



Safeguard Risk Identification Form (SRIF)

Section 1: Project Overview

Identification	<i>Insert Project ID# from Programme Framework Table</i> AF-2022000120 CTCN- 2023000006
Project Title	<i>Insert title (adding words 'project preparation proposal for' before title)</i> Feasibility and viability study of using Blockchain Technology for a real-time climate risk insurance system in Thailand's agricultural sector.
Managing Division	UNEP –Industry and Economic Division – CTCN
Type/Location	<i>[Global/Normative; Regional; National]</i> National
Region	<i>(Africa/ Europe/ North America/ Asia Pacific/ Latin America Caribbean/ West Asia)</i> Asia Pacific
List Countries	<i>Enter country name(s)</i> Thailand
Project Description	<p>Thailand's agricultural sector is exposed to increasingly frequent climate change related extreme weather events. The fragility of the farmers being exposed to climate risk poses a threat to livelihoods and food security. Besides concrete risk mitigation measures, Thai farmers need financial instruments that reduce the exposure to the economic impact of climate-induced agricultural losses. Several crop insurance products are existing on the Thai market, but these seem inaccessible to many farmers for multiple reasons (lack of transparency, high transaction costs, slow indemnity payments, etc.).</p> <p>This technical assistance aims to develop a technical and economic feasibility study for using blockchain technology for an improved parametric crop insurance product. Using blockchain technology has the potential to reduce transaction costs and automatize transparent indemnity payments, thus making crop insurance more attractive and accessible to farmers whilst remaining economically viable for insurance providers. Beyond the feasibility study, an implementation roadmap will support the national stakeholders in the subsequent steps of developing, testing, and implementing such a blockchain-based product beyond this technical assistance. The aim will be to increase resilience of Thai farmers to climate-induced extreme weather events.</p>
Relevant Subprogrammes	/
Estimated duration of project	<i>Provide the estimate in months from project kickoff to completion. Do not include time spent on concept or design.</i> 12 Months
Estimated cost of the project	<i>Provide the estimated cost for entire project in USD.</i> USD 205,018
Name of the UNEP project manager responsible	Clara Landeiro
Funding Source(s)	AFCIA
Executing/Implementing partner(s)	CTCN
SRIF submission version	<i>If it is not the first time, mark the time of your previous submission</i> Concept Review [] During Project development [] PRC []



	Other _____ Version 1
Safeguard-related reports prepared so far <i>(Please attach the documents or provide the hyperlinks)</i>	<ul style="list-style-type: none"> • Feasibility report [] • Gender Action Plan [] • Stakeholder Engagement Plan [] • Safeguard risk assessment or impact assessment [] • ES Management Plan or Framework [] • Indigenous Peoples Plan [] • Cultural Heritage Plan [] • Others _____

Section 2: Safeguards Risk Summary

A. Summary of the Safeguards Risk Triggered

Safeguard Standards Triggered by the Project	Impact of Risk ¹ (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H) <i>Please refer to the matrix below</i>
SS 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management	1	1	L
SS 2: Climate Change and Disaster Risks	2	2	L
SS 3: Pollution Prevention and Resource Efficiency	1	1	L
SS 4: Community Health, Safety and Security	1	1	L
SS 5: Cultural Heritage	1	1	L
SS 6: Displacement and Involuntary Resettlement	1	1	L
SS 7: Indigenous Peoples	1	1	L
SS 8: Labor and working conditions	1	1	L

B. ESS Risk Level² -

5	H	H	H	H	H
4	M	M	H	H	H
3	L	M	M	M	M

¹ Refer to UNEP Environmental and Social Sustainability Framework (ESSF): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

² **Low risk:** Negative impacts minimal or negligible: no further study or impact management required.

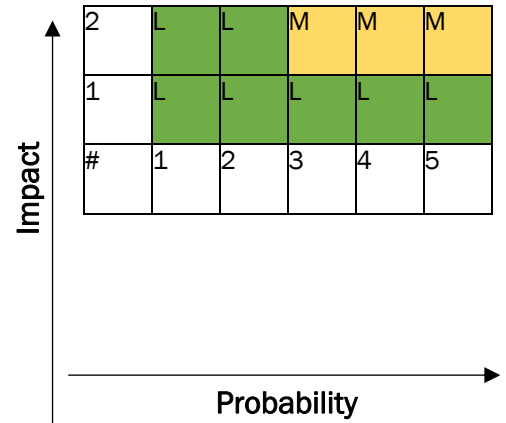
Moderate risk: Potential negative impacts, but limited in scale, not unprecedented or irreversible and generally limited to programme/project area; impacts amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop an Environmental and Social Management Plan (ESMP). Straightforward application of good practice may be sufficient without additional study.

High risk: Potential for significant negative impacts (e.g., irreversible, unprecedented, cumulative, significant stakeholder concerns); Environmental and Social Impact Assessment (ESIA) (or Strategic Environmental and Social Assessment (SESA)) including a full impact assessment may be required, followed by an effective comprehensive safeguard management plan.



Refer to the UNEP ESSF (Chapter IV) and the UNEP's ESSF Guidelines.

- Low risk
- Moderate risk
- High risk
- Additional information required



C. Development of SRIF and Screening Decision

Prepared by

Name: Clara Landeiro Date: 14 October 2023

Screening review by

Name: Polycarp Odiedo Date: 30/10/2023

Cleared³

D. Safeguard Review Summary (by the safeguard team)

This is a low-risk project. However, UNEP ESSF guiding principles - resilience and sustainability; human rights, gender equality and women empowerment, accountability and leave no one behind – as outlined in section 3 are still applicable for low-risk projects.

A. Safeguard Recommendations (by the safeguard team)

- No specific safeguard action required.
- Take Good Practice approach⁴
- Carry out further assessments (e.g., site visits, experts' inputs, consult affected communities, etc.)
- Carry out impact assessments (by relevant experts) in the risk areas and develop management framework/plan
- Consult Safeguards Advisor early during the full project development phase
- Other _____

³ This is signed only for the full projects latest by the PRC time.

⁴ Good practice approach: For most low-moderate risk projects, good practice approach may be sufficient. In that case, no separate management plan is necessary. Instead, the project document demonstrates safeguard management approach in the project activities, budget, risks management, stakeholder engagement or/and monitoring segments of the project document to avoid or minimize the identified potential risks without preparing a separate safeguard management plan.



Section 3: Safeguard Risk Checklist

Screening checklist	Y/N/ Maybe	Justification for the response (please provide answers to each question)
Guiding Principles (these questions should be considered during the project development phase)		
GP1 Has the project analyzed and stated those who are interested and may be affected positively or negatively around the project activities, approaches, or results?	Y	The project, in consultation with the Office of National Higher Education Science Research and Innovation Policy Council (NXPO), has analyzed and has identified stakeholders who are interested and may be positively or negatively impacted by the project implementation. This analysis and stakeholder engagement will be complemented at early stages of implementation (output 3).
GP2 Has the project identified and engaged vulnerable, marginalized people, including disabled people, through the informed, inclusive, transparent, and equal manner on potential positive or negative implication of the proposed approach and their roles in the project implementation?	Y	The project has identified key stakeholders at the design stage and has included as part of its design a strong engagement approach, including a detailed stakeholder mapping to inform the composition of a project working group and further stakeholder consultation processes. As per TORs, attention will be given to gender balance and vulnerable farmer groups in terms of representation.
GP3 Have local communities or individuals raised human rights or gender equality concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	N	No concerns have been raised on human rights or gender equality during the development of the proposed project.
GP4 Does the proposed project consider gender-balanced representation in the design and implementation?	Y	Gender-balanced representation has been considered in the design of the project. This is part of the CTCN gender policy and action plan that was approved by its AB. The gender policy adopted addresses the fact that women are underserved when it comes to technologies and capacity development, so historical imbalances need to be corrected, and equal/equitable opportunity must be given to men and women. All CTCN Technical Assistances are in line with the adopted gender policy and are implemented with the engagement of at least one gender expert and with a minimum percentage of the project costs allocated towards gender and youth as mandatory requirements.
GP5 Did the proposed project analyze relevant gender issues and develop a gender responsive project approach?	Y	Gender has been considered in the design of the activities of the project proposal. The project team consists of one gender expert out of a team of 8 experts. A detailed stakeholder analysis and mapping will be undertaken at the beginning of the project



		implementation and will inform subsequent stages of implementation, including addressing as needed gender issues uncovered. The project team includes a gender expert, and due attention will be given to gender balance and vulnerable farmer groups in terms of representation in the project working group and further consultation processes.
GP6	Does the project include a project-specific grievance redress mechanism? If yes, state the specific location of such information.	Y A specific grievance redress mechanism will be put in place through UNEP ⁵ . The project will also respect the Adaptation Fund’s 15 safeguard principles.
GP7	Will or did the project disclose project information, including the safeguard documents? If yes, please list all the webpages where the information is (or will be) disclosed.	Y Safeguards documents will be uploaded after approval onto the CTC-N webpage and www.open.unep.org .
GP8	Were the stakeholders (including affected communities) informed of the projects and grievance redress mechanism? If yes, describe how they were informed.	N Not yet, but this will be done as soon as the grievance redress mechanism has been established, at the start of project implementation. The grievance redress mechanism will follow UNEP rules and procedures and will also be aligned with Adaptation Fund requirements.
GP9	Does the project consider potential negative impacts from short-term net gain to the local communities or countries at the risk of generating long-term social or economic burden? ⁶	N Though the project considers all potential impacts, no short- or long-term negative social or economic impacts are foreseen from the implementation of this project.
GP10	Does the project consider potential partial economic benefits while excluding marginalized or vulnerable groups, including women in poverty?	N The project presents potential economic benefits with the development of a technical and economic feasibility study for using blockchain technology for an improved parametric crop insurance product. Using blockchain technology has the potential to reduce transaction costs and automatize transparent indemnity payments, thus making crop insurance more attractive and accessible to farmers whilst remaining economically viable for insurance providers. The aim is to increase resilience of Thai farmers to climate-induced extreme weather events.
Safeguard Standard 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management		
<i>Would the project potentially involve or lead to:</i>		

5

[https://wedocs.unep.org/bitstream/handle/20.500.11822/32023/ESSFRM.pdf?sequence=13#:~:text=UNEP's%20Stakeholder%20Response%20Mechanism%20\(SRM,submit%20complaints%20directly%20to%20UNEP.](https://wedocs.unep.org/bitstream/handle/20.500.11822/32023/ESSFRM.pdf?sequence=13#:~:text=UNEP's%20Stakeholder%20Response%20Mechanism%20(SRM,submit%20complaints%20directly%20to%20UNEP.)

⁶For example, a project may consider investing in a commercial shrimp farm by clearing the nearby mangrove forest to improve the livelihood of the coastal community. However, long term economic benefit from the shrimp farm may be significantly lower than the mangroves if we consider full costs factoring safety from storms, soil protection, water quality, biodiversity and so on.



1.1	conversion or degradation of habitats (including modified habitat, natural habitat, and critical natural habitat), or losses and threats to biodiversity and/or ecosystems and ecosystem services?	N	None. This project consists of the development of a technical and economic feasibility study for using blockchain technology for an improved parametric crop insurance product, aiming at increasing resilience of Thai farmers to climate-induced extreme weather events.
1.2	adverse impacts specifically to habitats that are legally protected, officially proposed for protection, or recognized as protected by traditional local communities and/or authoritative sources (e.g., National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)?	N	None.
1.3	conversion or degradation of habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	None.
1.4	activities that are not legally permitted or are inconsistent with any officially recognized management plans for the area?	N	None.
1.5	risks to endangered species (e.g., reduction, encroachment on habitat)?	N	The project does not pose risk to endangered species.
1.6	activities that may result in soil erosion, deterioration and/or land degradation?	N	None.
1.7	reduced quality or quantity of ground water or water in rivers, ponds, lakes, other wetlands?	N	The project will have no impact on both the quality and quantity of ground water
1.8	reforestation, plantation development and/or forest harvesting?	N	The project does not involve reforestation, plantation development and/or forest harvesting activities.
1.9	support for agricultural production, animal/fish production and harvesting	Y	The project is expected to support climate resilient agricultural production by preparing for the introduction of a blockchain-based parametric crop insurance that will solve some of the current challenges (including high transaction costs, unclear terms and policies, long indemnity payment times). The ultimate outcome of the introduction of a blockchain-based parametric crop insurance will be that a larger number of farmers will be insured and thus more resilient to extreme weather events, safeguarding economic livelihoods and ultimately improving food security.
1.10	introduction or utilization of any invasive alien species of flora and fauna, whether accidental or intentional?	N	No.
1.11	handling or utilization of genetically modified organisms?	N	No.
1.12	collection and utilization of genetic resources?	N	No.
Safeguard Standard 2: Climate Change and Disaster Risks			
<i>Would the project potentially involve or lead to:</i>			
2.1	improving resilience against potential climate change impact beyond the project intervention period?	Y	The project will lead to increased resilience of farmers against potential climate change impacts beyond the project intervention period. Farmers in Thailand are exposed to climate-induced extreme weather events



		such as droughts, storms, and heavy rainfalls in an increasing frequency. Crop insurance products have been developed in the past and are offered to Thai farmers, but only a limited number of farmers is able to access these products or is convinced of their effectiveness, and hence a big number of farmers are exposed to the high risks of extreme weather events that lead to livelihood vulnerabilities and food insecurity. This technical assistance will prepare the introduction of a blockchain-based parametric crop insurance that will solve some of the current challenges (incl. high transaction costs, unclear terms and policies, long indemnity payment times).	
2.2	areas that are now or are projected to be subject to natural hazards such as extreme temperatures, earthquakes, extreme precipitation and flooding, landslides, droughts, severe winds, sea level rise, storm surges, tsunami or volcanic eruptions in the next 30 years?	Y	The project has a national scope, and the nation is increasingly affected by climate change, including higher frequency and magnitude of floods and droughts that are impacting severely the agriculture sector.
2.3	outputs and outcomes sensitive or vulnerable to potential impacts of climate change (e.g., changes in precipitation, temperature, salinity, extreme events)?	N	No.
2.4	local communities vulnerable to the impacts of climate change and disaster risks (e.g., considering level of exposure and adaptive capacity)?	Y	The project will involve the vulnerable farmers in Thailand who face increasing climate change induced losses. The project is a pathway to the introduction of parametric insurance which will protect the farmers by minimizing losses.
2.5	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	N	This is an adaptation project and will have no impact on emissions.
2.6	Carbon sequestration and reduction of greenhouse emissions, resource-efficient and low carbon development, other measures for mitigating climate change	N	This is an adaptation project and will have no impact on emissions.
Safeguard Standard 3: Pollution Prevention and Resource Efficiency			
<i>Would the project potentially involve or lead to:</i>			
3.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	N	Not applicable.
3.2	the generation of waste (both hazardous and non-hazardous)?	N	Not applicable.
3.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	N	Not applicable.
3.4	the use of chemicals or materials subject to international bans or phase-outs? (e.g. DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol , Minamata Convention , Basel Convention , Rotterdam Convention , Stockholm Convention)	N	Not applicable.
3.5	the application of pesticides or fertilizers that may have a negative effect on the environment (including non-target species) or human health?	N	Not applicable..



3.6	significant consumption of energy, water, or other material inputs?	N	Not applicable.
Safeguard Standard 4: Community Health, Safety and Security			
<i>Would the project potentially involve or lead to:</i>			
4.1	the design, construction, operation and/or decommissioning of structural elements such as new buildings or structures (including those accessed by the public)?	N	None.
4.2	air pollution, noise, vibration, traffic, physical hazards, water runoff?	N	None.
4.3	exposure to water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable or noncommunicable diseases?	N	None.
4.4	adverse impacts on natural resources and/or ecosystem services relevant to the communities' health and safety (e.g., food, surface water purification, natural buffers from flooding)?	N	None. On the contrary, positive impacts are foreseen in terms of food security of resilience of farming communities.
4.5	transport, storage use and/or disposal of hazardous or dangerous materials (e.g., fuel, explosives, other chemicals that may cause an emergency event)?	N	Not applicable.
4.6	engagement of security personnel to support project activities (e.g., protection of property or personnel, patrolling of protected areas)?	N	No.
4.7	an influx of workers to the project area or security personnel (e.g., police, military, other)?	N	No.
Safeguard Standard 5: Cultural Heritage			
<i>Would the project potentially involve or lead to:</i>			
5.1	activities adjacent to or within a Cultural Heritage site?	N	Not applicable. The project involves working with information systems and key stakeholders; no activities will be implemented on the ground which could pose a risk to cultural heritage.
5.2	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional, or religious values or to intangible forms of cultural heritage (e.g., knowledge, innovations, practices)?	N	Not applicable.
5.3	utilization of Cultural Heritage for commercial or other purposes (e.g., use of objects, practices, traditional knowledge, tourism)?	N	Not applicable.
5.4	alterations to landscapes and natural features with cultural significance?	N	Not applicable.
5.5	significant land clearing, demolitions, excavations, flooding?	N	Not applicable.
5.6	identification and protection of cultural heritage sites or intangible forms of cultural heritage?	N	Not applicable.
Safeguard Standard 6: Displacement and Involuntary Resettlement			
<i>Would the project potentially involve or lead to:</i>			
6.1	full or partial physical displacement or relocation of people (whether temporary or permanent)?	N	Not applicable. The project is a pathway to the introduction of parametric insurance which will protect the farmers by minimizing losses.



6.2	economic displacement (e.g., loss of assets or access to assets affecting for example crops, businesses, income generation sources)?	N	Not applicable.
6.2	involuntary restrictions on land/water use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	Not applicable.
6.3	risk of forced evictions?	N	Not applicable.
6.4	changes in land tenure arrangements, including communal and/or customary/traditional land tenure patterns (including temporary/permanent loss of land)?	N	Not applicable.
Safeguard Standard 7: Indigenous Peoples			
<i>Would the project potentially involve or lead to:</i>			
7.1	areas where indigenous peoples are present, or uncontacted or isolated indigenous peoples inhabit or where it is believed these peoples may inhabit?	N	Not applicable. As mentioned, the project does not involve the implementation of activities on the ground, thus it will not impact indigenous peoples. The project centres on work with information systems and stakeholders to ensure that farmers have access to tools that help them cope better with climate change impacts.
7.2	activities located on lands and territories claimed by indigenous peoples?	N	Not applicable.
7.3	impacts to the human rights of indigenous peoples or to the lands, territories and resources claimed by them?	N	Not applicable.
7.4	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	Not applicable.
7.5	adverse effects on the development priorities, decision making mechanisms, and forms of self-government of indigenous peoples as defined by them?	N	Not expected. In the future, beyond the completion of the project, it is expected that new insurance products would be available to all farmers in Thailand, with a positive effect in terms of their increased resilience, rather than adverse effects.
7.6	risks to the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	Not applicable.
7.7	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	Not applicable.
Safeguard Standard 8: Labor and working conditions			
8.1	Will the proposed project involve hiring or contracting project staff?	Y	Yes. The implementer will be a network member selected through the bidding process under UNGM and will be mandated to respect the UN code of conduct rules and will meet all the requisites.
<i>If the answer to 8.1 is yes, would the project potentially involve or lead to:</i>			
8.2	working conditions that do not meet national labor laws or international commitments (e.g. ILO conventions)?	N	No.
8.3	the use of forced labor and child labor?	N	No.
8.4	occupational health and safety risks (including violence and harassment)?	N	No.
8.5	the increase of local or regional unemployment?	N	No.
8.6	suppliers of goods and services who may have high risk of significant safety issues related to their own workers?	N	No.



8.7 unequal working opportunities and conditions for women and men	N	No.
--	---	-----