

Assessment of Social and
Environmental Aspects of Bio-
Businesses of the Project “Building the
Resilience of Wetlands in the Province
of Datem del Marañón in Peru



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1. Introduction

The project "Building the Resilience of Wetlands in the Province of Datem del Marañón in Peru" was born in 2015 as an initiative of Profonanpe, with the purpose of promoting the conservation of the carbon stock stored in the wetlands of this region. This initiative is the first project worldwide financed by the Green Climate Fund, in cooperation with the Korean government and co-financing of Profonanpe.

The project's strategy focuses on improving the capacity of resilience and good practices in the use of natural resources of indigenous communities, through the implementation of bio-businesses as a means of improving the quality of life of seven ethnic groups in Datem del Marañón: Awajún, Achuar, Chapra, Kandozi, Quechua, Wampis and Shawi.

The implementation of the bio-businesses requires several social and environmental considerations that guarantee that the initiatives are sustainable, and operate for the benefit of the indigenous communities and the conservation of natural resources.

This document is an excerpt of the report of the application of the screening tool in the bio-businesses under implementation during the first months of 2020, considering the ESS Policies of GCF and Profonanpe's Environmental and Social Policies.

2. Goal

Present the results of the screening tool of the environmental and social risks generated due to the implementation of the bio-businesses.

3. Methodology

Fieldwork took place between 12 and 24 January 2020, with the purpose of interviewing the project's team and to visit the native communities where the bio-businesses are located. During these visits, environmental and social information for the validation of the screening tool was gathered.

The screening tool was developed on 2019 by the former safeguard specialist of Profonanpe and a specialist of the Green Climate Fund. The later considers the Environmental and Social Safeguards of GCF, and Profonanpe's Environmental and Social Policies.

The screening provides an assessment of the significance of environmental and social risks and impacts based on two criteria: (1) the magnitude of such risks and impacts if these were to occur (critical, severe, moderate, minor, negligible)(Table 1); and (2) likelihood of occurrence of such risks and impacts (expected, highly likely, moderately likely, and unlikely)(Table 2). The significance value will be derived from the combination of the two criteria (Table 3).

The screening tool allows the assignation of the environmental and social risk category of a project or activity, i.e. whether it is of high, moderate or low risk. The categories are presented on Table 4.

Table 1. Likelihood of occurrence (score of 1 – 5)

Classification	Probability
5	Expected
4	Highly likely
3	Moderately likely
2	Remotely likely
1	Unlikely

Table 2. Magnitude of risks and impacts (score of 1 – 5)

Severity	Classification	Description
Critical	5	Significant adverse impacts on communities and/or environment. Adverse impacts in wide spatial extent (e.g. large geographic area, often outside the footprint of the project, affecting significant number of people, with transboundary impacts, cumulative impacts) and often long-term duration and irreversible; affecting areas of high conservation and biodiversity value and sensitivity; adverse impacting to rights, lands, resources and territories of indigenous peoples; involve significant displacement or resettlement (over 200 people); and may give rise to significant social conflicts.
Severe	4	Medium to large magnitude of adverse impacts on people and/or environment; Less spatial and temporal extent than critical level risks and impacts; Risks and impacts are considered predictable, mostly temporary, reversible.
Moderate	3	Risks and impacts considered moderate to low magnitude; Impacts are limited in scale (site-specific) and duration (temporary), can be avoided, managed and/or mitigated with relatively uncomplicated and generally accepted measures.
Minor	2	Minimal risks and impacts in terms of magnitude (e.g. small affected area, small scale activities, very low number of people affected) and duration (short, for example only during construction phase), and risks and impacts may be easily avoided, managed, mitigated.
Negligible	1	Negligible or no adverse impacts on communities, individuals, and/or Environment.

Table 3. Significance value

Magnitude of the risk or impact (1-5)	Likelihood of occurrence of the risk or impact (1 - 5)				
	1	2	3	4	5
5	H	H	H	H	H
4	M	M	M	H	H
3	L	L	M	M	M
2	L	L	L	L	M
1	L	L	L	L	L

High=Category A; Moderate=Category B; Low=Category C

Table 4. Categorization of a project or activity based on the GCF criteria

Category	Description
A - High	Activities with potential significant adverse environmental and/or social risks and impacts that, individually or cumulatively, are diverse, irreversible, or unprecedented;
B - Moderate	Activities with potential limited adverse environmental and/or social risks and impacts that individually or cumulatively, are few, generally site-specific, largely reversible, and readily addressed through mitigation measures
C - Low	Activities with minimal or no adverse environmental and/or social risks and/or impacts.

After the application of the screening, a matrix for the definition of management actions of the environmental and social risks and impacts was developed for each bio-business. The identified components include:

Table 5. Management of the environmental and social risks and impacts

Activity	Environmental/Social Aspect	Description of the risk	Mitigation measure	Responsible
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4. Results

The screening tool was applied to six bio-businesses. After the assessment, it was determined that all the bio-businesses are under the Category C = Low value of significance or risk, e.g. the bio-businesses have a minimal or no adverse environmental and/or social risks and/or impacts.

The next table presents the results of all the bio-business:

Table 5. Results of the screening assessment in the six bio-businesses

Bio-business	Likelihood of occurrence of the risk	Magnitude of the risk	Significance of the risk
Production and Commercialization of Pulp of Aguaje and Curichis (Association ASPROMAG)	1,42	2	Low: Category C
Production and Commercialization of Aguaje and Ungurahui Oil (Association APUAPISEM)	1,84	1,84	Low: Category C
Commercialization of Aguaje Fruits from Managed Areas (Association ASPROQUEPD)	1,15	1,63	Low: Category C
Commercialization of fresh fish (Association KACHISPANI)	1,42	1,26	Low: Category C
Commercialization of fresh fish (Association KATINBASHI)	1,42	1,26	Low: Category C
Fisheries bio-business plan for local/regional market (SUGKAS Association)	1,36	2	Low: Category C

This document reports the application of the screening tool in the bio-business: “Production and Commercialization of Aguaje and Ungurahui Oil of the Association of Producers of Ungurahui and Aguaje of Indigenous Peoples of the Marañon Sector - APUAPISEM” is presented on the Appendix 1.

A table with the management of the environmental and social risks and impacts is also included.

5. Main Findings and Conclusions

In respect of the bio-businesses:

- Overall, the implementation of the bio-businesses is delayed. Nevertheless, the new project team had been working with the associations since the last quarter of 2019 to boost them and strengthen capacities of its members.
- The project team has been working on the participative elaboration and proceedings of documents, licenses and permits necessary for the bio-businesses' functioning.
- An important feature of the current project team is to guarantee correct procedures for the assignation of lands for the construction and implementation of the bio-business plans. The construction of the ice plants for the KACHISPANI and KATINBASHI associations started after a participatory process for land designation within the indigenous communities.
- The aguaje fruits are obtained through a sustainable practice, which consists in climbing the palm trees during the harvest. This process comes with capacity building for the proper use of the equipment and safety protocols.

In respect of the associations:

- The associations do not count with experience in the proceedings for the obtention of licenses and permits. To overcome the later, the project team has been providing support in different processes, such as the renovation and inscription of the Administrative Boards in Public Registries (SUNARP), as well as in opening of bank accounts for the formalization of financial operations.
- Actions to promote the incorporation of more women in the associations and the bio-businesses are still in process.
- In the last quarter of 2019, relations were renewed between Profonanpe, the associations, authorities and native communities involved in the project.
- The associations are engaged with the implementation of the bio-businesses. When required, they organize meetings and assemblies with the Apus and members of the communities. This has been crucial for boosting the bio-businesses.

In respect of the screening tool:

- The application of the screening in the six bio-businesses determined that all of the bio-business have a low significance or risk. This indicates that that possible impacts are minimal or non-existent, and that even if their likelihood of occurrence was expected, the magnitude of these risks can be easily avoided, managed and mitigated.
- The following conclusions can be drawn from each of the assessed topics:

a. Stakeholders' involvement and participation (PAS 6 of Profonanpe and GCF ESS1)

The participation of the population, the partners and the authorities of the indigenous communities is promoted on a permanent basis. Meetings and/or assemblies have been organized to make the respective consultations, on each stage of implementation of the bio-businesses, as part of the FPIC processes. This has been done within a framework of respect for their traditional ways of making decisions. In this sense, Profonanpe does not intend to introduce or force other forms of participation and collective decision-making. However, it is suggested not to lose sight of the possible risk of affecting traditional forms of participation in productive activities.

b. Work and labor conditions (PAS 1 and 11 of Profonanpe and GFC ESS 2)

Health and life risks of workers is unlikely, because work safety has been foreseen in the design of all the bio-businesses. In any case, the occurrence of accidents would be more linked to the non-compliance of the safety protocols by the workers of the bio-business. For this reason, the project's team has planned to define safety protocols on each of the processes of the bio-businesses, as well as to provide adequate use to the machinery, and place signs with information on the procedure, and the risks involved in their use.

Likewise, children will be prevented from accompanying their parents during the operating processes of the bio-businesses. In addition, training in first aid is planned to deal with accidents that may occur during working hours. Moreover, training in the use and handling of machines or instruments that allow the operation of the bio-businesses will take place, in order to prevent accidents.

c. Resources efficiency and pollution prevention (PAS 4 and 5 of Profonanpe and GCF ESS 3)

Prevention of pollution is one of the components that has been more foreseen in the design of the bio-businesses. The risk of pollution of water, air, soil and other resources is unavoidable, whether at a slight or insignificant level. However, Profonanpe and the project team have devised strategies to manage and mitigate such risks. For instance, training in organic waste management through composting or as feed for native Amazonian fish is planned. None of the bio-businesses imply the use of materials and toxic supplies, nor the generation of solid hazardous waste. Nevertheless, the use of biodegradable bags is suggested for the *curichis* or aguaje lollipops business. Sensibilization of the communities in respect to the management of waste, to avoid more pollution of the soil and rivers is necessary. This could be done by organizing campaigns to clean up the rivers. It is also suggested that plates, glasses and cutlery made of biodegradable or reusable material are used in the project's activities.

d. Community health and occupational safety (GCF ESS 4 and PAS 11 of Profonanpe)

The bio-businesses do not affect directly the health or security of the communities. In any case, the risks, considered improbable or unlikely to occur, could affect only the workers of the bio-businesses, but not the rest of the community. Nevertheless, as mentioned lines above, it is necessary to organize trainings about the importance of respecting safety protocols in the workplace.

On the other hand, besides the fruit crushing machine of the APUAPISEM bio-business, no bio-business generate loud noises. For this particular case, the workers employ safety ear plugs. Finally, the location of the plants and collection points do not affect the health and safety of the communities.

e. Biodiversity conservation and sustainable management of living natural resources (GCF ESS 6 and PAS 3 of Profonanpe)

None of the bio-businesses has a negative impact on biodiversity conservation and sustainable natural resource management. On the contrary, they imply a sustainable use of resources. The climbing school constitutes one of the most important efforts of the whole project and involves the participation of the local population. This proposal favors a sustainable harvesting of the aguaje, avoiding cutting down the palm trees. In addition, the harvest of

aguaje comes from sustainably managed forests, under Management Declarations².

f. Indigenous Peoples (GCF ESS 7 and PAS 8 of Profonanpe)

The location of the plants and the processes of operation and management of the bio-businesses do not imply risks and adverse impacts against indigenous peoples. The existence of bio-businesses is possible only with the Free, Prior and Informed Consent (FPIC) of the communities. Moreover, the project supports the strengthening of local organizations and promotes the recognition of citizenship, through the registration of births and the delivery of National Identity Card (DNI). Likewise, the project subsidizes the transportation, food and lodging expenses of the local authorities, in order to comply with procedures and formalities in favor of their communities, related to the project.

g. Cultural Patrimony (GCF ESS 8 and PAS 9 of Profonanpe)

The activities of bio-businesses do not cause negative impacts on the cultural heritage of indigenous populations. Nevertheless, it is suggested that traditional knowledge of the indigenous communities is documented to generate other bio-business ideas or initiatives that add value to the cultural heritage of indigenous populations and/or promote the participation of women in the project. Although the project seeks the conservation of wetlands and natural resources, it must be considered that it covers the territory of seven Amazonian ethnic groups, which is both a privilege and a challenge.

h. Compliance with the regulations (PAS 1 of Profonanpe)

The project has been processing various permits and licenses that are required for the implementation of the bio-businesses. Some of them are still in the process. The permits and licenses required are: Environmental Adequacy Plan (SENACE), Sanitary authorization (DIGESA), Management Declarations (GERFOR), Organic Re-certification (OCIA International), Fisheries Management Program (DIREPRO), Preliminary Environmental Evaluation (PRODUCE), Sanitary Qualification of SANIPES, among others.

5. Recommendations

These recommendations were given by the consultant and are now being evaluated by Profonanpe:

- In the case of APUAPISEM, considering that currently, only eight people work in the production plant, it is suggested that a rotative hiring plan of workers is implemented, to guarantee equal opportunities among members of the communities.
- It is suggested to elaborate a stakeholder's map on each of the bio-businesses, to identify interests, relations and networks, as well as the possible level of influence of different stakeholders in the bio-businesses. Moreover, it is important to promote the participation of women, and define strategies to increase their participation.
- Considering that the harvesting of aguaje is from September to February every year, it is suggested to propose a plan for the diversification of bio-businesses.
- It is key to install signs in the plants of all the bio-businesses, to prevent risks to the health and integrity of the workers due to the handling of equipment. Moreover, capacity-building in first aid is necessary to attend any occupational incident.

² The Management Declaration is a mandatory document presented to the sub-national authority for the sustainable management of natural resources, according to the Forest and Wildlife Law.

- Capacity building of the associations in organization and financial management is necessary for the implementation of the bio-businesses. Furthermore, sensibilization in production techniques and commercialization will be necessary. The project has these activities planned.
- It is important to strengthen sensibilization topics in regard to the conservation of the wetlands, and disseminate information of the natural resources under use. It is suggested to employ printed, visual and/or hearing material, in order to transfer the objectives in a creative manner.
- In regard to the screening tool, it is recommended to follow a structure according to the phases and activities of the bio-business, in order to evaluate the risks and impacts of each phase. More specific and detailed questions are also recommended, and no “yes” or “no” answers to indicate the existence of a risk.
- The tool should be applied in the future bio-businesses, during implementation studies.

APPENDICES

Appendix 1: Screening tool in the bio-business “Production and Commercialization of Aguaje and Ungurahui Oil of the Association of Producers of Ungurahui and Aguaje of Indigenous Peoples of the Marañon Sector - APUAPISEM”

This bio-business seeks to produce and commercialize oil obtained from aguaje and unguarahui palm fruits, with the purpose of increasing the resilience capacity of the beneficiary native communities against the effects of climate change. To achieve this, there are management instruments aligned to the Forestry Law (Management Declaration - DEMA), that ensures the sustainable use of the resource.

The process begins with the harvest of the fruit through the climbing technique to avoid cutting down the palm trees of aguaje and unguarahui. In the processing plant, the fruit is washed, chopped, dehydrated and pressed through procedures aligned to the organic certification. Recently, a fruit crushing machine was purchased for fruit chopping, which makes the process more efficient and allows increasing the rentability of the bio-business.

This is the only bio-business with a commercial agreement with the company Candela Perú for the purchase of aguaje oil. Despite that, the bio-business still needs support of the project in the organizational, financial and technological aspects.

The beneficiaries of this bio-business are from five indigenous communities of the Environmental Conservation Area Bajo Morona (ACA-BM): native community Chapis and its annexes: Nueva Alegría, Capernaúm and Ájachim; and the native community Wee, in the district of Manseriche.

Identification of environmental and social risks and impacts

Table A1. Criteria of identification according to the Environmental and Social Safeguards of CFF (ESS), and the Environmental and Social Policies of Profonanpe

Criterion of identification	Yes	No	Likelihood of occurrence	Magnitud de	Importance of the risk	Comments
Involvement and participation of stakeholders (PAS 6 of Profonanpe and GCF ESS1)						
Will the bio-business negatively impact indigenous communities?		X	2	2	L	No, because indigenous communities participate in decision-making about the bio-business. Possible discrepancies are addressed and solved in consultation spaces or assemblies. For now, the project's Technical Team participates in these assemblies.

Will the bio-business include in its design, informed consultation and participation of indigenous communities?	X		1	3	L	Yes, because the bio-business was design in a participatory manner. The association, authorities and community members are informed in a regularly basis during the project implementation. The bio-business was approved in a communal assembly.
Work and labor conditions (PAS 1 and 11 of Profonanpe and GFC ESS 2)						
Will bio-business involve child labor, which can interfere with children's education, or be harmful to their physical, emotional health or impede their social development?		X	1	2	L	No, the bio-business does not consider the participation of male or female children from the indigenous communities in any of its phases.
Will the bio-business pose potential adverse effects on workers conditions including health and safety?	X		2	4	M	Yes, there is a falling risk during climbing to harvest the aguaje fruits. Nevertheless, high safety techniques and equipment is employed (safety harness). Climbers were trained by certified experts. Moreover, during the processing, workers of the plant use equipment of personal protection (EPP), i.e. boots, protection glasses, helmets and aprons.
Resources efficiency and pollution prevention (PAS 4 and 5 of Profonanpe and GCF ESS 3)						
Will the bio-business activities result to negative impacts on the quantity and quality of water resources or bodies of water in the area?		X	2	1	L	No, because there is a minimum use of water during aguaje oil processing (during the wash). However, the process of fuel recharge of the boats used to transport fruit could had minimum spills.
Will the bio-business	X		5	2	M	Yes. The drying process

activities generate greenhouse gas (GHG) emissions?						of aguaje chips employ ovens that use firewood for heating which produces GHG emission. This firewood comes from the local market of Chapis native community. Moreover, during transport, emissions are generated. Nevertheless, this only occurs in a short-scale. The bio-business promotes a sustainable practice to avoid cutting down forest, and will install during 2020 solar panels, which will reduce the possible emission of GHG.
Will the bio-business activities have a negative impact on air quality?		X	2	1	L	No, because the fruits of aguaje are obtained through a sustainable practice, with a DEMA approved by the authority. Moreover, machinery in good conditions is employed during the processing of aguaje oil.
Will the bio-business activities have a negative impacts on soil quality?		X	1	1	L	No, because the aguaje harvest is developed without affecting the ecosystem. There are no supplies employed during the production that could affect the soil.
Will the bio-business activities increase the generation of household waste or household waste characteristics constitute a health hazard to the exposed population or may they alter the quality of water or soil?		X	1	1	L	No, because the process does not use any toxic supplies nor residual materials that could affect the population or the environment.
Will the bio-business activities generate hazardous solid waste?		X	1	1	L	No. The bio-business does not generate solid hazardous waste.

Will the bio-business activities lead to unsustainable use of natural resources, including water and energy?		X	2	1	L	No, because the bio-business promotes the sustainable harvest of the aguaje and ungrahui palm fruits through climbing techniques that do not affect the ecosystem. Likewise, the bio-business includes the use of renewable energy (solar panels) for the plant processes.
Community health and occupational safety (GCF ESS 4 and PAS 11 of Profonanpe)						
Will the bio-business activities affect the health and safety of the communities where it operates?	X		2	4	M	Yes. There is a falling risk during the climbing process for the harvest of the fruits, and also climbers could be bitten by insects. Nevertheless, safety measures are applied, and the climbers are previously trained. On the other hand, workers of the plant are not exposed to health or safety risks during production processes. Nevertheless, accidents could happen if workers do not follow strictly the safety protocols.
Will the bio-business activities generate noise, vibrations and other nuisance that may affect health and wellbeing of communities?	X		5	1	L	Yes. The equipment employed during the chopping process (fruit crushing machine) generate loud noises. Nevertheless, the workers use ear plugs so that they are not affected. The time use is one-and-a-half-hour maximum.
Biodiversity conservation and sustainable management of living natural resources (GCF ESS 6 and Profonanpe PAS 3)						
Will the bio-business activities lead to conversion of habitats and loss of plant cover where it will operate?		X	2	2	L	No, because the harvest and use of the resources do not affect the forest cover.
Will the bio-business activities adversely		X	2	1	L	No, because the harvested fruit comes

affect the biodiversity and natural habitats of the area where it will operate?						from sustainably managed forest. Moreover, the production processes in the plant do not affect biodiversity.
Indigenous Peoples (GCF ESS 7 and PAS 8 of Profonanpe)						
Will the bio-business activities result to adverse risks and impacts on affected or potentially affected indigenous peoples and communities? (for example, physical and economic displacement, adverse effects on resources and land tenure, cultural heritage and use of traditional knowledge systems)?		X	1	2	L	No, because activities are developed in recognized and titled indigenous territories. Their authorities and population have accepted the activity through a FPIC process.
Will bio-business activities require the free, prior and informed consent of indigenous peoples communities?	X		1	3	L	Yes, because the bio-business was design in a participatory manner. The association, authorities and community members are informed in a regularly basis during the project implementation. The bio-business was approved in a communal assembly.
Cultural heritage (ESS 8 and PAS 9 of Profonanpe)						
Will the bio-business activities cause negative impacts on archaeological remains or areas of historical, cultural, artistic or religious value?		X	1	1	L	No. There is no evidence of archeological remains from the Ministry of Culture in the area. Moreover, the bio-business is not related to historical, cultural, artistic or religious aspects.
Compliance with the standards (PAS 1 of Profonanpe)						
Does bio-business require any environmental, construction,	X		1	2	L	Yes. It requires the following: <ul style="list-style-type: none"> • Authorization of the Local Forestry

<p>operating and/or health licenses or permits? (If yes, indicate in comments all previous permissions that are required to comply with national regulations)</p>						<p>Authority (GERFOR) for use of the resource. This is obtained through the elaboration of management declarations (DEMA).</p> <ul style="list-style-type: none"> • Sanitary authorization of the Environmental Health Management Direction (DIGESA) because the oil is product of direct consumption. • Environmental Adequacy Plan issued by the National Service of Environmental Studies Certification (SENACE). • Though is not mandatory, the product of the bio-business has an organic certification issued by a private national certifier with international accreditation (OCIA).
<p>Risk category assigned to bio-business</p>	<p>Probability of occurrence of the risk: 1,84 Severity of the risk: 1,84 Category C: Low</p>					

Table A2. Management of environmental and social risks and impacts

Activity	Environmental/Social Aspect	Description of environmental and / or social risk / impact.	Mitigation measure	Responsible
Use of the fruits of aguaje and ungurahui	Use of natural resources	Cutting down of native palm trees for fruit harvesting.	Elaboration of management plans and capacity-building for the sustainable harvest of palm fruits.	APUAPISEM., Profonampe, and Local Forestry Authority (GERFOR) Profonampe.

Transport of the fruits of aguaje and ungurahui from the management area to the processing plant.	Use and impact on natural and hydric resources	Oil spills in areas near the wetlands with palm trees of aguaje and ungurahui, and water sources for the populations, which might trigger severe consequences to human health.	Adequate maintenance of transportation equipment and fuel recharge procedures, prior to the load and transport of palm fruits.	APUAPISEM
Production process of aguaje and ungurahui oil.	Impact on the soil quality.	Pollution of the soil due to unmanaged organic solid waste.	Implementation of a waste and compost management plan, with the organic remains of the process.	APUAPISEM
Production process of aguaje and ungurahui oil.	Health and safety at work	Accidents for the inadequate use of equipments (fruit crusher)	Implementation and adequate use of equipment of personal protection (EPP), and training in safety protocols.	APUAPISEM
Oil packaging	Soil pollution	Possible spill of aguaje oil due to an inadequate procedure of oil packaging.	Procurement of adequate equipments for the packaging, and training in its use.	APUAPISEM