

# INTERNATIONAL TROPICAL TIMBER ORGANIZATION

## ITTO

### PROJECT DOCUMENT

<b>TITLE:</b>	FOREST FIRE PREVENTION AND RESPONSE IN TROPICAL FORESTS AND FOREST PLANTATIONS IN PERU
<b>SERIAL NUMBER:</b>	PP-A/56-340-2

#### SUMMARY

Inadequate and illegal use of fire and the lack of awareness about its negative effects on the environment and human health are causing major forest fires, leading to a loss of large forest areas and the disturbance of countless natural processes. In Peru, and particularly in the departments of Cajamarca, Pasco, Junin and Ucayali, this problem is aggravated in communities with an ancestral tradition of burning practices to attract rain or as a technique to clear stubble vegetation left behind by agricultural activities. This results in a high incidence of wildfires in natural forests, other wild vegetation formations and forest plantations, eventually leading to the loss of forest cover and natural wild flora and fauna habitats; damages to the physical integrity, health or property of individuals; greenhouse gas emissions; and loss of economic value of forest lands and wildlife resources.

The objective of this project is to contribute to the conservation of forest ecosystems and other types of wild vegetation under threat of forest fires. Its specific objective is to reduce forest fires by strengthening the capacities of national and local authorities in taking urgent actions for forest fire prevention and response. Positive effects of the project include the reduced loss of forest cover, ecosystems and natural habitats of wild flora and fauna; greater capacity of the national and local authorities and local communities in prevention and response to forest fires; reduced emissions of greenhouse gases; and increased awareness about forest fires so as to accelerate the implementation of national and regional forest fire action plans.

Expected outputs of the project include: best forest and agricultural waste practices; public and private institutions effectively managing forest fire prevention and response protocols; efficient forest fire monitoring system; and knowledge management and outreach for forest fire prevention and response. In order to achieve these outputs, the project will raise awareness among agricultural producers regarding best forest and agricultural waste management practices and strengthen social organizations while ensuring effective coordination between public and private institutions. In addition, the project will support relevant institutions with early-warning and information systems and will disseminate forest-related regulations. The sustainability of the project will be extended under part of the forest fire programmes of SERFOR.

**EXECUTING AGENCY:** THE NATIONAL FOREST AND WILDLIFE SERVICE (SERFOR) OF MINISTRY OF AGRICULTURE AND IRRIGATION, PERU

**DURATION:** 12 MONTHS

**STARTING DATE** Tentative: 15 June 2020

<b>PROPOSED BUDGET AND OTHER FINANCING SOURCES:</b>	<b>Source</b>	<b>Contribution in US\$</b>
	ITTO (Government of Japan)	<b>1,105,263.16</b>
	SERFOR	<b>218,825</b>
	<b>TOTAL</b>	<b>1,324,088.16</b>



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## PROJECT BRIEF

In Peru, forest fires are classified as natural disasters according to Article 2 of the Regulations of the Law of the National System for Disaster Risk Management – SINAGERD, which reads: *“A disaster is a sudden event causing a combination of damage and loss of health, livelihoods, physical habitat, infrastructure, economic value and environment, as a consequence of the impact caused by hazards or threats to such a degree of intensity that results in a serious disruption of the functioning of social units, exceeding the local response capacity to effectively address its consequences; it can be a natural or human-induced event”*.

Fire is a natural regulator of certain ecosystems; however, its ecological role in the functioning and maintenance of these ecosystems has been affected by major disasters caused by inadequate and illegal use and by a lack of awareness on the negative effects on the environment and human health, in particular, of burning practices, which have resulted in major wildfires that, together with deforestation, have contributed to the loss of large forest areas and the disruption of countless natural processes.

Peru is not exempt from this situation; on the contrary, the problem is aggravated in communities with an ancestral tradition of burning practices to attract rain or as a technique to clear stubble vegetation left behind by agroforestry activities. This has resulted in a high incidence of wildfires in natural forests, other wild vegetation formations and forest plantations, eventually leading to the loss of forest cover and natural wild flora and fauna habitats; damages to the physical integrity, health or property of individuals; greenhouse gas emissions; and loss of economic value of forest lands and wildlife resources.

In view of the above, SERFOR hereby submits this project proposal with the objective of contributing to the conservation of forest ecosystems and other wild vegetation formations threatened by forest fires. The achievement of this objective will be measured at project completion through increased awareness and training of a total of 960 local dwellers and 375 representatives of key public and private institutions in the project target area, as well as sound coordination between the communities and public and private institutions to strengthen forest fire prevention and response.

The project will directly benefit local communities as well as local and regional authorities in priority areas where project activities will be implemented. Expected outcomes at project completion include reduced loss of forest cover from wildfires, increased awareness and capacity strengthening among local communities regarding best forest and agricultural waste management practices through the production of a manual; wildfire monitoring through an efficient forest fire monitoring system; increased capacity of public and private institutions to respond to forest fire events based on established protocols; and a communication strategy to inform beneficiaries on forest regulations and forest fire impacts. Basically, four outputs are expected to be produced to achieve these outcomes: best forest and agricultural waste practices; public and private institutions effectively managing forest fire prevention and response protocols; efficient forest fire monitoring system; and knowledge management and outreach for forest fire prevention and response.

The project will be executed by a steering committee, consisting of SERFOR and ITTO. A team consisting of a project manager and a project coordinator from Lima will execute project management and carry out monitoring; a regional office coordinator will be hired at 3 departmental regional offices which will carry out the project's operational activities; during the project execution, 3 specialist consultants (forestry, agronomist and zootechnist) and services will mainly train previously identified beneficiaries in their plots, among whom will be local leaders, local promoters, authorities, producers and key stakeholders who will be replicators in their places of origin.

A consultative committee will also be established with the participation of key stakeholders. This committee will provide a discussion and feedback platform to ensure ongoing project improvement. It should be pointed out that in order to improve the operational efficiency of project activities, a participatory, inclusive and multidisciplinary approach will be used, including planning and information methodologies.

Project sustainability will be based on the establishment and consolidation of community organizations and improved coordination among institutions involved in forest fire management, whose capacities will be strengthened to enable them to address forest fire occurrences with the support of a monitoring system. It should also be taken into consideration, SERFOR's mandate under the Forest and Wildlife Law of Peru includes promoting forest fire prevention activities.

Required assumptions for the achievement of project objectives include the Peruvian Government's interest in the development of a national forest policy and public and private institutions' interest in participating in project activities, among others; main risks that may hinder the achievement of objectives and implementation of

activities is an increase in forest fires in the target areas, a failure to implement best agricultural practices, a lack of interest of public and private institutions to participate in the process, etc. In order to mitigate these risks, the project will specifically focus on Objective 1 of the National Forest and Wildlife Policy: “Achieve effective management of forest ecosystems and other components of the Nation’s Forest and Wildlife Heritage”, which in item 1.5.7 states the need to prevent and control forest fires with the active participation of local communities.

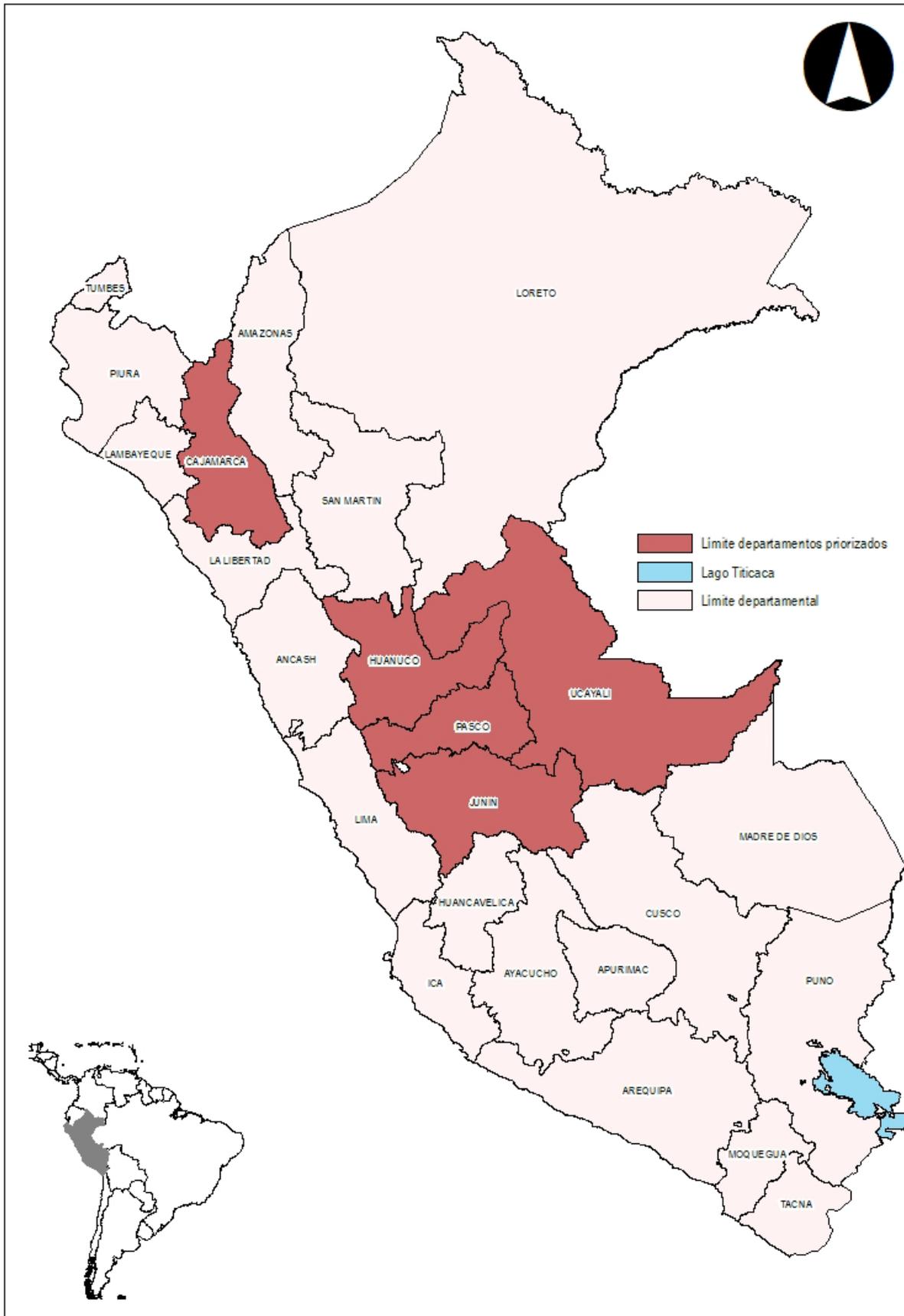
Furthermore, SINAGERD member institutions as well as key public and private institutions will be invited in advance to attend awareness and training meetings and events, providing them with user-friendly manuals and documents, which will be translated into local languages as required to reach the largest number of people possible. The regional office assistants will be in continuous and direct contact with the local communities and representatives of public and private institutions based in the proximity of the target areas so as to build trust links and thus consolidate communication as well as participation and interest in project activities .

The budget required from ITTO for the implementation of this project is US\$1,105,263.16 including personnel, capital items and others costs. The contribution of the executing agency will be US\$214,325.

## LIST OF ACRONYMS AND ABBREVIATIONS

AGRORURAL	Programa de Desarrollo Productivo Agrario Rural ( <i>Rural Agrarian Production Development Programme</i> )
ARFFS	Administración Regional Forestal y de Fauna Silvestre ( <i>Regional Forest and Wildlife Administration</i> )
ATFFS	Administración Técnica Forestal y de Fauna Silvestre ( <i>Technical Forest and Wildlife Administration</i> )
CENEPRED	Centro Nacional de Estimación, Prevención y Reducción del Riesgo de Desastres ( <i>National Center for Estimation, Prevention and Reduction of Disaster Risks</i> )
COEN	Centro de Operaciones de Emergencia Nacional ( <i>National Emergency Operations Center</i> )
INDECI	Instituto Nacional de Defensa Civil ( <i>National Civil Defense Institute</i> )
ITTC	International Tropical Timber Council
ITTO	International Tropical Timber Organization
MINAGRI	Ministerio de Agricultura y Riego ( <i>Ministry of Agriculture and Irrigation</i> )
SERFOR	Servicio Nacional Forestal y de Fauna Silvestre ( <i>National Forest and Wildlife Service</i> )
SERNANP	Servicio Nacional de Áreas Naturales Protegidas por el Estado ( <i>National Service for State-Protected Natural Areas</i> )
SENAMHI	Servicio Nacional de Meteorología e Hidrología de Peru ( <i>National Meteorology and Hydrology Service of Peru</i> )
SINAGERD	Sistema Nacional de Gestión del Riesgo de Desastres ( <i>National System for Disaster Risk Management</i> )
CGBVP	The General Corps of Volunteer Firefighters of Peru
INBP	Peruvian National Fire Administration
UNALM	National Agrarian University – La Molina
IIAP	Peruvian Amazon Research Institute
MC	Ministry of Culture
FEMA	Specialized Prosecutor in Environmental Matters

# MAP OF THE PROJECT AREA



## **PART 1: PROJECT CONTEXT**

### **1.1 Origin**

Forest fires are an ongoing problem for Peru, having recorded an alarming increase in forest fire occurrence over the last few years (2011-2016).

The losses caused by these events in 2016 alone amounted to nearly 94,200 ha. Affected forest ecosystems include plantations, tropical forests, other wild vegetation formations and associated wildlife.

SERFOR, in its capacity as the National Forest and Wildlife Authority, whose role includes managing and promoting the sustainable use, conservation and protection of forest and wildlife resources in the country, needs to enhance its actions aimed at mitigating this problem in accordance with its mandate of addressing all aspects related to forest fire prevention and control<sup>1</sup>.

In this context, the General Director for Sustainable Forest and Wildlife Heritage Management has decided to formulate this project proposal within the framework of the functions established for this institution and its decentralized agencies (ATFFS<sup>2</sup>), which are a pivotal element in the coordination of stakeholders in the area where the problem is to be addressed. This project originated from the approved project PD 853/17 Rev.2 (F), awaiting financing since November 2019.

The diverse group of stakeholders includes local authorities, community leaders, the local population in general and organizations and institutions in charge of forest fire response. In this respect, SERFOR has effective coordination and cooperation mechanisms with UNALM, IIAP, Ministry of Culture, MINAGRI, AGRO RURAL and others such as CGBVP, INBP, INDECI and local governments' specialized bodies responsible for addressing forest fire events. In addition, SERFOR is also in ongoing communication with national institutions in charge of planning and prevention actions related to forest fires (CENEPRED and INDECI). The project will have the support of the aforementioned institutions and pre-existing synergies established within the framework of cooperative actions undertaken in this field.

### **1.2 Relevance**

By aiming to reduce the occurrence of forest fires, this project is consistent with ITTO objectives and priorities as well as relevant national policies.

#### **1.2.1 Conformity with ITTO's objectives and priorities**

##### **ITTO objectives (ITTA 2006)**

The loss of forest and wildlife resources worsens the poverty conditions of local communities and prevents the establishment of enabling conditions for sustainable development; in this respect, all project courses of action will address this problem, mainly focusing on reducing a phenomenon that leads to the loss of forest resources (objective c).

The project seeks to strengthen governance structures so as to facilitate the enforcement of current – and future – policies and regulations, promoting partnerships and coordination with key stakeholders in regional scenarios. Even though the current regulatory framework in the country is quite comprehensive when it comes to the sustainable management of forests, the lack of knowledge about these regulations and the low priority given to their enforcement at some levels, limits its effectiveness. The project will address these weaknesses, focusing on creating awareness to value resources so as to encourage their management under an ecosystem approach (objective n).

The project will empower rural communities, indigenous communities, ancestral and local peoples through the transfer of technology and knowledge, use of beneficial practices and training, all of which will strengthen their capacities and will promote their involvement in planning processes for the utilization of forests on a sustainable basis. These will indeed be the direct beneficiaries of the project as it will promote the conservation of a resource base of paramount importance for their livelihoods and life styles (objective r).

The project will strengthen both human resource skills and technological equipment to address an increasing phenomenon that requires a multifocal approach, particularly in the face of current climate change conditions,

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<sup>1</sup> Act No. 29763 – Forest and Wildlife Law.

<sup>2</sup> Technical Forest and Wildlife Administration Services (*Administraciones técnicas forestales y de fauna silvestre* – ATFFS).

which in the case of forest fires, exacerbate the problem, intensifying desertification in vulnerable regions (objective s).

### **ITTO Guidelines on Fire Management in Tropical Forests – 1997**

This projects falls within the scope of the ITTO Guidelines on Fire Management in Tropical Forests, in Principle 4 “The selection and application of fire management options depend upon the conditions and circumstances found at the national, provincial, and local levels which may include, inter alia:

- Risk and sources of fire,
- Fire management capabilities or means.

Item b of Recommended Action 4 stipulates that “An integrated fire management program should be developed which may include some or all of the following fire management measures:

- Community participation in fire protection,
- Fire pre-suppression measures, e.g. weather and fire danger forecasts, detection and early warning and reporting systems.
- Training, extension and public awareness programs, and
- A compost processing policy for agricultural waste or residues from other operations carried out near forest areas.

### **ITTO priorities (ITTO Strategic Action Plan 2013-2018)**

Governance strengthening in priority areas will be ensured through the capacity-building component addressed to community organizations and authorities, as well as through the development of stakeholder coordination mechanisms and spaces in the field of forest management in problem areas (consistent with Strategic priority 1). Furthermore, the project seeks to reduce the degradation of tropical forests by improving their conservation so as to maintain the provision of environmental services and promote sustainable forest management, which in turn will contribute to national and, in particular, local economies (Strategic priorities 3, 4 and 2).

Finally, the project will focus on raising awareness about the value of production and competitive resources to encourage their management under an ecosystem approach (priorities 3 and 4).

#### **1.2.2 Relevance to the submitting country’s policies**

The project is consistent with the National Forest and Wildlife Policy, approved through Supreme Decree No. 009-2013-MINAGRI, and in particular with its Policy Guideline 2 on resource sustainability, which promotes *special management for the conservation and sustainable utilization of forest ecosystems and other types of wild vegetation that are threatened or subject to degradation*. Forest fires constitute a threat to the national forest and wildlife heritage.

In this context, the National Forest and Wildlife Service, SERFOR, implements various actions aimed at the production of the country’s Forest Heritage within the framework of its mandate as defined in Act No. 29763 Forest and Wildlife Law, which states *inter alia* that SERFOR’s responsibilities are “To manage and promote the sustainable use, conservation and protection of forest and wildlife resources”. It is for this reason that SERFOR is in charge of promoting actions for the prevention and control of wild fires and the rehabilitation of fire-affected areas.

Furthermore, the National Agreement explicitly details commitments undertaken in order to “Integrate the national environmental policy with economic, social, cultural and land management policies and institutionalize public and private environmental management so as to protect biological diversity and facilitate the utilization of natural resources...”.

### **1.3 Target area**

#### **1.3.1 Geographic location**

The project’s direct area of influence is located in four departments, which are under the jurisdiction of three Technical Administration for Forestry and Wildlife – ATFFS, and two Regional Governments, which are SERFOR’s decentralized local agencies as described below:

Department	Geographic location			ATFFS
	ZONE	X	Y	
Junín	19	185757	8501670	Selva Central
Pasco				
Cajamarca	17	777040	9207332	Cajamarca
Huánuco	18	363799	8902385	GORE - Huánuco
Ucayali	18	551699	9073833	GORE - Ucayali

See map on page 5.

### 1.3.2 Social, cultural, economic and environmental aspects

According to the National Institute of Statistics and Information Technology (*Instituto Nacional de Estadística e Informática* – INEI), the population in the project target area is characterized by the following data:

Department	Population according to census (year)					
	1940	1961	1972	1981	1993	2007 a/
Cajamarca 1/	482,431	731,256	902,912	1,026,444	1,259,808	1,387,809
Ucayali	16,154	64,161	120,501	163,208	314,810	432,159
Huánuco	229 268	323 246	409 514	477 877	654 489	762 223
Junín 1/	338,502	521,210	696,641	852,238	1,035,841	1,225,474
Pasco 1/	91,617	140,426	175,657	211,918	226,295	280,449

1/ Restructured according to 2007 Political-Administrative Division, considering changes occurred in each department during the relevant periods.

Source: National Institute of Statistics and Information Technology (INEI) – National Population and Housing Census, 1940, 1961, 1972, 1981, 1993 y 2007.

The Project area mainly covers Andean and Amazon communities where there is a culturally embedded tradition about technical agricultural practices, in particular the burning of (agricultural and forestry) stubble vegetation, which is a common practice to attract rain or, in the best of cases, it is used as a technique to eradicate residues. These actions are often the cause of forest fires that can destroy thousands of hectares per year, including natural forests, plantation forests and seasonal crops, as well as homes and human lives, and can also affect the general landscape, directly impacting activities such as tourism.

The products are marketed at the local and regional levels in fairs, while other products such as rice and cocoa are mainly marketed in coastal cities. Due to the improvements made to the road network in these localities, there is a constant trade flow as well a reciprocal trade with neighbouring districts.

The Amazon region has large areas of natural forests with high commercial value timber species such as cedar. These forests are under constant pressure from shifting agriculture and land-use changes as well as indiscriminate logging, which affects the headwaters of watersheds where the water sources that feed the agricultural valleys are found. In order to improve the regeneration process and the quality of pastures for livestock feeding, the local communities carry out burning.

The production of coffee and cocoa is the driving force behind the local and regional economies and has become one of the main economic activities in the region as these products are in high demand in international markets.

In the departments covered by the project area there are natural protected areas that are home to very valuable flora and fauna species, which are being threatened by the expansion of the agricultural frontier and bad agricultural practices such as the burning of stubble vegetation or burning caused by land-use changes.

The environmental impacts caused by these practices include: loss of habitats and forest cover, including forest wildlife heritage areas; considerable air pollution affecting the health and vision of the local population; land fragmentation and rifting in natural biological corridors; loss of organic matter (micro flora and micro fauna), affecting the physical-chemical properties of soils, which in the short term, will lead to the impoverishment and degradation of soils and will have a direct impact on cattle and/or agricultural production, with the subsequent abandonment of these lands. The areas in question are affected by landslides, mud floods, soil erosion, deterioration of water quality, and sedimentation of rivers, among others.

#### **1.4 Expected outcomes at project completion**

After project completion, it is expected that the loss of forest cover caused by forest fires will be reduced as a consequence of the following outcomes:

- Manuals on sustainable management techniques will be available and the local communities in the project's target areas will have been sensitized and trained on these issues and will be implementing good forest and agricultural waste management practices.
- Response protocols will be available for forest fire occurrences and these will have been used to train personnel from local public and private institutions, who will be coordinating and effectively responding to forest fire situations.
- An early warning management and implementation manual will be available and personnel from the regional offices and other public institutions will have been trained to systematically coordinate the monitoring of forest fires through the use of an efficient forest fire monitoring system.
- Communication systems will be available and the local communities and local authorities will have acquired knowledge about forest and related regulations and about the impacts and consequences of forest fires.

## **PART 2: PROJECT RATIONALE AND OBJECTIVES**

### **2.1 Rationale**

#### **2.1.1 Institutional set-up and organizational issues**

The local authorities, as the basic units in the government organizational structure, are in charge of liaising directly with the local communities. The district and province municipalities are politically and administratively autonomous and coordinate with the regional governments, which represent the administrative and political authority responsible for the management of resources in the departments.

SERFOR is a specialized technical public agency attached to the Ministry of Agriculture and Irrigation – MINAGRI. It has full legal capacity under the public domestic law of the State with budgetary allocations from MINAGRI. The institution has technical forest and wildlife administrations (ATFFS), which are decentralized local agencies with budgetary allocations from MINAGRI.

According to article 4 of the Organic Law of Regional Governments, the regional governments have the essential purpose of promoting sustainable integral regional development, promoting public and private investment and employment to guarantee the full exercise of the rights and equal opportunities of their inhabitants.

The National Civil Defense Institute – INDECI, is a public agency within the National System for Disaster Risk Management – SINAGERD, a synergic, decentralized, cross-sectoral and participatory inter-institutional system aimed at identifying and reducing the risk of disasters or at minimizing their effects, as well as avoiding the generation of new hazards and ensuring adequate preparation and response in the face of disasters. INDECI is technically responsible for coordinating, facilitating and supervising the formulation and implementation of the National Policy and National Plan for Disaster Risk Management through preparation, response and rehabilitation actions. It should be pointed out that MINAGRI is a member of SINAGERD.

CENEPRED is a public agency that is also a member of SINAGERD. It is technically responsible for coordinating, facilitating and supervising the National Policy for Disaster Risk Management and the National Plan for Disaster Risk Management through estimation, prevention, disaster risk reduction, rehabilitation and reconstruction actions.

Furthermore, the General Voluntary Firefighters Department of Peru– CGBVP, is involved in the prevention, control and suppression of fires, providing voluntary services to the community based on a strong commitment to service, social awareness, dedication and discipline in order to prevent, protect and support the population in the event of fires and natural or human-induced emergencies at the national level. The National Fire Administration of Peru created in 2018 is in charge of the administration of resources of the CGBVP.

In the project target areas, the local communities are not fully aware of the impacts of forest fires, and the representatives of local public and private institutions are not adequately trained. Thus, there is no coordination structure for the prevention of and response to forest fires, and there is a need to strengthen this coordination through the activities proposed in this project with the support of ATFFS as focal decentralized centers of SERFOR for the provision of information derived from the Early Warning System. In addition, the ATFFS will carry out participatory training activities addressed to local community members and representatives of key public and private institutions, with a view to reducing the occurrence of fires in natural forests, other wild vegetation formations and forest plantations.

Moreover, coordination with the institutions that make up SINAGERD will also be strengthened at the local level so as to enhance the positive impact of project activities.

## 2.1.2 Stakeholder analysis

The Project will directly benefit the local communities and the local and regional authorities in the target areas where project activities will be implemented.

A detailed breakdown of project stakeholders/beneficiaries is shown below:

Stakeholder group	Characteristics	Problems, needs and interests	Strengths	Relationship with the project
<i>Primary stakeholders</i>				
Indigenous organizations	Involved in forest harvesting	Ecosystem services threatened	Ancestral knowledge	Beneficiaries
Farmer organizations	Use of agricultural lands	Loss of soil fertility	Ancestral knowledge	Beneficiaries
Forest producers	Income from the harvesting of natural forests and forest plantations	Illegal logging	Forest management	Beneficiaries
Forest producer associations	Use of agricultural lands	Increased use of agrochemicals	Export products	Beneficiaries
Cattle ranchers	Involved in forest clearing to increase cattle ranching areas	Forest logging	Food for the population	Beneficiaries
<i>Secondary stakeholders</i>				
Volunteer Fire Brigades of Peru	Active participation in response to forest fire incidents	Very few fire brigades that specialize in fighting forest fires	Experience in responding to forest fire incidents	Will provide support for the training of local dwellers and institutions in response to forest fire incidents
Local governments	Local authorities that are involved in the prevention and response to forest fire incidents	Weak management	Convening capacity	Involvement in the dissemination of written and oral information for the prevention of forest fires
NGOs	Private non-profit organizations that provide support for the sustainable development of natural resources	They implement coordinated activities with the State	Experience at the local and regional levels	Sharing of information
Cooperatives	Community organizations grouping local dwellers who are involved in production activities	Need to preserve the national forest and wildlife heritage, forest plantations and agricultural and cattle-raising production activities	Improved production and utilization of forest resources	Will call on their members to participate in project activities

<i>Tertiary stakeholders</i>				
Journalists	Social communicators	Will keep local dwellers informed about the risks of forest fires	Wide dissemination of information through social communication mass media	Maintain the population informed on prevention and warning measures related to forest fires
SENAMHI	Records and provides meteorological information	Cooperates with State institutions by providing meteorological information	Provides timely meteorological information	Active participation in early warning activities
Universities	Training professionals	Limited budget	Capacity to pass on knowledge to local communities	Provides technical assistance and training to local communities
SERNANP	It is the governing body of the National System of Natural Protected Areas - SINANPE.	Presence in Natural Areas Protected by the Peruvian State	Experience in forest fire fighting	It has specialists trained in forest fire fighting
Banks	Regional and national financing	Local presence	Credit expertise	Credit possibilities

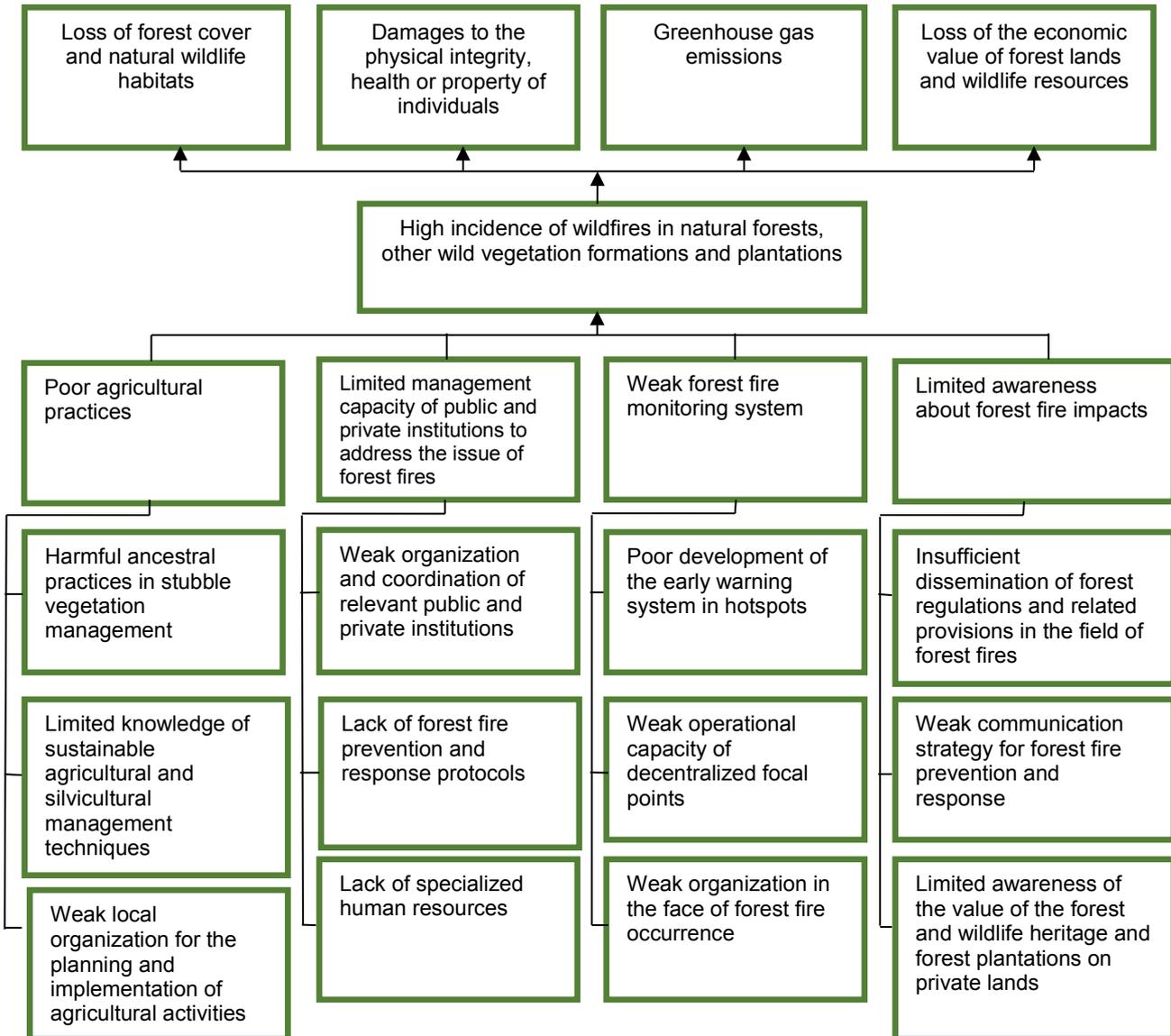
List of direct beneficiaries of project: 960 rural populations (NEW)				
Department	Province	Beneficiary	Organization	N° of beneficiaries
Cajamarca	San Ignacio	Habitants	Naranjos Native Community (Awajun)	20
Cajamarca	San Ignacio	Habitants	Ronderil Huarango Organization	20
Cajamarca	San Ignacio	Habitants	San Pedro Huarango Peasant Community	20
Cajamarca	San Ignacio	Habitants	Group of conservationists of the natural forests of the Botijas basin.	25
Cajamarca	San Ignacio	Habitants	The Prosperidad Chirinos Coffee Cooperative	35
Cajamarca	San Ignacio	Habitants	Organización Ronderil Sectorial-Corazón de la Naranja	20
Cajamarca	Jaen	Co-proprietors	San Felipe Peasant Community	20
Cajamarca	Jaen	Co-proprietors	Santa Rosa Peasant Community	20
Cajamarca	Jaen	Co-proprietors	Pauca Peasant Community	20
Ucayali	Coronel Portillo	Habitants	Federation of Organic Producers of Ucayali (FEPEU)	20
Ucayali	Coronel Portillo	Habitants	Organization of Agricultural Producers of the Middle Ucayali (ORPAMU)	20
Ucayali	Coronel Portillo	Habitants	Utuquinia River Basin Agricultural Producers Association (APARU)	30
Ucayali	Coronel Portillo	Co-proprietors	Native Community of Santa Rosita	20
Ucayali	Coronel Portillo	Habitants	Association of Agricultural Producers Los Emprendedores de Caribe Uchunya	25

Ucayali	Coronel Portillo	Co-proprietors	Santa clara of Uchunya	25
Ucayali	Padre Abad	Habitants	Asociacion of Agricultural Producers the Wrestlers of Nuevo San Juan (APALLUNSAJU)	14
Ucayali	Padre Abad	Habitants	Agroindustrial Ecological Cooperative of Curimana	20
Ucayali	Padre Abad	Habitants	Central Comitee with Development to the Future of Curimana	30
Junin	Chanchamayo	Habitants	Agricultural Cofffee Cooperative ACPC Pichanaki	50
Junin	Chanchamayo	Habitants	Association of Ecotourism Farmers	50
Junin	Satipo	Co-proprietors	Native Communities Belonging to KANUJA and CARE Organizations	40
Junin	Satipo	Habitants	Association of Agricultural Producers of the Tzancuvatsiari Town Center	20
Junin	Satipo	Habitants	Association of Agricultural Producers of the Rio Venado Village Center	20
Junin	Satipo	Habitants	Association of Agricultural Producers of the Maranquiari Village Center	20
Pasco	Oxapampa	Habitants	Pozuzo Farmers' Association	45
Pasco	Oxapampa	Habitants	Industrial Agricultural Cooperative Apas - Sancore Palcazú Ltda.	15
Pasco	Oxapampa	Habitants	Oxapampa Granadilleros Association	40
Pasco	Oxapampa	Habitants	Pichis Valley Producers Association	100
Huanuco	Leoncio Prado	Habitants	Leoncio Prado Producers Association	78
Huanuco	Huanuco	Habitants	Huanuco Producers Association	78

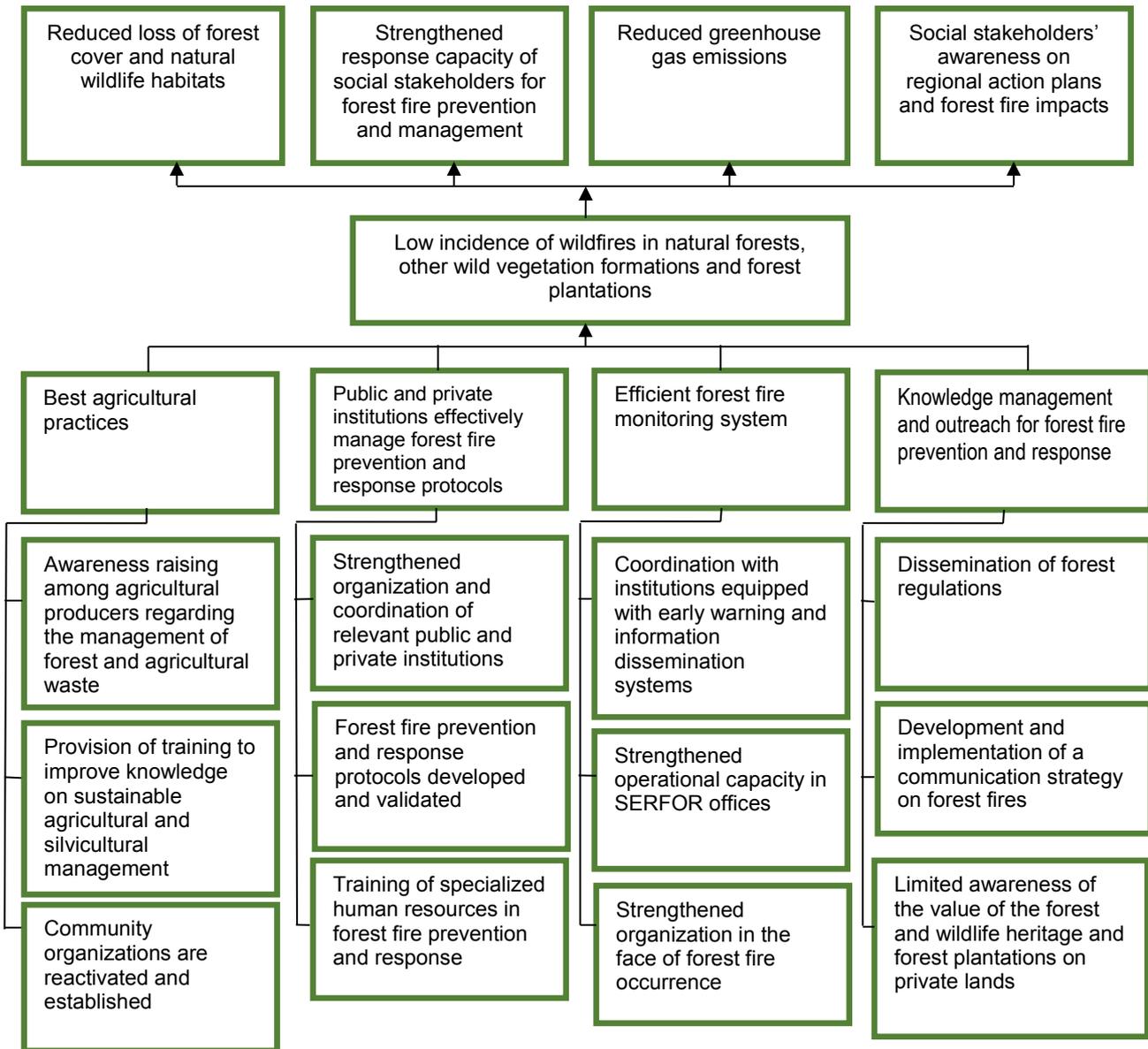
### 2.1.3 Problem analysis

After identifying the key problem, four causes were recognized as detailed in the problem tree below:

**Problem tree**



## Solutions tree



## 2.1.4 Logical framework

Intervention strategy	Measurable indicators	Means of verification	Assumptions
<p><b>Development objective</b> Contribute to the conservation of forest ecosystems and other wild vegetation formations threatened by forest fires,</p>	<ul style="list-style-type: none"> <li>• A total of 960 local dwellers and 375 representatives of key public and private institutions in the project target area have been sensitized and trained</li> <li>• There are advertising guidelines for radio spots in 3 languages.</li> <li>• Brochures in prevention and response to the occurrence of forest fires; and in forest regulations and enhancement of forest and wildlife heritage.</li> <li>• Sound coordination links have been established between the population and public and private institutions for forest fire prevention and response</li> <li>• There are communication actions implemented in a forest fire</li> <li>• 42 trained and equipped brigades for forest fire fighting</li> </ul>	<ul style="list-style-type: none"> <li>• Guidelines, legal regulations</li> <li>• reports and / or reports of training and technical assistance to rural residents in their plots</li> <li>• Protocol for the prevention of forest fires and for the response to the occurrence of forest fires</li> <li>• Proceedings of meetings</li> <li>• Early warning protocol</li> <li>• Trained and equipped brigades</li> </ul>	<ul style="list-style-type: none"> <li>• The Peruvian Government is interested in developing a national forest policy aimed at the sustainable development of forests in consonance with the project objective</li> <li>• Public and private institutions are willing to participate in the activities organized by the project</li> </ul>
<p><b>Specific objective</b> Reduce the occurrence of forest fires through capacity strengthening in forest fire prevention and response aimed at local communities and local authorities</p>	<ul style="list-style-type: none"> <li>• Two (02) protocols developed – one for forest fire prevention and another one for forest fire response</li> <li>• There are two (02) manuals on best agroforestry practices available</li> <li>• There is one (01) communication action on forest fires.</li> <li>• One (01) online capacity building platform</li> <li>• One (01) wildfire platform web implemented</li> <li>• 01 subcontract for improvement of the wildfire early warning system</li> <li>• 01 subcontract for improvement of the fire monitoring and evaluation system</li> </ul>	<ul style="list-style-type: none"> <li>• Official reports on field visits and workshops</li> <li>• Official statistical reports</li> <li>• Commitments and/or agreements with key social stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Regional offices raise awareness on forest fire prevention, management and control</li> <li>• Public and private institutions are willing to participate in workshops and awareness events</li> <li>• Reduced risk of forest fires in priority areas</li> </ul>
<p><b>Output 1</b> Best forest and agricultural waste practices</p>	<ul style="list-style-type: none"> <li>• 2 manuals for the course on sustainable agricultural and silvicultural management techniques, in the 1st year</li> <li>• 10 awareness workshops aimed at residents of rural areas</li> <li>• 10 courses on sustainable agronomic and forestry management techniques aimed at the inhabitants of rural areas.</li> <li>• 5 specialists (foresters, agronomists, zootechnicians or related careers) for Cajamarca, Pasco, Huánuco, Ucayali and Junín to train and provide technical assistance in non-burning alternatives and preventive forestry to rural inhabitants</li> <li>• A communicator will be hired who works exclusively to spread the subject of fire prevention using the right means of communication to reach the target audience, which is the rural population.</li> <li>• 01 online capacity building platform. 500 regional and local actors will access and benefit from this platform.</li> <li>• Equipment to strengthen the operational capacity of Regional Forest Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop, meeting and course reports</li> <li>• Reports containing photographs of publicity billboards and CD with publicity videos</li> <li>• Newsletters/spot/audios</li> <li>• Proceedings of meetings</li> <li>• Equipment and tools</li> <li>• Capacity building platform implemented.</li> </ul>	<ul style="list-style-type: none"> <li>• The best practices for forest and agricultural waste management help reduce the incidence of forest fires</li> </ul>
<p><b>Output 2</b> Public and private institutions effectively managing forest fire prevention and response protocols</p>	<ul style="list-style-type: none"> <li>• 5 training workshops/courses for social stakeholders to enhance forest fire response capacity.</li> <li>• 1 forest fire prevention protocol</li> <li>• 1 forest fire response protocol</li> <li>• 4 validation workshops for the implementation of forest fire prevention and response protocols</li> <li>• 5 training courses in response to the forest fires</li> <li>• 1 wildfire platform web</li> </ul>	<ul style="list-style-type: none"> <li>• Forest fire prevention and response protocols</li> <li>• Reports on workshops and courses</li> <li>• Proceedings</li> <li>• Technical manuals and/or guidelines</li> <li>• Wildfire platform web implemented</li> <li>• Suppression team equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Regional offices and public and private institutions are interested in the various workshops and courses implemented by the project</li> <li>• Regional offices and public and private institutions are interested in the implementation of forest fire prevention protocols</li> <li>• Regional offices and public and</li> </ul>

			private institutions are interested in the implementation of forest fire response protocols
<b>Output 3</b> Efficient forest fire monitoring system	<ul style="list-style-type: none"> <li>• 05 information workshops on early warning systems</li> <li>• 02 protocols for action on forest fire alerts for its articulation with local and regional institutions.</li> <li>• 04 studies to strengthen the satellite monitoring system for forest fires</li> <li>• 01 subcontract for improvement of the wildfire early warning system</li> <li>• 01 subcontract for improvement the fire monitoring and evaluation system</li> </ul>	<ul style="list-style-type: none"> <li>• Technical reports on workshops</li> <li>• Maps</li> <li>• Trained personnel</li> <li>• Attendance list</li> <li>• documents</li> <li>• Protocols for action about the wildfire alerts in local governments</li> <li>• Hotspot detection procedural guide</li> <li>• Implementation and technical documentation of the studies</li> </ul>	<ul style="list-style-type: none"> <li>• Regional offices and public and private institutions are interested in the various courses and workshops implemented by the project</li> <li>• Regional offices and public and private institutions are interested in early warning management and implementation</li> <li>• Professionals working at the regional offices make good use of the tool kit provided</li> <li>• Regional offices and public and private institutions apply the early warning management and implementation manual</li> <li>• The forest fire monitoring system helps reduce the incidence of forest fires</li> </ul>
<b>Output 4</b> Knowledge management and outreach for forest fire prevention and response	<ul style="list-style-type: none"> <li>• 5 dissemination workshops on forest and related regulations</li> <li>• outreach factsheets developed</li> <li>• 5 dissemination workshops for the implementation of the forest fire communication strategy</li> <li>• Outreach factsheets on the economic value of the forest and wildlife heritage and forest plantations on private lands</li> <li>• Radio spots broadcast on local radios</li> <li>• 02 project dissemination and socialization events</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop reports</li> <li>• Outreach factsheets</li> <li>• Forest fire communication strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Communities, regional offices and public and private institutions are interested in participating in the workshops</li> <li>• Regional offices and public and private institutions are interested and internalize the message conveyed through outreach factsheets</li> </ul>

## **2.2 Objectives**

### **2.2.1 Development objective and impact indicators**

The development objective is to contribute to the conservation of forest ecosystems and other wild vegetation under threat of forest fires through strengthening the capacity of the national and local authorities and local communities for integrated forest fire management.

Impact indicators:

- A total of 960 local dwellers and 375 representatives of key public and private institutions in the project target area have been sensitized and trained.
- Sound coordination links are established between the rural population, native communities and public and private institutions for forest fire prevention and response.
- A publication on forest fires is produced.

### **2.2.2 Specific objective and outcome indicators**

This project specifically aims to reduce the occurrence of forest fires through capacity strengthening in forest fire prevention and response aimed at local communities and local authorities.

Outcome indicators:

- Two (02) protocols have been developed – one for forest fire prevention and another for forest fire response.
- One (01) protocol for early warning management and implementation is available.
- One (01) online capacity building platform
- One (01) wildfire platform web implemented
- 01 subcontract for improvement of the wildfire early warning system
- 01 subcontract for improvement the fire monitoring and evaluation system
- On completion, there are two (02) manuals on best agroforestry practices available.
- On completion, one (01) communication action on forest fires is established.

## **PART 3: DESCRIPTION OF PROJECT INTERVENTIONS**

### **3.1 Outputs and activities**

#### **3.1.1 Outputs**

- Output 1: Best forest and agroforestry management, and best agricultural waste practices.
- Output 2: Public and private institutions effectively manage forest fire prevention and response protocols.
- Output 3: Efficient forest fire monitoring system established.
- Output 4: Knowledge management and outreach for forest fire prevention and response

#### **3.1.2 Activities**

Activity 1.1: Raise awareness among agricultural producers on best practices for forest and agricultural waste management

- Implementation for the design and development of publicity billboards as well as services for awareness and outreach radio spots; in addition, the design and printing of outreach factsheets, posters and stickers will also be sub-contracted.
- A total of 10 awareness workshops will be organized and publicity billboards, radio spots and videos will be produced and promoted in order to raise community awareness on best forest and agricultural waste management practices so as to avoid forest fires.

Activity 1.2: Provide training on sustainable forest and agroforestry management techniques

- Accompaniment and technical assistance to the rural population to promote good agroforestry and forest practices in the areas at risk of identified forest fires.
- Manuals on best agroforestry practices will be produced
- 12 courses on sustainable forest and agroforestry management techniques will be implemented for local community members.
- Implementation of the online capacity building platform to strengthening capacities on forest fire prevention, for the dissemination, training and technical assistance. This must be complemented with technological resources and applications, which contribute to the achievement of learning, when it comes to training and technical assistance, and knowledge transfer. Immediate when it comes to outreach and awareness.

Activity 1.3: Reactivate and establish community organizations.

- Work meetings will be held to reactivate or establish community organizations to strengthen community skills in forest fire prevention and response.

Activity 1.4: Strengthen the operational capacity of SERFOR headquarters

- 05 equipped motorcycles, 05 laptops, 05 computer desktops, 05 agricultural and forestry waste choppers, and other tools and equipment for prevention and response to the occurrence of forest fires will be acquired.

Activity 2.1: Strengthen the organization and coordination of public and private institutions.

- Three training workshops/courses will be executed for the personnel of relevant public and private institutions so as to enhance their response capacity in the face of forest fire events.
- Design and establishment of the wildfire platform web.

Activity 2.2: Develop and validate forest fire prevention and response protocols.

- Two forest fire consultants will be contracted to develop two framework protocols – one on forest fire prevention and another on forest fire response.
- These protocols will be validated in workshops to be executed by each of the project offices with the participation of representatives from public and private institutions.

Activity 2.3: Train specialized human resources in forest fire prevention and response.

- Workshops will be developed to standardize criteria for 05 professionals who will be contracted to provide technical assistance in alternatives for non-burning and preventive forestry; Likewise, professionals from GOREs and other institutions will be trained to train rural residents.
- 05 training courses will be developed for the training of specialized brigades of forest fire fighters, for which specialists and instructors will be contracted, as well as the purchase of tools, clothing, and appropriate equipment for the development of training and establishment of the brigades.

Activity 3.1: Coordinate with institutions equipped with early warning and information dissemination systems

- 04 specialists will be hired to strengthen the satellite monitoring system for the timely detection of wildfire alerts.
- 05 information workshops will be developed for regional institutions, and key public and private institutions to provide training on the management and implementation of these early warning systems.
- Four studies will be developed to automate and validate information to strengthen the wildfire satellite monitoring system
- 01 subcontract to improve the wildfire early warning system.
- 01 subcontract to improve the fire monitoring and evaluation system

Activity 3.2: Strengthen organization in the event of forest fires.

- Develop two protocols for action on forest fire alerts for its articulation with local and regional institutions.
- Two (02) validation workshops for the implementation of protocols for response to forest fires alerts.

Activity 4.1: Carry out dissemination actions on forest regulations.

- The production of outreach illustrative cards, factsheets, posters and stickers to disseminate forest regulations will be outsourced.
- 12 workshops will be organized for the dissemination of forest regulations, the prevention actions that are being carried out, highlighting causes and consequences of forest fires for local population.

Activity 4.2: Develop and implement communication and outreach actions on forest fires.

- Three (03) local information workshops will be carried out for public and private institutions.
- One (01) regional workshop to disseminate prevention and control forest fire experience, for government, experts, private sectors and local actors in the countries of the Amazon region.

Activity 4.3: Assess and disseminate the value of the forest and wildlife heritage and forest plantations on private lands.

- Material for the dissemination about the value of forest and wildlife heritage and forest plantations on private land will be prepared, for dissemination at several kinds of events organized by SERFOR, as well as those developed by other organizations, the MINAGRI instances, SERNANP, Ministry of Culture, INDECI, FEMA.
- Working meetings will be held with the FEMA, PNP, ATFFS and ARFFS of the GORE in order to improve the Administrative Sanctioning Procedures – PAS, and criminal proceedings related to the issue of forest fires.

Activity 4.4: Establish and maintain project coordination and management.

- This activity is part of the project management process. It includes the preparation of monthly, six-monthly and final reports, yearly plans of operation, coordination, monitoring, administration, etc.

- At the beginning of the project, a project coordinator and an administrator will be hired with ITTO funds. Also, the executing agency will assign a project manager and a coordinator for each regional office, represented by the technical administrator of the corresponding ATFFS and ARFFS of Ucayali and Huánuco.

### **3.2 Approaches and methods**

In order to ensure the achievement of project objectives, the operational execution of project activities must take into account the approaches, methods and mechanisms to be used to attain this goal; the following approaches are considered:

- **Participatory and inclusive approach:** Improving the implementation of project activities; in this respect, it is envisaged that the project will endeavour to ensure the participation, both collectively and individually, of agencies from the three levels of government, local and national stakeholders from both the public and private sectors, by including the strengthening of knowledge and capacities such as community forest management techniques. The project will highlight the economic and environmental benefits that would be generated through indirect harvesting operations to improve land quality and increase (agricultural and forest) productivity, as well as through community forest management and the establishment of response mechanisms in accordance with the requirements of each area affected at the local level. This will be achieved by ensuring the participation of local organizations involved in activities such as burnings, the management of agricultural waste, and prevention and control of hot spots and forest fires.
- **Multidisciplinary approach:** The project will establish multidisciplinary professional and technical teams and identify local leaders and government authorities so as to determine appropriate responses to risks such as forest fires; the project will work with and train experts in forest fires, including professionals such as forest engineers, biologists and specialists in areas such as economics, social sciences and communications.
- **Synergies:** It is essential to work and establish partnerships and foster joint work relationships with local, provincial and regional institutions, in order to strengthen forest fire prevention and control actions while avoiding duplication of efforts and dispersion of budgetary resources, so as to improve the use of available resources to cover larger areas of action. Furthermore, good relationships must be maintained and agreements must be reached with neighbouring sectors, districts, provinces and regional governments in the area, in case the management of major forest fires exceeds the capacity of one jurisdiction.
- **Leadership and capacity strengthening at the local level:** The project will organize, identify and train community leaders and children, and will provide information and training to local personnel for field work and implementation of project activities. The topics to be covered in capacity-building activities include the prevention and control of forest fires, forest conservation and improvement of environmental services, as well as various issues related to forest management, harvesting, business management and carbon trade.

In order to achieve the objective of helping to curb the loss of forest cover and wildlife habitats caused by forest fires by reducing the occurrence of forest fires that affect natural forests, forest formations and forest plantations at the national level, the following methods will be applied:

- **Planning, identification and demarcation of the most important areas for the establishment of head offices from where project activities will be coordinated.**
- **Activities:** assess needs so that through support, training, inter-institutional coordination, local community involvement, education and preparedness, it will be possible to address forest fire occurrences through their prevention or appropriate management.
- **Information and results:** prepare regular reports on the actions taken to provide feedback and evaluate the progress made and the achievement of objectives, so as to strengthen areas as required or implement actions to ensure ongoing improvement.

### 3.3 Work Plan

Outputs & activities		Responsible Party	Year 1			
			Quarter			
			1	2	3	4
<b>Outputs 1</b>	<b>Good practices in forest and agroforestry management, and forest and agricultural waste</b>					
A1.1	Raise awareness agricultural producers on good practices for forest and agricultural waste management.	Plant SERFOR, - ATFFS technical administrators SERFOR, ARFFS-Ucayali				
A1.2	Training on sustainable forest and agroforestry management techniques	Professional specialists hired sustainable agronomic and forestry management techniques, ATFFS SERFOR Central, Technical Administrators of ATFFS-SERFOR and ARFFS				
A1.3	Reactivate and form community organisations	SERFOR Central, Technical Administrators of ATFFS-SERFOR and ARFFS-Ucayali hired specialist professionals				
A1.4	Strengthen the operational capacity of SERFOR headquarters	SERFOR Central, Project Manager, Technical Administrators of ATFFS-SERFOR, ARFFS Ucayali				
<b>Outputs 2</b>	<b>Public and private institutions effectively manage the prevention and response of forest fires</b>					
A2.1	Strengthen the organization and articulation of public and private institutions	SERFOR Central, Technical Administrators of ATFFS-SERFOR, ARFFS-Ucayali hired specialist professionals				
A2.2	Develop and validate protocols for prevention and response to the occurrence of forest fires	SERFOR Central, Technical Administrators of ATFFS-SERFOR - Consultants				
A2.3	Train specialized human resources in forest fire prevention and response	Technical administrators of SERFOR Central, Technical administrators of ATFFS-SERFOR. Qualified Specialists				
<b>Outputs 3</b>	<b>Efficient forest fire monitoring system.</b>					
A.3.1	Articulate with institutions that have early warning systems and information transmission	Project manager				
A.3.2	Strengthen the organization in the event of forest fires	Project Manager SERFOR Central, Technical Administrators of ATFFS-SERFOR, ARFFS Ucayali				
<b>Outputs 4</b>	<b>Knowledge management and outreach for forest fire prevention and response</b>					
A.4.1	Carry out dissemination actions related to the forestry activity of SERFOR Central, Technical Administrators of ATFFS-SERFOR and ARFFS-Ucayali	SERFOR Central, Technical Administrators of ATFFS-SERFOR and ARFFS-Ucayali				
A.4.2	Develop and implement communication actions on forest fires	Communication consultant for development of communication actions on forest fires SERFOR Central, Technical Administrators of ATFFS-SERFOR and ARFFS-Ucayali				
A.4.3	Know and spread the value of forest and wildlife heritage and forest plantations on privately owned land	Project Manager SERFOR Central, Technical Administrators of ATFFS-SERFOR and ARFFS-Ucayali				
A.4.4	Establish and maintain project coordination and management	SERFOR Central, Project Manager				

### 3.4 Project budget

#### 3.4.1 Master budget (US\$)

Output / activity	Description	Comp. Pres.	Quantity	Unit	Unit cost (\$)	Total Cost (\$)	OIMT (\$)	executing agency
<b>Output 1</b>	<b>Forest and Agricultural Waste Management</b>					<b>426,660</b>	<b>373,505</b>	<b>53,155</b>
<b>A1.1</b>	<b>To Sensitize producers in Forest and Agricultural Waste Management</b>					<b>105,210</b>	<b>95,330</b>	<b>9,880</b>
	SERFOR specialists	11.3	15	D/H	100	1,500		1,500
	Communication specialists	11.5	8	M/H	2,100	16,800	16,800	
	Illustrations, posters and stickers.	21	4	Subcontrat	2,000	8,000	8,000	
	Per diem	31.3	105	Day	95	9,975	9,975	
	Participant bus tickets	33.2	500	Ticket	10	5,000	5,000	
	Desktop tools	54	20	Training	80	1,600	1,220	380
	Banners	54.1	10	Unit	40	400	400	
	fuels and lubricants	55	587	Gallon	5	2,935	2,935	
	Dissemination of awareness videos	24	5	Service	1,000	5,000	5,000	
	Preparation of radio spots and broadcasting	24	2	month	8,000	16,000	16,000	
	Printing of material in prevention and suppression of forest fires	61.6	5	thousand	3,000	15,000	15,000	
	Courses support	64	20	workshop	800	16,000	15,000	1,000
	Facilitation service	61.5	20	workshop	150	3,000		3,000
	Sound equipment rental	61.12	20	workshop	100	2,000		2,000
	Auditorium rental	61.7	20	workshop	100	2,000		2,000
<b>A1.2</b>	<b>Sustainability techniques training of agronomic and 'silvicultural' management</b>					<b>251,175</b>	<b>212,400</b>	<b>38,775</b>
	SERFOR specialists	11.3	24	D/H	100	2,400		2,400
	5 Field specialist (forester / zootechnician / agronomist) -10 months	12.3	50	M/H	2,100	105,000	105,000	
	2 manuals on good agroforestry and forestry practices	22	1	Subcontrat	6,000	6,000	5,000	1,000
	Specialist for pedagogical support	11.7	6	M/H	2,000	12,000	12,000	
	Service of design and implementation of virtual pedagogical proposal	27	1	Subcontrat	35,000	35,000	30,500	4500
	Intercultural expert	12.5	8	M/H	2,300	18,400	18,400	0
	local mobility	33.3	150	passage	40	6,000	0	6,000
	stationery supplies	54	150	material	25	3,750	0	3,750
	fuels and lubricants	55	225	gallon	5	1,125	0	1,125
	Supplies to install the demonstration plots	61.1	83	supplies	500	41,500	41,500	
	Local rental for field specialists	61.7	50	workshop	400	20,000		20,000
<b>A1.3</b>	<b>Activate and form communal organizations</b>					<b>11,175</b>	<b>6,675</b>	<b>4,500</b>
	SERFOR specialists	11.3	18	D/H	100	1,800		1,800
	Travel tickets	33.3	300	D/H	10	3,000	1,900	1,100
	Desktop tools	54	15	meeting	25	375	275	100
	Meeting support	64	300	meeting	15	4,500	4,500	
	Local rental	61.7	15	meeting	100	1,500		1,500
<b>A1.4</b>	<b>To strengthen the operative capacity of SERFOR headquarters</b>					<b>63,100</b>	<b>63,100</b>	<b>-</b>

	Desktop	44.1	5	Unit	1,700	8,500	8,500	-
	Laptop	44.1	10	Unit	1,200	12,000	12,000	-
	Honda XR 180 motorcycles	43.1	5	Unit	2,500	12,500	12,500	-
	Motorcycle fuel (8) x 10 months	55	800	gallons	5	4,000	4,000	-
	Motorcycle maintenance + SOAT	61.4	5	units	130	650	650	-
	Vehicle safety kit	52	5	kit	100	500	500	-
	Agricultural and forestry waste chopper	44.3	5	Unit	900	4,500	4,500	-
	Chainsaw	44.3	5	Unit	600	3,000	3,000	-
	Agricultural waste management toolkit	44.3	5	kit	200	1,000	1,000	-
	Tree pruning tool kit	44.3	5	kit	500	2,500	2,500	-
	Tool kit for plantation installation	44.3	5	kit	600	3,000	3,000	-
	Camera and filmer	44.1	5	Unit	600	3,000	3,000	-
	multimedia projector	44.1	5	Unit	600	3,000	3,000	
	Ecran portable	44.1	5	Unit	150	750	750	
	Roller to darken environments	44.1	5	Unit	40	200	200	
	stereo	44.3	5	Unit	500	2,500	2,500	
	Internet service	53	50	service / month	30	1,500	1,500	
<b>Output 2</b>	<b>Public and private institutions effectively managing forest fire prevention and response protocols.</b>					<b>205,902</b>	<b>166,762</b>	<b>39,140</b>
<b>A2.1</b>	<b>To strengthen the organization and articulation of public and private institutions</b>					<b>30,850</b>	<b>30,350</b>	<b>500</b>
	SERFOR Specialist	11.3	5	D/H	100	500		500
	Air ticket	33.1	10	tickets	250	2,500	2,500	
	Per diem	31.3	30	Day	95	2,850	2,850	
	Design, operation of web platform for forest fires	25	1	Subcontract	25,000	25,000	25,000	
<b>A2.2</b>	<b>To Elaborate and validate prevention and response protocols in cases of forest fires</b>					<b>31,850</b>	<b>8,810</b>	<b>23,040</b>
	SERFOR Specialist	11.3	8	D/H	100	800		800
	Participants to Institutions 'events	12.6	200	D/H	100	20,000		20,000
	Forest fires Consultant	12.4	2	M/H	2,000	4,000	4,000	
	Desk tools	54	10	workshop	80	800	560	240
	Workshop support	64	10	workshop	375	3,750	3,750	
	Facilitation services	61.5	10	workshop	150	1,500		1,500
	Auditorium rental cost	61.7	5	workshop	100	500	500	
	Office rental cost	61.7	5	workshop	100	500		500
<b>A2.3</b>	<b>To train Human Resources specialized in Prevention and Response of Forest fires</b>					<b>143,202</b>	<b>127,602</b>	<b>15,600</b>
	SERFOR specialists	11.3	12	month/man	1,200	14,400		14,400
	3 Specialists for induction to field professionals	12.2	24	day	130	3,120	3,120	
	stationery supplies	54	5	workshop	80	400	300	100
	Air ticket	33.1	15	tickets	250	3,750	3,750	
	fuels and lubricants	55	220	gallon	5	1,100	1,100	
	Workshop support	64	5	workshop	700	3,500	3,500	-
	facilitation service	61.5	5	workshop	120	600		600
	auditorium rental	61.7	5	workshop	100	500		500
	Design service of the training course for combatants	12.2	1	service	2,800	2,800	2,800	
	Forest fire suppression trainers service	12.2	9	service	800	7,200	7,200	

	Air ticket	33.1	20	passage	250	5,000	5,000	
	Training support	64	3	service	2,000	6,000	6,000	
	Accommodation 50 participants 3 nights	61.13	225	service	30	6,750	6,750	
	Diverse materials (notepad, backpack, maskintape, cutter, board)	54	5	various	600	3,000	3,000	
	Baner	54.1	8	Unit	55	440	440	
	Firefighter jacket	44.2	63	Unit	210	13,230	13,230	
	Firefighter pants	44.2	63	Unit	240	15,120	15,120	
	Forest firefighter helmet	44.2	63	Unit	110	6,930	6,930	
	Firefighter gloves	44.2	63	Unit	73	4,599	4,599	
	Forest Firefighter Lenses	44.2	63	Unit	30	1,890	1,890	
	Forest firefighter boot	44.2	63	Unit	235	14,805	14,805	
	Tool kills fire	44.2	70	Unit	95	6,650	6,650	
	Pulasky ax	44.2	12	Unit	96	1,152	1,152	
	Forest rake	44.2	16	Unit	80	1,280	1,280	
	Forest shovel	44.2	16	Unit	146	2,336	2,336	
	Machetes	44.2	20	Unit	6	120	120	
	Fire extinguishing backpack	44.2	12	Unit	120	1,440	1,440	
	Multipurpose firefighter backpack	44.2	70	Unit	87	6,090	6,090	
	Global Positioning System (GPS) Team	44.3	10	Unit	900	9,000	9,000	
<b>Output 3</b>	<b>Efficient forest fire monitoring system</b>					<b>224,945</b>	<b>199,895</b>	<b>25,050</b>
<b>A3.1</b>	<b>Coordinate with institutions that have early warning systems and information transmission.</b>					<b>215,125</b>	<b>191,875</b>	<b>23,250</b>
	SERFOR specialists	11.3	12	month / man	1,750	21,000		21000
	Remote sensing specialist	11.6	20	month / man	2,200	44,000	44,000	
	GIS specialist	11.6	20	month / man	2,200	44,000	44,000	
	Service for the incorporation of new satellites for the alert of forest fires	25	1	Service	8,800	8,800	8,800	
	Forest fire alert report generation service	25	1	Service	8,800	8,800	8,800	
	high resolution image coverage license	25	1	Service	57,000	57,000	57,000	
	Automation service and generation of cartography of burned areas	26	1	Service	8,800	8,800	8,800	
	Service of design and implementation of methodology for validation of the map of burned areas	26	1	Service	8,800	8,800	8,800	
	Geospatial viewer improvement	26	1	Service	8,800	8,800	8,800	
	Per diem	31.3	15	day	95	1,425	1,425	
	Air ticket	33.1	5	ticket	250	1,250	1,250	
	land passage	33.2	5	ticket	40	200	200	
	projector rental	61.12	5	workshop	100	500		500
	sound equipment rental	61.12	5	workshop	150	750		750
	auditorium rental	61.7	5	workshop	200	1,000		1,000
<b>A3.2</b>	<b>To Strengthen the organization in case of a Forest Fire</b>					<b>9,820</b>	<b>8,020</b>	<b>1,800</b>
	Per diem	31.3	32	day	95	3,040	3,040	
	Air ticket	33.1	8	tickets	250	2,000	2,000	
	land passage	33.2	8	tickets	35	280	280	
	Workshop support	64	4	workshop	300	1,200	1,200	

	laptop	44.1	1	unit	1,500	1,500	1,500	
	projector rental	61.12	4	workshop	100	400		400
	sound equipment rental	61.12	4	workshop	150	600		600
	auditorium rental	61.7	4	workshop	200	800		800
<b>Output 4</b>	<b>Trained dwellers on Forest Fires Impact</b>					<b>278,255</b>	<b>176,775</b>	<b>101,480</b>
<b>A4.1</b>	<b>To Make Normativity Diffusion Actions related to the Forest activity</b>					<b>7,700</b>	<b>2,000</b>	<b>5,700</b>
	SERFOR Specialists	11.3	12	D/H	100	1,200		1,200
	Institutions' Events Participants	12.6	450	D/H	10	4,500		4,500
	Informative brochures Printing	61.6	10	thousand	200	2,000	2,000	
<b>A4.2</b>	<b>Develop and implement communication and outreach actions on forest fires</b>					<b>73,775</b>	<b>72,625</b>	<b>1,150</b>
	SERFOR Specialists	11.3	4	D/H	100	400		400
	Per diem	31.3	6	day	95	570	570	
	Bus Ticket	33.2	6	ticket	40	240	240	
	Desk tools	54	3	workshop	80	240	240	
	Fuel and Oil	55	90	gallon	5	450	450	
	Workshop support	64	3	workshop	375	1,125	1,125	
	Facilitation Services	61.5	3	workshop	150	450		450
	Auditorium rental cost	61.7	3	workshop	100	300		300
	Regional workshop	65	1	workshop	70000	70,000	70,000	
<b>A4.3</b>	<b>Assess and disseminate the value of the forest and wildlife heritage and forest plantations on private lands</b>					<b>3,000</b>	<b>3,000</b>	<b>-</b>
	Local Transportation	33.3	20	Mes	150	3,000	3,000	
<b>A4.4</b>	<b>Establish and maintain project coordination and management</b>					<b>193,780</b>	<b>99,150</b>	<b>94,630</b>
	Project Coordinator	11.2	10	M/H	2,800	28,000	28,000	
	Project support officer	11.4	10	M/H	2,000	20,000	20,000	
	Project director	11.1	12	M/H	4,350	52,200		52,200
	Regional coordinator	12.1	36	M/H	700	25,200		25,200
	Participants in meetings	12.6	65	D/H	100	6,500		6,500
	Per diem	31.3	160	day	95	15,200	15,200	
	Air ticket	33.1	40	ticket	250	10,000	10,000	
	Land passage	33.2	30	ticket	40	1,200	850	350
	Local mobility	33.3	12	Month	200	2,400	1,400	1,000
	Office rental	41	12	Month	500	6,000		6,000
	Vehicle spare parts	52	12	Month	150	1,800	1,400	400
	Basic services	53	12	Month	300	3,600	3,500	100
	Stationery supplies	54	12	Month	120	1,440	1,200	240
	Meeting support	64	12	Month	40	480	320	160
	Vehicle maintenance service	61.4	12	Month	150	1,800	1,600	200
	Project dissemination and socialization events	61.8	2	Event	2,500	5,000	5,000	
	Steering committee meetings	61.8	2	Unit	120	240	100	140
	Advisory council meetings	61.8	2	Unit	120	240	100	140
	Bank charges and courier	61.9	12	Month	40	480	480	
	Private audit	66	1	Unit	10000	10,000	10,000	
	Financial audit	62	1	Unit	2,000	2,000		2000
						<b>1,139,762</b>	<b>920,937</b>	<b>218,825</b>

### 3.4.2 Consolidated budget by component (US\$)

Category	Description	ITTO & SERFOR
<b>10</b>	<b>Project staff</b>	
11.1	Project director	52,200
11.2	Project coordinator	28,000
11.3	SERFOR specialists	44,000
11.4	Project support officer	20,000
11.5	Specialists (comunicator)	16,800
11.6	Specialists (Remote sensing / GIS)	88,000
11.7	Specialist (Pedagogical support)	12,000
12.1	Regional coordinator	25,200
12.2	Experts (training course)	13,120
12.3	Experts (forester / zootechnician / agronomist)	105,000
12.4	Experts (design protocols)	4,000
12.5	Experts (Intercultural)	18,400
12.6	Participants to events and meetings	31,000
<b>19</b>	<b>Subtotal</b>	<b>457,720</b>
<b>20</b>	<b>Subcontracts</b>	
21	Illustrative booklets, poster and sticker	8,000
22	Manuals on good agroforestry practices	6,000
23	Design and operation of web platform for forest fires service	25,000
24	Spot development services and broadcast services	21,000
25	Service for improvement of early warning system	74,600
26	Service for improvement the fire monitoring and evaluation system	26,400
27	Service of design and implementation of virtual pedagogical proposal	35,000
<b>29</b>	<b>Subtotal</b>	<b>196,000</b>
<b>30</b>	<b>Duty travel</b>	
31.3	Per diem	33,060
33.1	Air ticket	24,500
33.2	Ground passage	6,920
33.3	Local mobility	14,400
33.4	Japan travel	10,000
<b>39</b>	<b>Subtotal</b>	<b>88,880</b>
<b>40</b>	<b>Capital goods</b>	
41	Office rental	6,000
43.1	Honda XR motorcycle	12,500
44.1	Laptop, multimedia projector	28,950
44.2	Forest equipment for suppression of forest fires	75,642
44.3	Others	25,500

<b>49</b>	<b>Subtotal</b>	<b>148,592</b>
<b>50</b>	<b>Consumable items</b>	
52	Vehicle spare parts	2,300
53	Basic services	5,100
54	Stationery supplies	11,605
54.1	Baners	840
55	Fuels and lubricants	9,610
<b>59</b>	<b>Subtotal</b>	<b>29,455</b>
<b>60</b>	<b>Miscellaneous expenses</b>	
61.1	Supplies to install the demonstration plots	41,500
61.3	PSC meeting	5,905.16
61.4	Vehicle maintenance	2,450
61.5	Event facilitation service	5,550
61.6	Information material printing service	17,000
61.7	Auditorium services	27,100
61.8	Outreach, socialization and project meetings events	5,480
61.9	Bank charges and messaging	480
61.12	Sound equipment rental service and ecran	4,250
61.13	Hosting service	6,750
62	Financial audit	2,000
64	Support for course development	36,555
65	Regional workshop	70,000
66	Private audit	10,000
<b>69</b>	<b>Subtotal</b>	<b>235,020.16</b>
	<b>SUBTOTAL / All categories</b>	<b>1,155,667.16</b>
<b>70</b>	<b>National administrative costs</b>	
<b>80</b>	<b>Project monitoring and administration</b>	
81	ITTO project monitoring and evaluation costs	35,000
82	ITTO final evaluation	15,000
83	ITTO program support costs	118,421
<b>89</b>	<b>Subtotal</b>	<b>168,421</b>
<b>100</b>	<b>TOTAL GLOBAL</b>	<b>1,324,088</b>

### 3.4.3 ITTO budget by component (US\$)

Category	Description	ITTO
<b>10</b>	<b>Project staff</b>	
11.2	Project coordinator	28,000
11.4	Project support officer	20,000
11.5	Specialists (comunicator)	16,800
11.6	Specialists (Remote sensing / GIS)	88,000
11.7	Specialist (Pedagogical support)	12,000

12.2	Experts (training course)	13,120
12.3	Experts (forester / zootechnician / agronomist)	105,000
12.4	Experts (design protocols)	4,000
12.5	Experts (Intercultural)	18,400
<b>19</b>	<b>Subtotal</b>	<b>305,320</b>
<b>20</b>	<b>Subcontracts</b>	
21	Illustrative booklets, poster and sticker	8,000
22	Manuals on good agroforestry practices	5,000
23	Design and operation of web platform for forest fires service	25,000
24	Spot development services and broadcast services	21,000
25	Service for improvement of early warning system	74,600
26	Service for improvement the fire monitoring and evaluation system	26,400
27	Service of design and implementation of virtual pedagogical proposal	30,500
<b>29</b>	<b>Subtotal</b>	<b>190,500</b>
<b>30</b>	<b>Duty travel</b>	
31.3	Per diem	33,060
33.1	Air ticket	24,500
33.2	Ground passage	6,570
33.3	Local mobility	6,300
33.4	Japan travel	10,000
<b>39</b>	<b>Subtotal</b>	<b>80,430</b>
<b>40</b>	<b>Capital goods</b>	
43.1	Honda XR motorcycle	12,500
44.1	Laptop, multimedia projector	28,950
44.2	Forest equipment for suppression of forest fires	75,642
44.3	Others	25,500
<b>49</b>	<b>Subtotal</b>	<b>142,592</b>
<b>50</b>	<b>Consumable items</b>	
52	Vehicle spare parts	1,900
53	Basic services	5,000
54	Stationery supplies	6,795
54.1	Baners	840
55	Fuels and lubricants	8,485
<b>59</b>	<b>Subtotal</b>	<b>23,020</b>
<b>60</b>	<b>Miscellaneous expenses</b>	
61.1	Supplies to install the demonstration plots	41,500
61.3	PSC meeting	5,905.16
61.4	Vehicle maintenance	2,250
61.6	Information material printing service	17,000
61.7	Auditorium services	500
61.8	Outreach, socialization and project meetings events	5,200
61.9	Bank charges and messaging	480

61.13	Hosting service	6,750
64	Support for course development	35,395
65	Regional workshop	70,000
66	Private audit	10,000
<b>69</b>	<b>Subtotal</b>	<b>194,980.16</b>
	<b>SUBTOTAL / All categories</b>	<b>936,842.16</b>
<b>70</b>	<b>National administrative costs</b>	
<b>80</b>	<b>Project monitoring and administration</b>	
81	ITTO project monitoring and evaluation costs	35,000
82	ITTO final evaluation	15,000
83	ITTO program support costs	118,421
<b>89</b>	<b>Subtotal</b>	<b>168,421</b>
<b>100</b>	<b>TOTAL GLOBAL</b>	<b>1,105,263</b>

### 3.4.3 SERFOR budget by component (US\$)

Category	Description	Executing Agency
<b>10</b>	<b>Project staff</b>	
11.1	Project director	52,200
11.3	SERFOR specialists	44,000
12.1	Regional coordinator	25,200
12.6	Participants to events and meetings	31,000
<b>19</b>	<b>Subtotal</b>	<b>152,400</b>
<b>20</b>	<b>Subcontracts</b>	
22	Manuals on good agroforestry practices	1,000
27	Service of design and implementation of virtual pedagogical proposal	4,500
<b>29</b>	<b>Subtotal</b>	<b>5,500</b>
<b>30</b>	<b>Travels</b>	
33.2	Ground passage	350
33.3	Local mobility	8,100
<b>39</b>	<b>Subtotal</b>	<b>8,450</b>
<b>40</b>	<b>Capital goods</b>	
41	Office rental	6,000
<b>49</b>	<b>Subtotal</b>	<b>6,000</b>
<b>50</b>	<b>Expendable property</b>	
52	Vehicle spare parts	400
53	Basic services	100
54	Stationery supplies	4,810
55	Fuels and lubricants	1,125

<b>59</b>	<b>Subtotal</b>	<b>6,435</b>
<b>60</b>	<b>Miscellaneous expenses</b>	
61.4	Vehicle maintenance	200
61.5	Event facilitation service	5,550
61.7	Auditorium services	26,600
61.8	Outreach, socialization and project meetings events	280
61.12	Sound equipment rental service and ecran	4,250
62	Financial audit	2,000
64	Support for course development	1,160
<b>69</b>	<b>Subtotal</b>	<b>40,040</b>
	<b>SUBTOTAL / All categories</b>	<b>218,825</b>
<b>100</b>	<b>TOTAL GLOBAL</b>	<b>218,825</b>

## **3.5 Assumptions, risks and sustainability**

### **3.5.1 Assumptions and risks**

The assumptions considered for the achievement of project outputs and the project's development and specific objectives include the following:

- The Peruvian Government is interested in developing a national forest policy aimed at the sustainable development of forests in consonance with the project objective
- Public and private institutions are willing to participate in the activities and events organized by the project
- Regional offices raise awareness on forest fire prevention, management and control
- The implementation of best practices for forest and agricultural waste management help reduce the incidence of forest fires
- Reduced risk of forest fires in the target areas.

Some of the risks that could hinder the achievement of project outputs and the project's development and specific objectives include:

- The Peruvian government does not develop a national forest policy aimed at sustainable forest development in consonance with the project objective.
- There is a lack of interest of the regional offices and public and private institutions to participate in the activities implemented within the framework of the project.
- Regional offices do not implement awareness programs for the prevention, management and control of forest fires for public and private institutions and local communities.
- Best agricultural practices are not implemented.
- The risk of forest fires increases in the target areas.

In order to mitigate these risks, the project will focus on specific objective 1 of the National Forest and Wildlife Policy: "Achieve effective management of forest ecosystems and other components of the Nation's Forest and Wildlife Heritage", which in its item 1.5.7 states the need to prevent and control forest fires with the active participation of local communities.

Furthermore, SINAGERD member institutions as well as key public and private institutions will be invited in advance to attend awareness and training meetings and events, providing them with user-friendly manuals and documents, which will be translated into local languages as required to reach the largest number of people possible. The regional office experts will be in continuous and direct contact with the local communities and representatives of public and private institutions based in the proximity of the target areas so as to build trust links and thus consolidate communication as well as participation and interest in project events.

### **3.5.2 Sustainability**

- The development of this project is part of the management activities of SERFOR, and it is therefore in the interest of this institution to guarantee the sustainability of the project.
- Furthermore, the project seeks to reactivate community organizations and improve coordination between public and private institutions by inviting them to participate in awareness-raising and training workshops and courses so as to achieve the desired impact in addition to providing them with the materials and knowledge in accordance with their needs and local practices. This will not only serve as a long-term reference but will also create a sense of project ownership. Moreover, project activities have been planned taking into consideration the characteristics of the target areas and beneficiary groups.
- In order to ensure the appropriate uptake of knowledge, the project will run courses and workshops during its implementation period so as to strengthen the acquired knowledge and the use of new techniques, in accordance with project objectives, which will be adapted to the local conditions.
- With regard to the Regional Offices, ATFFS, which are SERFOR's decentralized offices with full legal powers- and Regional Governments, the project will strengthen their capacity to monitor forest fires as well as their operational capacity and ensure their coordination with other public and private institutions working in this field.

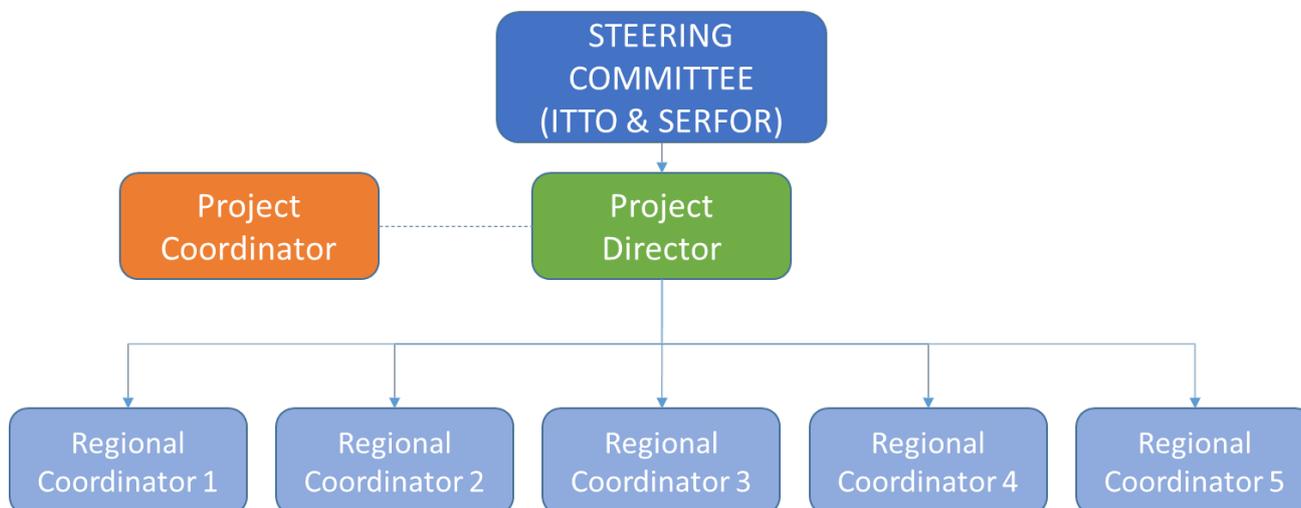
- It should be pointed out that within the existing regulatory framework, Article 20 of the Forest Management Regulations of Forest and Wildlife Law No. 29763 promotes *inter alia* the implementation of activities aimed at the prevention of forest fires, thus supporting the project and guaranteeing its institutional and political sustainability.
- Training and awareness raising will be provided to 1,800 local dwellers and 960 representatives of public and private institutions. However, there are larger numbers of local dwellers living in the vicinity of the project's area of influence. In view of this, the representatives of the public institutions to be trained by the project, within the framework of their prescribed duties, will continue to provide training by replicating the workshops to local dwellers who could not participate in the project's training and awareness raising activities.
- The plots, where the training activities will be implemented during the project for the management of agricultural and forest residues and agroforestry practices, will serve as demonstration plots for future training activities and, to this end, agreements will be duly signed with the plot owners.
- Technical forest and wildlife services involved in the project area – ATFFS, decentralized SERFOR offices –will play an active role during project implementation and will continue to develop these activities after project completion. Furthermore, they will be responsible for bringing together trained and sensitized professionals from the institutions participating in the project so as to continue with these joint actions.
- Within the framework of their prescribed duties, public institutions participating in the project provide a service to the local communities and are committed to continue with forest fire prevention and response activities after project completion.

## PART 4: IMPLEMENTATION ARRANGEMENTS

### 4.1 Organization structure and stakeholder involvement mechanisms

#### 4.1.1 Executing agency and partners

The project organizational chart is shown below:



#### 4.1.2 Project management team

The project management team will comprise the following:

- A project director (SERFOR)
- A project coordinator
- Five regional office coordinators (ATFFS and GORE)

#### 4.1.3 Project steering committee

The membership of the project steering committee will be as follows:

- A representative of SERFOR
- A representative of ITTO
- A representative of a local institution

SERFOR will propose an officer to supervise the implementation of the project in conjunction with a representative proposed by ITTO.

#### 4.1.4 Stakeholder involvement mechanisms

The executing agency will establish a Consultative Committee made up of a representative each of civil society, the Peruvian Army, MINAGRI, SERNANP, INDECI, CENEPRED, the Firefighters Department and AGRORURAL. This committee will provide a platform for the sharing of views among stakeholders/beneficiaries and will offer feedback for the improvement of project implementation.

## **4.2 Reporting, review, monitoring and evaluation**

The following reports will be prepared and submitted:

- Inception report – upon project approval
- Work plan – together with the inception report
- Yearly plan of operation – at the beginning of each project implementation year
- Monthly reports
- Six-monthly progress reports – by 28 February and 31 August and/or 4 weeks before the arrival of a review and monitoring mission
- Technical report – every 6 months during the project implementation period
- Annual and final financial reports
- Completion report – upon project completion

In addition, the project will be monitored through an international monitoring team.

## **4.3 Dissemination and mainstreaming of project learning**

### **4.3.1 Dissemination of project results**

As project implementation progresses, project outcomes will be disseminated, both in relation to training activities and scheduled workshops. This dissemination process will be part of the project's communication and outreach actions.

The information derived from outcomes will be disseminated as part of the activities using platforms provided by both relevant authorities and institutions involved in forest fire management.

SERFOR's institutional webpage will be used to disseminate information on project progress and outcomes. Information will also be disseminated to the rest of the country, throughout South America and the Caribbean, as they have similar forest fire occurrence problems.

The progress/outcomes of the project will be disseminated to ITTO member countries and the donor of the project during the ITTC to be held in Japan.

### **4.3.2 Mainstreaming of project learning**

The project will help ensure that the authorities, institutions and the local communities in the target departments will acquire and/or apply knowledge on best agricultural and forest practices, which may later be replicated in other areas of the country; furthermore, it will improve organization to address the occurrence of forest fires.

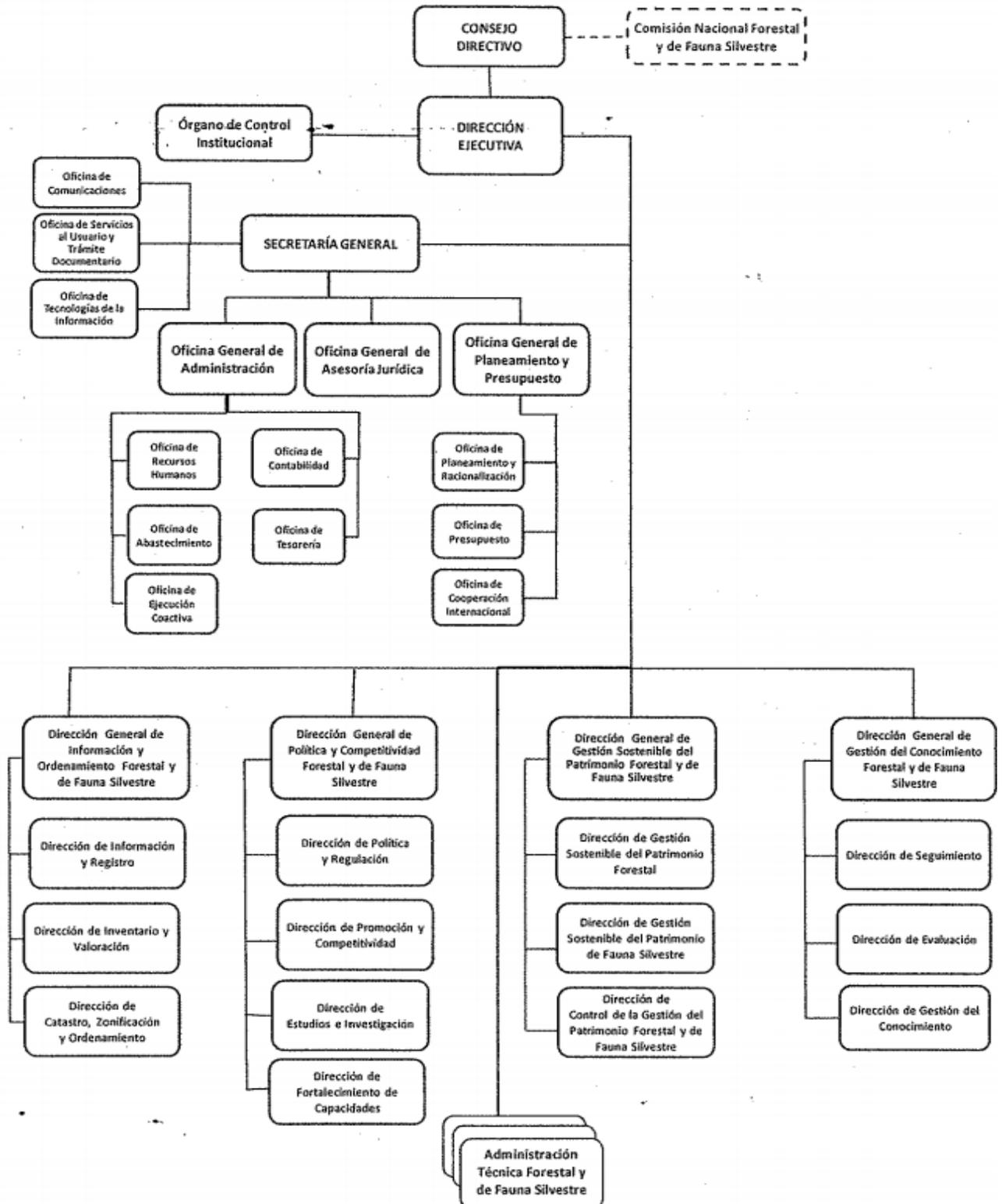
The development of forest fire prevention and response protocols will lead to improved responses in the face of forest fires and will contribute to the formulation of relevant regulations, thus improving governance in the target departments, with the possibility of replication at the national level. All of these issues will be validated with the relevant institutions and local communities in the target areas.

The organization of project start-up or launching events is envisaged with the participation of stakeholders involved in forest fire management. In addition, a dissemination event will also be organised to disseminate the results and/or findings of project experiences with the participation of forest fire related stakeholders, which has already been considered in the project budget under the relevant component. Project progress will also be reported to the project steering committee.

Moreover, the mainstreaming of project experiences will be facilitated by the dissemination of results in all the participatory events to be organized throughout the project with the participation of key stakeholders and representatives that are directly and indirectly involved in forest fire management in the project's areas of action.

## ANNEX 1. Profile of the executing agency – SERFOR

The National Forest and Wildlife Service – SERFOR was established under Article 13 of the Forest and Wildlife Law – Act No. 29763 as a specialized technical public agency with full legal capacity under the public domestic law of the State with budgetary allocations from the Ministry of Agriculture and Irrigation – MINAGRI. The technical forest and wildlife administrations (ATFFS) were incorporated to SERFOR as decentralized local agencies with budgetary allocations from MINAGRI through the First Complementary Transitory Provision of Supreme Decree No. 016-2014-MINAGRI, by virtue of which the amendment to the Regulations on SERFOR’s Organization and Functions was approved. The head of these decentralized agencies is the Technical Forest and Wildlife Administrator. SERFOR’s organizational chart is shown below:



## **ANNEX 2. Tasks and responsibilities of key experts provided by the executing agency**

### **Project Director**

#### **Tasks and responsibilities**

- Provide project implementation support and follow-up
- Coordinate with institutions equipped with early warning and information dissemination systems and incorporate these into an integrated system with local authorities
- Provide training, propose regulations and strengthen effective actions by public and private institutions in the event of forest fires at the local, provincial and departmental levels
- Validate and disseminate the communication strategy in the Forest Fire Management Plan
- Assess and disseminate the value of the forest and wildlife heritage and forest plantations on private lands through training
- Work in coordination with the project regional coordinators (SERFOR)
- Meet with the project consultative committee
- Participate in work teams and/or committees for training workshops in his/her areas of expertise
- Meet with the project Advisory Committee
- Other actions related to forest fire management.

### **Project regional coordinators (05)** **Cajamarca, Junin, Pasco, Huánuco and Ucayali**

#### **Tasks and responsibilities in their respective headquarters**

- Organization of workshops and / or courses to be developed throughout the project, responsible for convening rural residents and public and private institutions within the scope of the project headquarters.
- Review and update the directory of district, provincial mayors, Lieutenant Governors, Justice of the Peace, Presidents of Associations, Peasant Rounds, MINAGRI sector coordinators, Tambos, Prefects and Subprefects among others.
- Establish coordination mechanisms with local authorities for the implementation of the early warning system.
- Coordinate with early warning stations available in Peru under the responsibility of relevant institutions.
- Arrange a timely response to the occurrence of forest fires with local and national authorities.
- Review communication and outreach proposals and various documents to be produced according to the situation of the target population within the framework of the project.
- Develop one (01) manual on early warning management and implementation.
- Implement project scheduled activities in coordination with the Project Manager in compliance with the functions stipulated in the first complementary transitory provision of Supreme Decree No. 016-2014-MINAGRI, endorsing the amendment to the Regulations for SERFOR's organization and functions, approved under Supreme Decree No. 007-2013-MINAGRI.

## **ANNEX 3: Terms of reference of personnel and consultants and sub-contracts funded by ITTO**

### **Project coordinator**

#### **Assignment objective**

The Project Coordinator shall lead the management of the project.

#### **Qualifications**

- Degree in forest engineering, geographic engineering, geography or related discipline.
- GIS studies or specialization.
- Courses in leadership and/or conflict resolution.
- Professional with expertise in training at all levels in the fields of forest management and administration.
- Public management courses.
- Preferably training in databases and statistical analysis.
- Training in forest fire management.
- Knowledge of forest regulations.
- A minimum of five (05) years of professional experience, including at least two (02) years in the forest or agricultural sectors.

#### **Duties**

- Responsible for project management: drafting of yearly plans of operation (YPOs), drafting of reports, coordination and monitoring of project implementation, etc.
- Develop the content and design of outreach factsheets on the value of the forest and wildlife heritage and forest plantations on private lands.
- Establish, coordinate and obtain feedback on the implementation of the project.
- Coordinate with institutions equipped with early warning and information dissemination systems and incorporate these into an integrated system with local authorities.
- Generate, strengthen and develop strategic partnerships with public and private institutions.
- Provide training on the use of information regarding warnings on potential hotspots and actions related to potential forest fire hazards.
- Organize actions, provide training, propose regulations and strengthen skills to ensure effective responses in the face of forest fires at the local, provincial and departmental levels.
- Assess and disseminate the value of the forest and wildlife heritage and forest plantations on private lands through the provision of training.
- Organize three (03) training workshops/courses for social stakeholders to enhance forest fire response capacity, in the 1st year of project implementation.
- Work in coordination with the project coordinator (SERFOR).
- Meet with the regional coordinators to assess project progress.
- Assess and develop the skills of identified local leaders.
- Prepare monthly, six-monthly and annual reports.
- Participate in work teams and/or committees for training workshops in his/her areas of expertise.
- Travel to the regional areas where the project will be implemented.
- Other actions related to forest fire management.

## **Project support officer**

### **Assignment objective**

Support the project coordinator and project director.

### **Requirements**

- Degree in Management.
- Public management courses.
- Preferably training in databases and statistical analysis.
- Knowledge of forest regulations.
- A minimum of five (03) years of professional experience, including at least two (02) years in the forest or agricultural sectors.

### **Functions**

- Ensure the agreed project management methods, standards and processes are maintained throughout the project lifecycle.
- Assist the Project Coordinator and Project Director in the production and maintenance of project plans.
- Develop and maintain the project library, filing, recording and reporting systems.
- Develop and implement appropriate configuration management procedures
- Co-ordinate the production of all reports and produce project summary reports.
- Set up and maintain systems for recording project costs.
- Define and document procedures in accordance with agreed methodology
- Advise and assist project team members in the application of project procedures , disciplines and recording and reporting standards.
- Develop and support effective communication mechanisms between the project teams.

## **Specialist – Development of communication and outreach actions on forest fires**

### **Assignment objective**

Develop and implement effective communication and outreach actions related to forest fires to all stakeholders involved in the protection of the forest and wildlife heritage in constant coordination with the Project Manager, the Regional Coordinators and Directorate of Communications of SERFOR.

### **Requirements**

Communicator, specializing in the design and use of audiovisual tools

### **Duties**

- Develop a communication proposal for the scope of the project stakeholders, including leaflets, panels, radio spots, flyers, booklets, manuals etc.
- Design illustrative posters, posters and stickers on good agroforestry practices according to the agroforestry practices carried out in each of the three locations of the areas prioritized in the project.
- Socialize the design and layout of illustrative cards, posters and stickers with the technical administrators of the Priority Offices.
- Translate the text of the illustrative cards, posters and stickers in two (02) languages.
- Print one (01) thousands of illustrative booklets in two languages previous coordination with the coordinators of the prioritized headquarters.
- Diagram and design communication pieces.
- Identify the existing media in the field of stakeholders and spaces, appropriate times for the transmission of messages.
- Write radio messages in the language of local people.
- Prepare directory of festive dates, football matches, regional fairs, meetings of governors among others, in order to disseminate prevention and response material to the forest fires.
- Send the material to the strategic allies.
- Prepare news releases at the local and national levels.
- Keep a file of outreach materials.
- Identify the material of best reception by the actors (residents and institutions).

## **Specialist (02) - Remote Sensing Specialist**

### **Assignment objective**

Generate cartography of wildfire scars that can support in the collection and analysis of geospatial information related to forest fire events and scars identification, with the aim of building a historical database,

in constant coordination with the Project Manager and the General Directorate of Forest and Wildlife Information of SERFOR.

### **Requirements**

- Bachelor and/or Degree in Forest Engineering, Geographer or related.
- Experience in satellite image processing
- Satellite image processing software training courses

### **Functions**

- Generate wildfire scars according to the structure of the IDE-SERFOR database.
- Generate the archive of forest fire events according to the structure of the IDE-SERFOR database.
- Prepare regional analysis reports of scars and number of wildfires events.

## **Specialist (02) - Geographic Information System**

### **Assignment objective**

Support the collection and analysis of geospatial information related to wildfire monitoring, with the objective of generating reports that provide adequate information in case of emergency for the rapid taking of actions, in constant coordination with the Project Manager and the General Directorate of Forest and Wildlife Information of SERFOR.

### **Requirements**

- Bachelor and/or Degree in Forest Engineering, Geographer or related.
- Experience in geospatial database and GIS management.
- GIS Software Training Courses

### **Functions**

- Prepare daily reports of heat sources, including weekends.
- Constantly update forest fire alerts on the database server.
- Prepare reports and thematic maps as a result of forest fire alerts, as well as confirmed fire surveillance reports.
- Prepare individual reports of wildfire scars, according to request.

## **Expert – Training on forest fire prevention and response**

### **Assignment objective**

Provide training to technical personnel in forest fire prevention and response within the framework of activity 2.3 under output 2 (Public and private institutions effectively managing forest fire prevention and response protocols).

### **Qualifications**

- Professional with expertise in training and education, strategy implementation and forest fire management operations.
- At least three years professional experience in working and/or training in forest fire related issues.
- Experience in conflict resolution.
- Two years field experience in forest fire response procedures.

### **Duties**

- Coordination of training workshops including planning, scheduling and implementation.
- Training on forest fire prevention, strategies, operations and management.
- Training on identification and implementation of direct and indirect forest fire fighting and suppression techniques, taking into account safety issues.
- Training on risk factors related to the inadequate use of tools and equipment, among others.
- Assessment of participants on procedures, tasks, safety, tools, etc., as well as individual and group activities to apply the skills learned by participants.
- Preparation of theoretical and practical workshop reports on forest fires in the project training area, and course proceedings.
- Participation in work teams and/or committees related to training workshops in his/her field of expertise.
- The consultant will coordinate with SERFOR to prepare the list of stakeholders to be involved in outreach activities and will deliver a report on the aforementioned workshops.

**Experts in agricultural and forest solid waste management,  
agroforestry systems and forest management**

**Object of the service**

Hire 5 professionals, 1 for each of the departments (Ucayali, Pasco, Junín, Huánuco and Cajamarca) forestry, agronomists and zootechnists.

**Requirements**

- Forest engineering professionals, agronomists, zootechnists and / or related careers with experience and knowledge in sustainable agronomic and forestry management techniques.
- With experience in agricultural and forest waste management
- With professional experience
- With experience in silvoagricultural management
- With experience in forestry and livestock
- With experience in coffee-cocoa under shade
- Ease of communication
- With experience in surveys and analysis
- Predisposition to travel to the province.
- Experience in silvicultural management

**Functions**

- Organize and develop the knowledge training course on sustainable agronomic and forestry, forestry management techniques.
- Conduct workshops in the different locations of the project.
- Provide technical assistance to rural residents of the project scope
- Preparation of beneficiary database
- Surveys of rural people
- Select beneficiaries in whose plots the silvopastoral, silvoagrícola, compost, biol demonstration plots will be installed.
- Fuel management - disposal of agricultural waste.
- Establish the demonstration plots silvoagrícola, silvopastoral.
- Fuel management - Forest plantation management
- Preventive silvicultural fuel management - Pruning of plantation trees and disposal of forest residues.
- Organize groups of residents for prevention and response to the occurrence of forest fires.
- Inform every 3 months of the progress of the tasks assigned.
- Make a report and the report of the course and deliver it to the coordinator of the headquarters where he dictates the course, in physical and digital support.

**Expert – Development of forest fire prevention and response protocols**

**Assignment objective**

Develop and validate forest fire prevention and response protocols within the framework of activity 2.2 under output 2 (Public and private institutions effectively managing forest fire prevention and response protocols).

**Qualifications**

- Professional in Forest Engineering, Environmental Engineering, Agronomic Engineering or careers at the end.
- Professional with two years experience in the development of institutional regulations or guidelines related to forest fire management and prevention.
- Two years experience in field work related to forest fire response procedures.

**Duties**

The consultant should deliver two outputs:

**First output:** Forest fire prevention protocols.

These protocols should be prepared in detail, including:

- Identification of stakeholders (government institutions, private organizations, grassroots community organizations and the population at large), including their role in forest fire prevention and their capacity for action.
- Identify strategies to enhance the participation and involvement of civil society and local authorities (education, communication and outreach strategies including events for the launch of the forest fire

prevention and control campaign at the regional and municipal levels and dissemination of information on fire risk and hazard areas) so as to raise awareness among all stakeholders.

- Development of mechanisms and identification of responsible parties in the systematization of information on contingency or similar plans related to forest fires, budget resources, human resources, logistics, etc.
- Identification of strategies to enhance monitoring and means for immediate communication on fire risk and occurrence in rural areas.
- Identification of risk and hazard areas using the data provided by existing information platforms complemented with historical data.
- Development of field contingency operational methodologies.

The protocols should include:

- Abbreviations
- Glossary of terms based on current legislation in the field
- Types of forest fires and danger rating
- Technical, logistic and financial considerations for actions to be proposed
- Institutions involved at a general level and their counterparts at the local level, taking into account that different localities may have various institutions playing the different roles.
- Operational mechanics.
- Description of actions to be implemented.
- Institution in charge of implementation.
- Necessary coordination.
- Financing mechanisms.
- Flow-charts.
- Bibliographic references (annex).

The protocols should also be adequately disseminated and validated, including evidence of actions taken in this respect.

The consultant shall submit an activity report.

**Second output:** Protocols of response and suppression to the occurrence of forest fires:

These protocols should be developed from a general perspective to number, arrange and prioritize response actions in the event of a forest fire warning in any area, but including specific considerations for their local application in different geographic locations.

- Describe the activities to be implemented in the face of a forest fire, including lines of action from the local level (hamlets, sectors, etc.) to specialized agencies at the regional and national levels.
- Type of direct and indirect responses to be undertaken by local dwellers as the first course of action (considering risk assessment and personal safety).
- Actions to be taken by institutions at the regional level according to an identification of institutional roles.
- Outline of stages identifying the level of action, either local or national.

The protocols must be adequately socialized and validated by the main public and private institutions that take part in the prevention, attention and suppression of forest fires, as well as civil society organizations, for which the consultant must show evidence of socialization and validation by the institutions. Dissemination and validation will be carried out through 3 workshops financed by the project. The consultant will coordinate these activities (including planning, scheduling and implementation), with the incorporation of a facilitator to be provided by the project. Similarly, the consultant will coordinate with SERFOR regarding the list of stakeholders that will participate in dissemination activities and will deliver a report on the aforementioned workshops.

### **Expert – Intercultural expert**

#### **Assignment objective**

Support the construction of the forest fire prevention strategy with rural communities in constant coordination with the forestfires team in SERFOR.

#### **Requirements**

- University Degree in Anthropology, Sociology, Social Work, Economy, Education
- Specific work experience of Two (02) years related to the functions

- Two (02) years performing jobs related to research or systematization or indigenous peoples or rights humans

### **Functions**

- Contribute to the construction of forest fire prevention strategies with an intercultural approach
- Provide assistance in regional and local spaces of public or private order that address issues related to indigenous peoples, intercultural approach, diversity cultural

### **Sub-contract - Printing of posters and leaflets about good agroforestry practices**

#### **Assignment objective**

Design, layout and printing of illustrated cards, posters and stickers on best agroforestry practices translated into two languages.

#### **Requirements**

- Company / person dedicated to printing graphic advertising material.

#### **Description Service**

- Print one hundred (100) units of posters in two languages prior coordination with the coordinators of the prioritized stakeholders.
- Print one (01) thousand leaflets in two languages previous coordination with the coordinators of the Priority Offices.

### **Sub-contract – Development of manual on sustainable agricultural and silvicultural management techniques**

#### **Assignment objective**

Design, layout and printing of three (03) manuals on best agroforestry practices translated into two languages.

#### **Qualifications**

- Company/individual with expertise in the design, layout and printing of texts.
- Experience in the provision of at least 5 services with positive feedback.
- Experience in the design, layout and printing of text in the Quechua language.

#### **Description of service**

- Design three manuals on best agroforestry practices according to the agroforestry systems established in each of the three regional areas targeted by the project.
- Disseminate the design and layout of the manuals with the technical administrators of the target areas.
- Translate the text of the manuals into two (02) languages.
- Print 1,000 copies of the manuals in two languages after coordinating with the coordinators of the target areas.

### **Sub-contract - Design and operation of web platform for forest fires service**

#### **Assignment objective**

Generate a specialized platform for the service of design, programming and implementation of web portal on forest fires in Peru

#### **Requirements**

- Company / person dedicated to related activities

#### **Description Service**

- Technical documentation of the procedure that allows subsequent modification
- Design Service of specialized platform
- Virtual Platform hosting service
- Complementary resource services
- Technological support

**Subcontract - Media company for the production of radio spots  
and placement in regional radios of the area of influence**

**Objective of the service**

Have radio spots with forest fire prevention messages aimed at rural residents of prioritized areas.

**Requirements:**

- Production company of media with portfolio management of radio media in areas of influence

**Sub-contract - Improvement of the wildfire early warning system**

**Assignment objective**

Development of a specialized service for the incorporation of new satellite data that detect heat sources to generate wildfire alerts in Amazonia, through the analysis of satellite images, programming, among other activities. Generate and code wildfire alert reports in GIS software or similar

**Requirements**

- Company / person dedicated to related activities

**Description Service**

- Incorporate new satellite data such as GOES 16, GOES 13, NOAA 19, NOAA 18, among others, for the detection of heat sources.
- Generate the documentation of the developed processes that allow future modifications.
- Incorporate the new information according to the Spatial Data Infrastructure of SERFOR.
- Development of programming in GIS software, or similar, for the generation and codification of wildfire alert reports.
- High resolution image coverage license.
- Technical documentation of the procedure that allows subsequent modification.

**Sub-contract – Improvement of fire monitoring and evaluation system**

**Assignment objective**

Generation of the methodology for the identification of burned areas and identification date for the historical map of wildfire scars in Amazonia information. Design and implementation of the map of burned areas validation methodology in the Amazon in order to identify the percentage of reliability of the resulting maps.

**Requirements**

- Company / person dedicated to related activities

**Service description**

- Generation of methodology for the identification of burned areas and date of occurrence of wildfires in Amazonia.
- Descriptive report of the methodology developed for publication.
- Design of the map of burned areas validation methodology in Amazonia.
- Implementation of map of burned areas validation methodology through evaluators.
- Geospatial viewer improvement.
- Technical documentation of the methodology that allows subsequent modifications.

**Sub-contract – Development of factsheets, posters  
and stickers on dissemination of forest regulations**

**Assignment objective**

Design, layout and printing of factsheets, posters and stickers on dissemination of forest regulations.

**Qualifications**

- Company/individual with expertise in the design, layout and printing of publicity graphic materials.
- Experience in the provision of at least 5 services with positive feedback.
- Experience in the design, layout and printing of publicity graphic materials in the Quechua language.

**Description of service**

- Design factsheets, posters and stickers on dissemination of forest regulations.
- Disseminate the design and layout of factsheets, posters and stickers with the technical administrators of the target areas.
- Translate the text of the factsheets, posters and stickers into two (02) languages.
- Print 1,000 factsheets in two languages in two languages after coordinating with the coordinators of the target areas.
- Print 100 copies of posters in two languages after coordinating with the coordinators of the target areas.
- Print 1,000 stickers in two languages after coordinating with the ATFFS in the target areas.

**Sub-contract – Editing and printing of a publication on forest fires****Assignment objective**

Editing and printing of a publication on forest fires translated into two languages (Quechua and Asháninka) within the framework of the development and implementation of communication and outreach actions on forest fires.

**Qualifications**

- Company/individual with expertise in the design, layout and printing of texts.
- Experience in the provision of at least 5 services with positive feedback.

**Description of service**

- Editing and printing of 100 copies of the publication on forest fires – full colour, size A5, laminated cover.

**Sub-contract - Service of design and implementation of virtual pedagogical proposal****Assignment objective**

generate a specialized platform for virtual courses in order to strengthen the capacities of local and regional actors, civil society, forestry actors, among others.

**Requirements**

- Company / person dedicated to related activities

**Description Service**

- Technical documentation of the procedure that allows subsequent modification.
- Design Service of virtual pedagogical proposal.
- Virtual Platform hosting service.
- Virtual classroom creation and implementation service.
- Complementary resource services.
- Specialist for pedagogical support.
- Technological support.