <https://doi.org/10.1007/s00382-022-06363-5>

¹² https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15868-WB_Malaysia%20Country%20Profile-WEB.pdf

¹³ <https://doi.org/10.1002/joc.6301>

¹⁴ https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15852-WB_Philippines%20Country%20Profile-WEB.pdf

¹⁵ Malaysia Third National Communication and Second Biennial Update Report to the UNFCCC (2018). "Based on model simulations for the periods of 2030 and 2050, MADA, KADA and IADA BLS may face significant reductions in average rice yield productions over all the seasons."

¹⁶ The Central Luzon is a medium risk for extreme heat and a low risk for water scarcity. Cagayan Valley is a medium risk of river flood and extreme heat, and a low risk of water scarcity. Central Visayas is a medium risk for tsunami and extreme heat and very low risk for water scarcity. Mimaropa is a medium risk for river flood, tsunami, extreme heat, and low risk for water scarcity. Soccskargen is a medium risk for landslide and extreme heat, and a very low risk for water scarcity.

¹⁷ <https://www.adaptation-fund.org/wp-content/uploads/2020/09/Local-Leadership-in-Adaptation-Finance-publication-1.pdf>

¹⁸ [Chapter 17: Decision-Making Options for Managing Risk | Climate Change 2022: Impacts, Adaptation and Vulnerability \(ipcc.ch\)](https://www.adaptation-fund.org/wp-content/uploads/2020/09/Local-Leadership-in-Adaptation-Finance-publication-1.pdf)

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US\$)
1. Medium and large-scale climate-smart technologies and practices deployed through public-private partnerships to increase and diversify production, and to build the resilience of rice farming communities	1.1 Paddy production improvements: The Philippines: Yields increased by 15% in target areas. Malaysia: Reduce yield loss by 30% due to climate change impacts 1.2 Paddy waste/by-products diversified products developed	1.1.1 Climate change resistant seed varieties introduced together with biofertilizer and other "Agriculture 4.0" applications and tools. 1.1.3 Climate smart irrigation system piloted and invested with standard O&M procedures in place and implemented. 1.2.1 Transferred and deployment of technologies to diversify farmers' income from left-over biomass (e.g. bio-packaging, rice-barn oil, fish meal and animal feed, compost).	Malaysia, the Philippines	5,000,000 (Malaysia: USD 3 million) Philippines: USD 2 million
2. Strengthened integrated information & climate intelligence for farmers and institutions	2.1 Capacity of rice farmers built to be resilient to climate change impacts in the target locations through climate-smart technologies and practices. 2.2. Enhanced data, information and effective early warning available to farmers	2.1.1 Raise awareness & incorporate climate smart agriculture (CSA) practices, good agricultural practices (GAP), water management, digital technology & practices through Farmer Climate Field Living Lab in target areas. 2.2.1 Impact-based forecasting and early warning system including for flood and drought established and piloted for anticipatory action. 2.2.3 Strengthen relevant data collection systems in the target locations for operations and evaluation -evaluation. (Improving current local database, info system & best practices) 2.2.4 Water accounting and water allocation system framework developed for agriculture sector. 2.2.5 Improve and coordinate information and climate and natural resources data flow between regional, national and local level institutions.	Malaysia, the Philippines	3,500,000 (Malaysia: USD 1.5 million) the Philippines: USD 2 million
3. Institutional capacity building for localized adaptation strategies to create enabling environment for investments in Agriculture Marketing Services	3.1 Enhanced policies, frameworks and institutional capacity to invest for better climate change adaptation	3.1.1 Train district, provincial and national government staff on adaptation measures and implementation procedures to ensure food and water security. 3.1.2 Train district, provincial and national government staff on CSA and GAP interventions. 3.1.3 Enhance farmers' capacity, especially female farmers, to plan, adapt and manage climate and market risks. 3.1.4 Increase awareness on optimizing farm inputs to increase production & income and reinvesting profits back into the farm or higher value secondary agricultural production. 3.1.5 Create/improve climate adaptation plans, investment plans of Agricultural Marketing Services and implement Agricultural Protection Scheme to residual risks.	Malaysia, the Philippines	2,500,000 (Malaysia: USD 1.2 million) Philippines: USD 1.3 million
4. Knowledge management for scaling-up and regional coordination platform and global outreach knowledge platform for South-South Cooperation	4.1 Regional cooperation established Platform for climate information exchange and transfer of best practice established s-	4.1.1 All key learnings - regional best practices, policy recommendations, project results, shared via UNIDO knowledge management platform. 4.1.2 Regional cooperation for joint R&D initiated joint collaboration on climate resilience for rice plantation supported 4.1.3 Regional workshops are organized to exchange best practices and strengthen cooperation/partnerships.	Malaysia, the Philippines, other relevant countries	500,000
5. Project/Programme Execution cost				1,200,000
6. Total Project/Programme Cost				12,700,000
7. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)				1,079,500
Amount of Financing Requested				13,779,500

Project Duration: 4 years (48 months)

PART II: PROJECT/PROGRAMME JUSTIFICATION

Component 1. Medium and large-scale climate-smart technologies and practices deployed through public-private partnerships to increase and diversify production, and to build the resilience of rice farming communities. This component will create an enabling environment on various aspects of Climate Smart Agriculture, including introduction of new seed varieties, climate smart irrigation system, use of digital technology & practices (Agriculture 4.0 tools and applications) through Farmer Climate Field Living lab of component 2 in target areas with an aim to increase rice productivity by 15%¹⁹ considering the impact of rise in temperature and heat stress that may occur due to changing climate²⁰. This component will also support transferred of technology and knowhow through the valorization of left-over rice straw biomass to bio-based packaging, rice-barn-bran oil or the other mid-scale deployment projects. **Component 2. Strengthened integrated information & climate intelligence for farmers.** This component intends to strengthen the extension service available for the farming community. The component intends to strengthen relevant data collection systems available currently in the target locations for operations and evaluation. The component intends to introduce seasonal to sub-seasonal forecast availability to farmers for enhanced early warning (EW) as well as impact-based forecasting for anticipatory actions based on these EWs in case of climate extremes so that farmers are able to better adapt to climate extremes. Farmer's Climate Field Living lab will play a significant role in the process. The component also intends to work on an water allocation system for rice farmers for optimal water usage as droughts are likely to be more frequent in the future in the region²¹. ~~Additionally, the component will improve and coordinate information flow for climate, agricultural, water resources and land use/land cover data between regional, national and local level institutions to manage impacts of climate change and climate extremes.~~ **Component 3. Institutional capacity building for localized adaptation strategies to create enabling environment for investments in Agriculture Marketing Services.** This component will provide institutional capacity building on the interventions identified in Component 1 and 2. Through working with district-level agricultural departments, the project will provide trainings to concerned policy makers and regulators on climate resilient agriculture practices to assist in food security of the project countries with social inclusion. This will enable enhanced capacity to manage climate change impacts on the food systems that is likely to occur. The component will build capacity on financial options available including access to climate finance for long term adaptation to climate change and build resilience of the farmers especially involving small farmers in modern agricultural value chains. **Component 4. Knowledge management for scaling up and Regional coordination knowledge platform and global outreach.** Leveraging insights from the four components and other similar projects in the region²², UNIDO will collaborate with implementing entities to set up an innovation hub a knowledge platform for climate-resilient agricultural practices rice planation and enhance regional cooperation and R&D. The project steering committee will drive consultations and regional cooperation. Once established, the platform will be guided by the project steering committee and will be participated by ,potentially collaborating with organizations like IRR and FAO, who manage related projects funded by GEF, GCF, and others in the region. On this component, building upon experience from other four components, UNIDO will work, in close collaboration with the implementing entities to establish an innovation hub for adaptation of climate resilient agriculture practices, knowledge exchnage and to strengthen regional co-

¹⁹ From Department of Agriculture, the Philippines

²⁰ <https://www.oecd.org/derec/adb/Food-security-asia.pdf>

²¹ ~~Additionally, the component will improve and coordinate information flow for climate, agricultural, water resources and land use/land cover data between regional, national and local level institutions to manage impacts of climate change and climate extremes.~~

²² For instance, GEFID10207: Building climate resilient livelihoods in vulnerable landscapes in Bangladesh (BCRL); GEFID10177: Promoting Climate-Resilient Livelihoods in Rice-Based Communities in the Tonle Sap Region; GEFID10187: Climate Smart Agriculture alternatives for upland production systems in Lao PDR; GEFID10929: Public-Private Blended Finance Facility for Climate-Resilient Rice Landscapes (Bangladesh, Cambodia, Vietnam).

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operation and initiate joint R&D. The project steering committee will be the platform to promote consultation and regional cooperation which may be further enhanced by having discussions with IRRI, FAO and other similar organizations who are running complementing projects in the regions funded by GEF, GCF and others.

B. Sustainability and environmental benefits The project's sustainability will be anchored through collaboration between the two countries' R&D organizations tied to their Agriculture Ministries. The climate field living lab, co-hosted by PhilRice and MARDI, will bolster community resilience and act as a safeguard for farmers against maladaptive practices. The strategies for climate-smart agriculture, resilient infrastructure, and climate intelligence will be integrated into the respective National Adaptation Plans and maintained by government agencies using standard procedures from the project. Training cooperatives in management and accounting further ensures the project's longevity, with potential learnings from GEF-funded regional projects. The long-term sustainability of the project will be ensured through institutional collaboration between the two countries especially R&D organizations who are directly connected to the extension services of the Agriculture Ministries and Departments of the two countries. Resilient capacities built during the project intervention will remain at different levels. The climate field living lab being proposed to be hosted jointly by PhilRice and MARDI will ensure the communities resilience for their cultivation practices. It will also act as one-stop agency to ensure farmers especially small holders are not forced to use seeds, varieties, or CSA practices which has a risk of maladaptation. The climate-smart agriculture solutions, climate resilient infrastructures and the climate intelligence services will be institutionalized by respective government agencies under the respective National Adaptation Plans. They will continue to operate these infrastructures according to the standard procedures to be provided as part of the project. Training of cooperatives in business management and accounting is likely to bring sustainability of the project for which there could be cross-learning from GEF funded projects in the region.

Environmental benefit: By promoting CSA practices, the project is likely to bring environmental benefits by improving soil health and reduce the use of harmful chemicals, leading to healthier ecosystems, thus enhancing the biodiversity in the target locations, and reducing the environmental impacts. The project can enhance water efficiency in agriculture, potentially alleviating water scarcity and maximizing its use. With the proposed Living Lab tied to a government entity and Farmer's self-help groups, farmers' trust will increase, minimizing maladaptation risks. The project can also improve water use efficiency in agriculture thus, potentially reducing water scarcity and optimizing the use of water. The proposed Living Lab being part of government entity and linked to Farmer's self-help group, confidence of farmer's will be higher as well risk of maladaptation can be reduced.

C. Compliance to international and national technical standards The project will fully align with relevant international and national standards such as food safety and food packaging standards in Malaysia and the Philippines, and as well as international standards such as WMO Guidelines on Multi-hazard Impact-based Forecast and Warning Services—Part II: Putting Multi-hazard IBFWS into Practice²³.

D. Environmental and social impacts and risks identified During the concept note proposal phase, all project activities will be screened against the 15 AF principles, as well as UNIDO ESSPP, to identify potential environmental and social risks and impacts. Through a consultative process, measures to mitigate these risks for each intervention will be identified and included in the project document. A gender baseline will also be developed. With the information available, some risks identified at this stage include i) lack of national policy on agriculture adaptation plan, ii) delay in revamping paddy and rice intervention strategies iii) delays in environmental policies and regulations due to market uncertainties, and iv) logistic disruption, as those observed during the Covid-19 Pandemic.

E. Cost effectiveness of regional intervention and justification for funding requested, focusing on the full cost of adaptation reasoning A regional-led program can enhance efficiency in climate-related initiatives through economies of scale, such as sharing administrative burdens. The project enables cross-country innovation between adaptation strategies in two countries, encouraging international South-South collaboration. The project has potential for replication in other

²³ https://library.wmo.int/doc_num.php?explnum_id=10965

regions of these countries and Southeast Asia, which accounts for 26% of global production and 40% of global export, with rice cultivation central to their agricultural sector. **F. Duplication of project/programme with other funding sources** ~~The project will put an effort to avoid geographical duplication with other projects, and will capitalize existing knowledge where possible.~~ During the project formulation process, the project will work closely with Malaysia National Adaptation Plan, MyNAP (2023-2026) which include Agriculture and Food Security Sector. The concerned agencies²⁴ welcome this proposed project and are ready to take part for deep-dive consultation during the project proposal formulation process. This proposed project will connect and learn from projects funded by the Adaptation Fund and GEF in these countries ~~and the Southeast Asia region~~²⁵ ~~Currently no GEF funded projects on rice landscape are being implemented in Philippines and Malaysia which gives an opportunity to for the proposed project to fill a gap as well as learn from other project and programs in the Southeast Asia region.~~ **G. Consultation Process:** ~~Project preparation will entail consultations at regional, national, and community levels. Community talks will prioritize vulnerable groups, such as female-led households and traditional forecasters. National discussions will gather stakeholder support and confirm the project design. Regional dialogues will set the project's scope, create a results-based framework, and evaluate environmental and social effects. The project preparation will involve comprehensive consultations at regional, national, and community levels. Community discussions will focus on vulnerable groups like female-headed households and traditional forecast providers, while national consultations will seek stakeholder support and validate the project design. Regional talks with local partners and implementers will define the project's scope, establish an initial result-based framework, and assess potential environmental and social impacts.~~

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PART III: IMPLEMENTATION ARRANGEMENTS

The project will be implemented by UNIDO and executed by national entities including the Bioeconomy Corporation in Malaysia and the Philippines' Department of Agriculture (DoA). UNIDO's expertise in agricultural extension and food security is well placed for UNIDO to take up the Implementing Entity. Malaysian Bioeconomy Development Corporation and DoA will lead the execution of the component 1 and 3 with support from UNIDO in their respective country. Particularly, for Malaysia, ~~on top of close collaboration with the respective state governments of the target locations,~~ the Bioeconomy Corporation will partner with MADA, KADA, IADA, MARDI, DOA, and other relevant agencies²⁶. The ADPC²⁷ will execute component 2 and 4. ~~The ADPC - a regional entity in Asia and Pacific region has worked on climate intelligence and climate smart initiatives in water and agriculture sector. The project will create be guided by a Project Steering Committee (PSC)²⁸ at the regional level to oversee performance, address strategic challenges, and ensure risk mitigation and best practice dissemination. Members will include representatives from the Ministry of Agriculture and Food Industry (Malaysia), the Department of Agriculture (Philippines), PhilRice, MARDI, the Adaptation Fund, and project teams. This committee will champion regional cooperation. The project will establish a Project Steering Committee (PSC) at the regional level or link into existing structures to monitor performance, provide technical oversight, advice on strategic~~

²⁴ Agencies in Malaysia: MADA-Muda Agricultural Development Authority, KADA- Kemubu Agricultural Development Authority, IADA- Integrated Agriculture Development Authority, MARDI-the Malaysian Agricultural Research and Development Institute, DOA- Department of Agriculture.

²⁵ In the Philippines, UNIDO is conducting the project formulation of a project, Harnessing the water-energy-food nexus to address and adapt to climate change impacts in Tawi-Tawi. The proposed project will be implemented by UNIDO and Mindanao Development Authority. In Malaysia, the UNHABITAT implements a project, Nature-based Climate Adaptation Programme for the Urban Areas of Penang Island. The project implements solely on the Penang Island.

²⁶ Agencies in Malaysia: MADA-Muda Agricultural Development Authority, KADA- Kemubu Agricultural Development Authority, IADA- Integrated Agriculture Development Authority, MARDI-the Malaysian Agricultural Research and Development Institute, DOA- Department of Agriculture.

²⁷ The ADPC - a regional entity in Asia and Pacific region has worked on climate intelligence and climate smart initiatives in water and agriculture sector.

²⁸ Members might include representatives from the Ministry of Agriculture and Food Industry (Malaysia), the Department of Agriculture (Philippines), PhilRice, MARDI, and project teams.

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challenges, and ensure systems exist to mitigate risks and disseminate best practice. The Project Steering Committee is proposed to. The project steering committee will be the platform to promote regional cooperation.

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government²⁹ Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project/programme. Add more lines as necessary. The endorsement letters should be attached as annexes to the project/programme proposal.

Dato' Mohamad Razif Bin Haji Abd Mubin Deputy Secretary General (Energy, Environment And Climate Change) Ministry of Natural Resources, Environment and Climate Change (NRECC), Malaysia	Date: July 18 2023
Ms. Analiza Rebueta-Teh Undersecretary for Finance, Information Systems and Climate Change, Department of Environment and Natural Resources (DENR, The Philippines)	Date: July 7 2023
(Enter Name, Position, Ministry)	Date: (Month, day, year)

B. Implementing Entity certification Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans such as Malaysia's Climate Change Adaptation Framework for Water Sectors, 2021 and the Philippines Rice Industry Road Map, 2018 by DoA, and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Fatou Haidara Managing Director Directorate of Global Partnerships and External Relations and Director General's Special Representative for Africa UNIDO	
Date:08.01.2023	Tel. and email: Tel: +43 1 26026-3708 Email: f.haidara@unido.org
Project Contact Person: Sooksiri Chamsuk, UNIDO Regional Office in Thailand under Jaime Moll de Alba Director Division of Regional Bureaus and Field Offices Directorate of Global Partnerships and External Relations Tel:+6687-022-1166;	

Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Email: J.Moll-de-Alba@unido.org;
s.chamsuk@unido.org



KEMENTERIAN SUMBER ASLI, ALAM SEKITAR DAN PERUBAHAN IKLIM

Ministry of Natural Resources, Environment and Climate Change

Aras 10, Blok F11, Kompleks F

Lebuhr Perdana Timur, Presint 1

62000 PUTRAJAYA

MALAYSIA

Tel : 03-8091 7012

Faks : 03-8091 7352

Our reference : KASA.BPI.S.800-2/9/2 JLD.3 (16)

Our date : 18 July 2023

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Mail stop: N 7-700
1818 H Street NW
Washington DC 20433
USA

Dear Sir/Madam,

ENDORSEMENT FOR STRENGTHENING FOOD SECURITY THROUGH SOUTH-SOUTH COOPERATION IN RICE PRODUCTION IN MALAYSIA AND THE PHILIPPINES.

In my capacity as Designated Authority for the Adaptation Fund in Malaysia, I confirm that the above national grant proposal is in accordance with the government's national priorities in implementing adaptation activities in agriculture sector to reduce adverse impacts and risks, posed by climate change in Malaysia.

Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by United Nations Industrial Development Organisation (UNIDO) and executed by Bioeconomy Corporation.

The project design will address climate change threat to food security by enhancing adaptation capacity and creating an enabling environment for investments in agriculture sector. The project aims to complement further development of National Adaptation Plan, as well as to build resilience of rice farming communities.

Thank you.

Sincerely,


DATO' MOHAMAD RAZIF BIN HAJI ABD MUBIN

Designated Authority to the Adaptation Fund

Deputy Secretary General (Energy, Environment and Climate Change)

Ministry of Natural Resources, Environment and Climate Change



Republic of the Philippines
Department of Environment and Natural Resources

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Email: web@denr.gov.ph; Website: <https://denr.gov.ph>

JUL 07 2023

LEOCADIO S. SEBASTIAN, Ph.D.
Undersecretary for Rice Industry Development
Department of Agriculture
Elliptical Road, Diliman, Quezon City

Subject: **Request for Support to the Pre-Concept Titled “Strengthening Food Security Through South-South Cooperation in Rice Production in Malaysia and the Philippines”**

Dear Undersecretary Sebastian:

This refers to your letter dated June 5, 2023 requesting for the DENR’s support for the Adaptation Fund, to the Pre-Concept titled “Strengthening Food Security Through South-South Cooperation in Rice Production in Malaysia and the Philippines”.

Based on our review, the proposal is aligned with the Philippine government’s strategy to enhance the efficiency of agricultural production and build the resilience of rice farming communities, as espoused in Chapter 5 of the Philippine Development Plan. The project also supports the DENR’s priority to achieve Water Security in our country which entails harnessing our water resources and providing sufficient, good quality and affordable water to all users.

We recommend, however, to identify possible complementation with the DA’s Adapting Philippine Agriculture to Climate Change Project funded by the Green Climate Fund.

Further, may we request that the pre-concept be shortened to conform with the standard length prescribed by the AF guidelines on preparation of pre-concepts (i.e. 5 pages, including cover page).

Thank you.

Very truly yours,

ATTY. ANALIZA REBUELTA-TEH
Undersecretary
Finance, Information Systems and Climate Change

cc: **Undersecretary Jonas R. Leones, CESO I**
Policy, Planning and International Affairs