

## 1. General Description:

**ID:CN-23024**

**Project resulting from this CN: N/A**

*Note: CNs are developed into project proposals following consultation with donor(s).*

### 1.1 Project Title:

Sustainable integrated management of non-timber forest products: Use and development of value-added products on a commercial scale from native bamboo (Guadua sp.)

### 1.2 Submitting Country/ies:

Peru

### 1.3 Specific Location & Country/ies/regions/areas benefitting from the project:

Tahuamanu area, Department of Madre de Dios, Peru

### 1.4 Endorsement from ITTO Focal Point:

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### 1.5 Intended Project Duration (in months):

26

### 1.6 Indicative Budget (in US\$):

<b>ITTO</b>	272,777
<b>Counterpart</b>	435,445
<b>Total</b>	708,222

## 1.7 Programme Line Focus

Legal and Sustainable Supply Chains (LSSC)

## 1.8 Project Type

Analytical work/studies, Innovation, Market/product development

## 1.9 Proposal Summary:

The proposal seeks to establish the sustainable industrial use of Paca (*Guadua* sp.), a native Peruvian bamboo species found in the areas of Tahuamanu and Tambopata, Madre de Dios region, Peru. Prioritized uses include the production of flooring and textile fiber from native bamboo (research and industrial development for the latter will be covered by another international funding source). The justification for the proposal is based on: natural abundance of the resource in forest concessions; limited silvicultural, forestry and industrial knowledge; product diversification of concessions holding FSC (Forest Stewardship Council) certification; potential markets in the Southern Peruvian Macro-region (mainly in the areas of construction & manufacturing) as well as in Bolivia, Brazil and Chile. The project is divided into 3 main stages (1 Silviculture, 2 Industrialization and 3 Marketing). This proposal focuses on the silvicultural stage with exploratory activities in stages 2 and 3, with the following objectives: Stage 1 – (a) Characterization and sampling of stocks per hectare, distribution and varieties; (b) Identification of factors limiting bamboo cane harvesting (costs, distance, labour, transport, storage and preservation in the field); (c) Identification of parameters for intensive bamboo production in nurseries; Stage 2 – d) Physical-mechanical & physical-chemical characterization and development of target products; Stage 3 – e) Market study on the demand for non-timber and alternative products for construction, manufacturing and chemical industries focusing on Lima and the Southern Macro-region. It should be noted that project stages 2 and 3 will be covered with funding from Conservation International - CI, through the Amazon Business Alliance program.

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## 2. Proponent Information:

## 2.1 Executing Agency Information:

**Name of Agency/Organization/Institution:**

MADERERA RIO ACRE - MADERACRE

**Name of main Contact Person:**

José Luis CANCHAYA

**Email:**

jcanchaya@maderacre.com

**Phone:**

51 954 688 869

## 2.2 Type of Organization:

Private Sector/Industry Association

## 2.3 Collaborating Agency/ies:

**Name of Agency/Organization/Institution:**

SERVICIO NACIONAL FORESTAL Y DE FAUNA SILVESTRE - SERFOR

**Name of main Contact Person:**

Leoncio CALDERON

**Email Address:**

lcalderon@serfor.gob.pe

**Phone:**

51 1 2259005

## **2.4 Relevant experience of EA:**

The executing agency (Maderacre) is one of the main timber companies in the country, leaders in the export of timber products and managing the entire timber value chain (forest, industry, markets). It has 220,000 ha of FSC-certified concessions (RA-FM/CoC002176 and NC-FM/CoC-002176) for the production, processing, and marketing of certified timber, under Voluntary Carbon Standard (VCS) and Climate Community and Biodiversity (CCB) Certification for the Carbon Credits Project.

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## **3. Relevance:**

### **3.1 Conformity with ITTO objectives (ITTA, 2006) and priorities (current SAP):**

The project is consistent with the current ITTO objectives, in particular the following:

- i. Contributing to sustainable development and poverty alleviation;
- ii. Promoting and supporting research and development with a view to improving forest management and efficiency of wood utilization and the competitiveness of wood products relative to other materials;
- iii. Promoting increased and further processing of tropical timber from sustainably managed sources;
- iv. Improving marketing and distribution of tropical timber and timber product exports from sustainably managed and legally harvested sources;
- v. Strengthening the capacity of members for the collection, processing and dissemination of statistics on their trade in timber;
- vi. Promoting better understanding of the contribution of non-timber forest products and environmental services to the sustainable management of tropical forests;
- vii. Encouraging members to develop national policies aimed at sustainable utilization and conservation of timber producing forests; and
- viii. Promoting access to, and transfer of, technologies and technical cooperation.

### **3.2 Relevance to the ITTO Programme Lines:**

The project proposal is in line with ITTO's six action areas. Sustainable Forest Management: as the project will be carried out in certified forest concessions, there is proven experience in the management and conservation of tropical forests by Maderacre. Similarly, there are sustainable forest industries based on the development of high value-added products, traceability and legality, with Paca being incorporated as a new product line. Capacity Building: this will be ensured during all project stages covering the cost-benefit efficiency of harvesting, industrialization and development of products and markets, incorporating equity and gender issues. The use and industrialization of Paca will contribute to economic and market access improvement, since the project plans to serve the southern macro-region of Peru (Cusco, Puno, Ica, Arequipa, Moquegua, Tacna), with national and foreign coverage (Bolivia, Chile, Brazil) in later stages. It should be noted that the ecosystems known as Pacales or Bambusales (bamboo forests) are among those that have the highest carbon sequestration per hectare (450-500 tons of CO<sub>2</sub>), while also contributing to water regulation and hence to climate change mitigation. All these considerations are strongly linked to the SDGs.

### **3.3 Relevance to the Sustainable Development Goals (SDGs) and the Global Forest Goals (GFGs) and other forest related global agenda:**

As stated in 3.1 and 3.2, the project has strong links with the SDGs, in particular: Goal 1 No Poverty; Goal 5 Gender Equality; Goal 8 Decent Work and Economic Growth; Goal 9 Industry, Innovation and Infrastructure; Goal 12 Responsible Consumption and Production; Goal 13 Climate Action; and Goal 15 Life on Land.

### **3.4 Relevance to submitting country's policies:**

The project is in line with the policies established by the relevant national authority, the Ministry of Agrarian Development and Irrigation (MIDAGRI), through the National Forest and Wildlife Service (SERFOR). In 2008, the Agricultural Competitiveness Directorate developed the National Bamboo Promotion Plan 2008-2020, which provides guidance to stakeholders in the bamboo production and value chain for the implementation of programs and activities within the framework of the 2020 vision for bamboo technological development in Peru. Likewise, in 2022 SERFOR approved the National Bamboo Strategy 2022-2025, establishing the technical legal framework and guidelines for the development of productive, economic and promotional activities for this resource. The project is fully consistent with its Specific Objectives - SO1: Generate knowledge and strategic information for bamboo development in prioritized and formalized areas; SO2: Develop capacities as required by all key stakeholders in the bamboo production chain to improve competitiveness, formalization, good management, harvesting, processing, management and marketing of major bamboo products; and SO3: Manage the inclusion of bamboo in policies, plans and governance of key sectors in bamboo production and at all levels of government.

### **3.5 Linkages to previous/ongoing ITTO and other projects/activities (if any):**

MANAGEMENT AND UTILIZATION OF PACA (*Guadua sarcocarpa*) - PD002/98 Rev.2 (F,I); PPD004/95 Rev.1 (M) PROMOTING THE REHABILITATION, MANAGEMENT AND SUSTAINABLE USE OF TROPICAL BAMBOO FORESTS IN THE NORTH-WESTERN REGION OF PERU - PD428/06 Rev.2 (F) BAMBOO FOR LIFE: AN ALTERNATIVE FOR THE REHABILITATION OF DEGRADED FORESTS AND SUSTAINABLE RURAL DEVELOPMENT IN THE PERUVIAN AMAZON REGION - PD690/13 Rev.4 (F); PD891/18 Rev.1 (F)

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## **4. Project synopsis:**

#### **4.1 Objectives (reflecting reference to elements within all ITTO Guidelines as applicable):**

The main objective of the project is to determine the sustainable industrial use of Paca (*Guadua* sp) through integrated silvicultural management (efficiency in harvesting, nursery development, actions to mitigate adverse climatic effects), identification of mechanically processed products with the greatest potential; scoping and identification of (regional, national and international) markets so as to ensure the sustainability of the proposal, within an environmental, economic, social and gender equity framework.

#### **4.2 Key problem(s) to be addressed:**

Cost-benefit in the use of non-timber forest resources. Undervaluation and underutilization of Paca in non-timber forest operations. Limited silvicultural and industrial experience with Paca. Under-utilization of non-timber forest products (with little or no value added). Loss of biodiversity and activities contributing to global warming.

#### **4.3 Main stakeholders and beneficiaries:**

Private sector, academia and research centers, technical and operational personnel, forest owners (private properties), forest concessions, native communities, and the public sector, seeking to improve and increase the quality of life of these stakeholders and supporting and strengthening the value chain of this non-timber resource in Peru.

#### **4.4 Key activities:**

Characterization of Paca in concession forests, according to density (No. of indiv/ha), variety, volume (m<sup>3</sup>/ha), Identification of optimal and economically feasible harvesting system. Product development (R + D + i): Bamboo boards / flooring (solid - engineered) / Bamboo textile fiber (pure/hybrid) / and others to be identified as economically viable during the project (table and kitchen utensils, toothpicks, other wood products). Development of technological packages with regional/state commercial articulation. Technical assistance and capacity building in the forest-industry-market stages. Strengthening of activities related to sustainable forest management for non-timber forest products. Incorporation of high-value-added bamboo products in national and international forest markets.

#### **4.5 Expected outcomes and impacts, including innovation/transformation:**

Establishment of an efficient and economically viable harvesting system, assessment of the harvestable volume of Paca in forest concessions, manufacture of target products, taking into account costs, scalability and market access. Technical and operational personnel trained in the silvicultural and industrial management of Paca, implementation of a forest nursery (bamboo), research on Paca silviculture and improvement. Development and innovation in prioritized products (boards, flooring, textile fiber) and others to be identified as economically viable during the project (table and kitchen utensils, toothpicks, other wood products).

#### **4.6 Existing funding for (related) initiative(s)/established contacts to potential donors:**

The project is applying for a grant from Conservation International (CI) through USAID Peru's Amazon Business Alliance program, which provides financial support to projects developing value chains for timber and non-timber forest products and bio-trade. The amount requested in the application for the implementation of project stages 2 and 3 (Industrial and Market, respectively) is US\$235,870.91. The project has also contacted government funding sources, such as PROCOMPITE, Innovate Peru, Agroideas, and others.



#### 4.8 Risk mitigation measures:

Environmental risk: Externalities to the SFM successfully implemented by MADERACRE (over which it has no control) negatively affect the occurrence of Paca in the concession. Mitigation measures: Nursery development of the varieties found in the concession. Study of these varieties under certain environmental factors to evaluate their development at the plantation level. Social risk: The interest in and abundance of Paca causes third parties to unsustainably harvest this resource in the concessions of Maderacre or its partners. Mitigation measures: Establishment of a forest monitoring committee. Training in the sustainable use of Paca. Promotion of Paca plantations as a business model. Technical risk: The use and/or industrialization of Paca is not economically viable for the proposed uses. Mitigation measures: Analysis of costs and processes and identification of a critical path for harvesting and industrialization. Joint work with technical partners and academia for the development of solutions in the various project stages. Considering the option of changing the products to be developed. Financial risk: Funding is not available for the implementation of the proposal. Mitigation measure: Leveraging innovative finance (Innovate, FINCYT), angel investment, application to national funds (AgroPeru), among others.

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#### 5. Indicative Budget (in US\$):

**Indicative Budget (in US\$):**

Description	ITTO	Counterpart	Total
<b>Personnel</b>	0	135,064	135,064
<b>Sub-contracts</b>	108,571	58,759	167,330
<b>Travel and DSA</b>	18,181	20,780	38,961
<b>Capital Items</b>	81,376	150,000	231,376
<b>Consumables</b>	0	30,000	30,000
<b>Publication / Dissemination</b>	0	33,766	33,766
<b>Miscellaneous</b>	6,423	7,076	13,499
<b>Total</b>	214,551	435,445	649,996

<b>ITTO Project Monitoring &amp; Review</b>	14,000	-	14,000
<b>Annual/Final Audit</b>	10,000	-	10,000
<b>ITTO Programme Support</b>	29,226	-	29,226
<b>ITTO Ex-post Evaluation</b>	5,000	-	5,000
<b>GRAND TOTAL</b>	272,777	435,445	708,222