# PROJECT PROFILE – BRAZIL

## I. BASIC DATA

| | | | |
|---|---|---|---|
| **Project Name:** | The Acre Sustainable Development Program (PDSA-II) | | |
| **Project Number:** | BR-L1289 | | |
| **Project Team:** | Eirivelthon Lima (INE/RND) and John Horton (INE/RND), Co-Team Leaders; Maria Claudia Perazza (INE/RND); Juan Ketterer (ICF/CMF); Ernani Pilla (VPS/ESG); Leise Estevanato (PDP/CBR); Marilia de Souza Santos (PDP/CBR); Teresa Maurea Faria (LEG/SGO); and Lisa Restrepo (INE/RND) | | |
| **Borrower:** | State of Acre | | |
| **Executing Agency:** | State of Acre through *the Secretaria de Planejamento* | | |
| **Financial Plan:** | IDB (OC): | US$ | 72 million |
| | Local: | US$ | 43 million |
| | Total: | US$ | 115 million |
| **Safeguards:** | Policies triggered: | OP-703; OP-765; OP-761; OP-102 | |
| | Classification: | B | |

## II. GENERAL JUSTIFICATION AND OBJECTIVES

### A. Pathways to Sustainable Development

2.1 Up to the 1990s, the combination of open access to forest lands, lack of governance, low productivity economic activities, market imperfections and poor infrastructure has led the State of Acre towards a self-reinforcing vicious cycle of chronic poverty, deforestation, and low economic return activities. The opportunity to turn this situation around came in 1999 when Acre's policy makers launched a bold economic development strategy focused on the sustainable use of forest resources. With the Bank's support through the first Acre Sustainable Development Program (PDSA I), approved in 2002, the GoAC was able to break the vicious cycle by tackling: (i) environmental governance; (ii) open access to land; and (iii) quality of infrastructure. These interventions are described below:

2.2 *Improving environmental governance.* Until the 1990s, the GoAC had very limited institutional capacity for prevention, surveillance, oversight, and environmental licensing of natural resources, especially to prevent and control deforestation and forest degradation. The PDSA-I supported: the design and implementation of the Environmental Information System (SEAIM); capacity building in key environmental areas; fine tuned the Environmental-Economical Zoning; and decentralized and strengthened regional offices. In addition, it supported the environmental protection agency with the procurement of vehicles and equipment for field work surveillance and communications.

2.3 *Reducing open access to forests*. Until the 1990s, private actors were moving quickly to signal, document, and legally claim ownership of public lands. This "race for land rights" led to construction of illegal roads followed by illegal logging and deforestation. The PDSA-I supported the GoAC to establish best practices in land-use planning, land tenure policy and administration. The program supported the GoAC to get ahead of this "race" by creating protected areas (PAs), expediting land regularization in areas already occupied, and imposing land-use regulation through the ZEE.

2.4 *Rehabilitating public infrastructure*. By the late 1990's, State's infrastructure was completely degraded, dragging down Acre's long-term economic growth potential and competitiveness, as the State's mains roads were impassable for most of the rainy season. In the last 10 years, the Bank, together with support and finance from the Federal Government, has helped the GoAC rebuild the State's core productive infrastructure, and today, transportation costs have gone down, increasing the competitiveness of several productive sectors.

2.5 The State of Acre's approach to development has, increasingly, delivered results. The low transportation cost together with good governance has allowed the forest sector to become an important building block to Acre's economy. Today, the forest sector contributes to: 18.6% of GDP, 60% of the overall exports, and it is a source of livelihood for 36% of the rural population. The trade of forest products brings nearly US$100 million a year of financial resources to Acre.

## B. Results of the Sustainable Development Program –PDSA I

2.6 The interventions financed under the PDSA-I, US$108 million with IDB financing US$64 million, have contributed to reduce the deforestation rate from 111,000 ha/year in 2002 to 22,000 ha/year in 2009. More specifically, the Bank conducted an impact evaluation of the strategy to create protected areas to avoid deforestation. The results showed that the creation of sustainable use protected areas alongside roads to be paved together with monitoring was a very effective strategy to avoid deforestation. Also, the program contributed to increase the participation of the agricultural and forestry in the economy. The State GDP of these sectors, combined, grew at 8.6%, in real terms, between 2002 and 2007.

2.7 The PDSA-I has yielded important lessons: (i) it is possible to invest in infrastructure and reduce deforestation through the strategic placement of protected areas; and (ii) the establishment of protected areas accompanied by job-creating alternatives is essential to avert strong local opposition. Thus, it is clear that the long-term protection of forests and the aim to reduce poverty, in heavily contested frontiers of deforestation, can no longer rely solely on the creation and effective management of protected areas. Instead, it will also depend on the development and implementation of viable forest based economic alternatives.

## C. Remaining Challenges for Sustainable Development

2.8 While the groundwork has been laid for significant growth of the forest based economy, the GoAC still needs to complete the decade long public sector intervention in the forest sector. Of particular importance are:

2.9 *Forest tenure and sustainable use protected areas*. In spite of the establishment of 1,2 million hectares of PAs, the titling of 5,700 rural properties, and issuance of 3,200 land access agreements to traditional communities in the PDSA-I, the illegal occupation of public lands still poses significant challenges for the GoAC. There are still six million hectares of public forests that could be protected and used for sustainable forestry. In this area, there are three million hectares of public forests and half a million hectares of communal forests where land tenure is not regularized. Also, the GoAC needs to develop economic alternatives to the already existing sustainable use PAs. The challenge for the GoAC is that large PAs unaccompanied by job-creating alternatives face strong opposition.

2.10 *Recovery of degraded lands for profitable productive use*. Large tracts of native forests nearest roads have been converted and replaced by pasture lands. The main practice for the established pasture has been annual burning to control weeds and insects, which has led to soil degradation, loss of nutrients and erosion. According to studies by Embrapa, an estimated 15% of the pasture land is in an advanced stage of land degradation. The PDSA-I supported the GoAC to recover 72,759 hectares of degraded lands. Despite this effort, the GoAC still needs to help landholders to turn this stock of degraded lands into productive forest plantations. The challenge is to set up an attractive partnership between the public and private sectors to leverage resources to fund the land recovery projects.

2.11 *Emergence of competitive rural supply chains.* The expansion of forest-based value chains requires significant organizational support to producer groups ranging from loosely associated rubber-tappers to cooperatives and small businesses. Buyers seeking to source products face the challenge of identifying producers who can deliver those products. Meanwhile producers face the challenge of finding opportunities and being able to fulfill the requirements which may entail implementing new technologies, know-how, specialized inputs, financial services, infrastructure, and assistance in contract negotiation and compliance. These relative high cost upfront investments required to participate in modern markets are a hindrance to participation of smallholders.

2.12 *Capacity to govern the forest sector*. Sustainable forestry is supported by three public sector functions: (i) land titling and administration; (ii) environmental licensing, monitoring and enforcement; and (iii) management of public forests. The current operations in the forest sector have surpassed the existing capacity of the GoAC to deliver these public services. These institutional shortcomings will tend to exacerbate, as these new businesses develop and expand production. Addressing these deficiencies will require streamlining legislation, regulations and improving administrative processes, strengthening technical capacities and upgrading physical installations and technology to meet the growing needs**.**

2.13 *Reduce Poverty Levels*. Nearly 42% of the population in the State of Acre still lives in poverty with monthly earnings less than 1/2 of the minimum wage. In the last 10 years, the State of Acre has made significant progress, reducing the poverty rate from nearly 50% in 2002 to 42% in 2009. The State of Acre poverty rate is 10% higher than the national poverty rate. This reduction in poverty happened especially in urban areas. The rural areas are still lagging behind with

68% of poverty rates in rural areas, thus, reducing poverty in rural areas is a major challenge for the GoAC[1].

**D. Objectives and Components.** The objective of the program is to increase the contribution of the forest sector to economic growth and poverty reduction while keeping deforestation under control.

2.14 **Expanding and Consolidating Protected Areas (PAs).** Investments include: (i) establishing new PAs- land regularization in the proposed areas, technical studies, information sharing, public consultations, demarcation of the PAs boundaries, public infrastructure for logistical support, monitoring, and protection; (ii) consolidation of the existing PAs- developing and approving PA management plans, demarcation of the units of forest management, provision of basic public infrastructure, and design of the bidding documents for the forest management concessions; and (iii) applied research and development to increase the productivity of tropical forest management.

2.15 **Competitive and Sustainable Value Chains.** Investments include: (i) set-up and funding for a competitive cost-sharing mechanism: organizational support for local producers, access to technology, access to specialized inputs, know-how, extension and measures to improve quality control of forest products; (ii) the set-up and funding of a private equity fund to rehabilitate degraded lands with forest plantations: identification of private sector partners, finance structure, instruments and vehicles for the implementation of the project, public sector funding; and (iii) investment in public goods such as basic infrastructure, applied research, and extension services to support value chains.

2.16 **Capacity Building and Governance.** Investments include: technical assistance, equipments and minor works targeted towards "*Secretaria de Florestas* – SEF" and "*Secretaria de Meio Ambiente*-SEMA" to: (i) streamline legislation, regulations and improve administrative processes and review of organizational structures; (ii) update and complement regulatory framework for the forest sector; (iii) professional training; (iv) build capacity in areas related to plantations, forest concessions, and value chains; and (v) modernize and rationalize technical assistance to smallholders and traditional communities.

2.17 **Country Strategy, Climate Change Strategy, and GCI-9**. The PDSA-II supports the Country Strategy and the Country Programming Document (GN-2570 and GN-2617). In addition, the program is aligned with the Bank's "Lending Program Priority Targets" in the areas of poverty reduction, climate change and environmental sustainability and regional cooperation and integration as established in the 9th Capital Increase in the Resources of the Bank (AB-2764). Also, the program targets investments in the following areas: social policy for equity and productivity; protecting the environment, responding to climate change, renewable energy, and enhancing food security, and regional integration.

---

[1] These poverty rates come from the "Pesquisa Nacional por Amostra de Domicílios – PNAD" for the years of 2002 to 2009.

## III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

3.1 **Design Issues**. The "PDSA-I" was designed to target multiple sectors and cross-sectoral issues. Despite of the success, the objective of the program became overly complex, the measurement of impacts was methodologically challenging, and the execution required strong coordination among institutions involved. The second phase operation will target a single sector, forestry, and it will involve fewer institutions, therefore, getting a more focused objective, reducing the burden of cross-sectoral coordination and facilitating the measurement of impacts.

3.2 **Sector Work.** The priority issues for the Program comes from technical studies, diagnostics, and needs assessments carried out by the Bank, the Brazilian Government, the GoAC and the World Bank. The technical cooperation ATN/OC-12722-BR under execution is providing inputs to the final design of the components, economic analysis, institutional analysis, fiduciary analysis, risks, and the monitoring and evaluation plan of the program. The ATN/SC-10057-RS has been already executed and it is providing technical inputs for the Program.

## IV. SAFEGUARDS AND FIDUCIARY SCREENING

4.1 **Social and Environmental Safeguards**. In the context of the policy OP-703, the Program is classified as 'B'. The program's impacts are expected to be positive: rehabilitation of degraded lands, consolidation and expansion of PAs, promotion of sustainable forest management, and improvement of environmental governance. Nevertheless, sustainable forestry activities may cause environmental and social impacts, such as: opening forest roads, pesticides, and risks to communities in the areas of influence of the program. The GoAC has commissioned a strategic social and environmental analysis for the program, SESA, to assess potential risks. The SESA will be carried out in consultation with local stakeholders and made available for review. The SESA will include a draft Environmental and Social Management Plan. The results of the SESA and the team's due diligence will be presented in an Environmental and Social Management Report as part of the operation's POD (see Annex III).

4.2 **Fiduciary Screening.** The execution of the first phase was done by the State of Acre through SEPLAN, which kept robust financial and procurement systems capable to submit timely disbursement requests and provide audited financial statements. The fiduciary mechanisms of the second phase will build upon the previous experience of the Government in the project execution.

## V. RESOURCES AND TIMETABLE

5.1 Annex V provides the details about costs and chronogram. The POD will be distributed for QRR on March 22, 2012 and the approval of the Loan by the Board is set for July 25, 2012. A technical cooperation, ATN/OC-12722-BR, is financing US$300,000 in consultancies for the design and feasibility analysis of the program. An additional US$31,000 in consultancies has been used to complete the preparation of the program.

Confidential

# SAFEGUARD POLICY FILTER REPORT

| | | |
|---|---|---|
| **PROJECT DETAILS** | **IDB Sector** | AGRICULTURE AND RURAL DEVELOPMENT-INTEGRATED RURAL DEVELOPMENT |
| | **Type of Operation** | Investment Loan |
| | **Additional Operation Details** | |
| | **Investment Checklist** | Forestry |
| | **Team Leader** | Lima, Eirivelthon Santos (ELIMA@iadb.org) |
| | **Project Title** | Desarrollo Sustentable de Acre II |
| | **Project Number** | BR-L1289 |
| | **Safeguard Screening Assessor(s)** | Pilla, Ernani (ERNANIP@iadb.org) |
| | **Assessment Date** | 2011-11-04 |
| | **Additional Comments** | |

| | | | |
|---|---|---|---|
| **SAFEGUARD POLICY FILTER RESULTS** | **Type of Operation** | Loan Operation | |
| | **Safeguard Policy Items Identified (Yes)** | Potential to negatively affect Indigenous People (also see Indigenous Peoples Policy.). | (B.01) Indigenous People Policy– OP-765 |
| | | The operation itself has a potential to exacerbate hazard risk to human life, property, the environment or the operation itself (Type 2 Disaster Risk Scenario). | (B.01) Disaster Risk Management Policy– OP-704 |
| | | The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements). | (B.02) |

| | | | |
|---|---|---|---|
| | | The operation (including associated facilities) is screened and classified according to their potential environmental impacts. | (B.03) |
| | | Other environmental and social sustainability issues that the Project Team considers to be a risk for this operation. (e.g. wood sourced from Amazon rainforest). | (B.04) |
| | | An Environmental Assessment is required. | (B.05) |
| | | Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups. | (B.06) |
| | | The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations. | (B.07) |
| | | The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases...). | (B.11) |
| | | Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement. | (B.17) |

| | | | |
|---|---|---|---|
| | **Potential Safeguard Policy Items(?)** | No potential issues identified | |
| | **Recommended Action:** | Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR. | |
| | **Additional Comments:** | | |

| | | |
|---|---|---|
| **ASSESSOR DETAILS** | **Name of person who completed screening:** | Pilla, Ernani (ERNANIP@iadb.org) |
| | **Title:** | |
| | **Date:** | 2011-11-04 |

# SAFEGUARD SCREENING FORM

| | | |
|---|---|---|
| **PROJECT DETAILS** | **IDB Sector** | AGRICULTURE AND RURAL DEVELOPMENT-INTEGRATED RURAL DEVELOPMENT |
| | **Type of Operation** | Investment Loan |
| | **Additional Operation Details** | |
| | **Country** | BRAZIL |
| | **Project Status** | |
| | **Investment Checklist** | Forestry |
| | **Team Leader** | Lima, Eirivelthon Santos (ELIMA@iadb.org) |
| | **Project Title** | Desarrollo Sustentable de Acre II |
| | **Project Number** | BR-L1289 |
| | **Safeguard Screening Assessor(s)** | Pilla, Ernani (ERNANIP@iadb.org) |
| | **Assessment Date** | 2011-11-04 |
| | **Additional Comments** | |

| | | | |
|---|---|---|---|
| **PROJECT CLASSIFICATION SUMMARY** | **Project Category:** B | **Override Rating:** | **Override Justification:** |
| | | | **Comments:** |
| | **Conditions/ Recommendations** | • Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements).<br><br>• The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.<br><br>• These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary. | |

| | **Identified Impacts/Risks** | **Potential Solutions** |
|---|---|---|
| **SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS** | Minor or moderate conversion or degradation impacts to natural habitats (such as forests, wetlands). | **Ensure Proper Management and Monitoring of the Impacts of Natural Habitat Loss:** A Biodiversity Management Plan (BMP) should be prepared that defines how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.). Confirmation should be obtained from competent experts that they are confident that the plan can mitigate impacts and also that the relevant authorities have approved the BMP. |
| | Negative impacts on ecosystem services (e.g. availability of freshwater resources, soil stability) to other users or habitats are minor to moderate in nature. | **Ensure Adequate Management Plans:** The plans should define how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and how ongoing consultation (including the development of a grievance mechanism) will be implemented which could be part of the ESMP. The ESMP should also include measures to manage these impacts. There should be evidence of effective and timely consultation with local communities, relevant authorities and conservation NGOs and confirmation should be obtained from competent experts that they are confident that the plans can mitigate impacts. Depending on the financial product, the plans should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.). |
| | The project is likely to negatively change the use of the land but the related negative impacts will be minor to moderate in nature. | **Land use:** A Plan should be prepared that defines how land use change will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Proper consultation should be foreseen. Confirmation should be obtained from experts that the plan can mitigate impacts and also that relevant authorities have approved the Plan. Examples of mitigation include reforestation, GHG offsetting, nutrient fixation in soils, conservation of |

| | | |
|---|---|---|
| | | biodiversity. |
| | The negative impacts from production, procurement and disposal of hazardous materials (excluding POPs unacceptable under the Stockholm Convention or toxic pesticides) are minor and will comply with relevant national legislation, IDB requirements on hazardous material and international standards and guidelines such as the IFC Forestry Guidelines (if applicable). | **Monitor hazardous materials use:** The borrower should document risks relating to use of hazardous materials and prepare a hazardous material management plan that indicates how hazardous materials will be managed (and community risks mitigated). This plan could be part of the ESMP. |
| | Borrower is using significant quantities of pesticides and/or pesticides that are defined as being extremely, highly or moderately hazardous under the World Health Organization Classification of Pesticides, but there is good control of access to/use of these chemicals and the host country has effective oversight of use of these chemicals. | **Pest Management:** The borrower should develop an Integrated Pest Management (IPM) or Integrated Vector Management (IVM) program within which the use of these chemicals is justified. The plan should have as an objective the annual review of pesticide application needs with a presumption that volumes will decline over time and less harmful/dangerous alternatives will be proactively sought. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests etc). |
| | Generation of solid waste (such as bark, waste wood, machinery) is moderate in volume, does not include hazardous materials and follows standards recognized by multilateral development banks. | **Solid Waste Management:** The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration. |
| | Safety issues associated with structural elements of the project (e.g. logging roads and processing facilities), or road transport activities (e.g. increase in heavy vehicle movements, etc) exist which could | **Address Community Health Risks:** The borrower should be required to provide a plan for managing risks which could be part of the ESMP; (including details of grievances and any independent audits undertaken during |

| | | |
|---|---|---|
| | result in moderate health and safety risks to local communities. | the year). Compliance with the plan should be monitored and reported. Requirements for independent audits should be considered if there are questions over borrower commitment or potential outstanding community concerns. |
| | Borrower is not responsible for directly managing the activities that have negative impacts on indigenous peoples (i.e. it is the responsibility of government or parastatal agencies other than the executing agency) and impacts are minor to moderate in nature. | **Ensure Adequacy of Mitigation Framework:**Where the activities that have the potential to impact indigenous peoples are the responsibility of third parties (associated facilities, activities under government jurisdiction, etc.), the borrower will need to collaborate with these third parties to ascertain that they are implementing a Mitigation Framework that is consistent with the objectives of OP-765, particularly with respect to avoiding adverse effects on indigenous peoples. In circumstances where third-party capacity is limited (or commitment is unclear), the borrower will need to play an active role in supporting the implementation of a reasonable mitigation framework. Depending on the financial product, the borrower's actions to cause the mitigation framework to be adequately implemented should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, credit and operation regulations, etc.). Reporting and independent monitoring of mitigation implementation should be required. |
| | The project has or will have minor negative impacts on Indigenous Peoples. | **Mitigation Framework:** Include specific mitigation measures as needed in consultation with affected IPs. Consult with Indigenous Peoples specialist. Incorporate measures in legal documentation (covenants, conditions of disbursement, etc.). Include mitigation measures as part of overall environmental and social management plans or provisions. |

| | | |
|---|---|---|
| **ASSESSOR DETAILS** | **Name of person who completed screening:** | Pilla, Ernani (ERNANIP@iadb.org) |
| | **Title:** | |
| | **Date:** | 2011-11-04 |

**Environment and Social Strategy (ESS)**

## 1. Background

1.1 The Brazilian State of Acre presents a microcosm of critical development challenges as well as the potential for model sustainable development. Acre lies on the westernmost edge of the country, in the Amazon region, bordering Bolivia and Peru as well as the Brazilian states of *Amazonas* and *Rondônia*. This remote area is still largely covered with tropical rainforest and in many areas rivers remain the primary mode of transportation. Home to a diverse mix of indigenous and traditional communities, many of whom have forest-dependent lifestyles, Acre faces the dual challenge of promoting economic development to improve its socio-economic indicators while at the same time conserving some of the world's most important and diverse ecosystems. Currently the state is at an important crossroads as new infrastructure projects are facilitating access from the outside world.

1.2 The IDB has been a key partner of Acre in improving the quality of life of its population while contributing towards the sustainable management of its natural resources. In 2002 the Bank financed a program designed with two complementary lines of action. First, it limited agriculture expansion by reducing access to and illegal grabbing of public lands, improving environmental monitoring and law enforcement. Second, the program promoted investment in sustainable forestry and consolidation of the already-deforested areas through modernization of agricultural services and improved public infrastructure. Coupled with improvements to the state's system of environmental governance (e.g. better monitoring capability of forest cover and land use changes and effective management of its protected areas) the IDB program contributed to reducing deforestation rates from 111,000 ha/year in 2005 to 22,000 ha/year in 2008.

1.3 The Acre Sustainable Development Program II (PDSA II) will contribute to higher level objectives in support of the State of Acre's unique *florestania* (a Portuguese term that merges the meaning of forestry and citizenship) initiative, a sustainable development model that started in 2000 based on a paradigm which places the rainforest at the center of a careful yet pragmatic development strategy, aiming to reconcile forest conservation with modern sustainable forest management that results in economic growth and improved livelihoods. While the PDSA II Program complement these efforts, the implications of *florestania* are potentially much greater than events within Acre. On the international stage, there are few examples of successful, natural resource-based sustainable development in a culturally diverse, ecologically sensitive environment where both community participation and ownership are high. Lessons learned from the *florestania* experience, especially given current international focus on climate and renewable resources; hold the potential for important contributions to other development programs across the globe.

## 2. Program Description

2.1 The objective of the Program is to strengthen the forestry sector in the state of Acre as a vehicle for sustainable economic growth and poverty reduction. To this end, the Program will: (i) consolidate existing and create new protected areas for sustainable use (state forests-SF); (ii)

restore degraded lands through reforestation; (iii) invest in competitive forest supply chains; and (iv) build capacity of the government of the State Acre (GoAc) to administer the forest sector more effectively and efficiently. The Program components are described in the Project Profile. The following are the preliminary milestones under each component and subcomponent:

2.2 **Component 1. Expanding and consolidating protected areas for sustainable use (SF-State Forests).** The component comprises activities and investments related to: (i) establishing a new SF, which requires preparatory work (surveys to identify and quantify communities living in the target area, community outreach, consultation and information; conflict mediation and land tenure regularization), delimitation of protected area (PA) boundaries and legal establishment; and (ii) full implementation of SF, including developing and approving PA management plans, PA physical, demarcation with definition of forest management units, provision of basic infrastructure, and designs for bidding documents for forest management concessions.

2.3 **Component 2. Competitive and sustainable value chains:** the component comprises: (i) the set up and funding for a competitive cost-sharing grant mechanism offered to qualified producer organizations in forest-based value chains to finance part of the cost for technical assistance to strengthen organization of local producers, implement applied technologies and improve quality control; and (ii) limited local public infrastructure to respond to requirements of the buyers of forestry products who will serve as co-sponsors of the proposed grants. Also, the component will finance the establishment of a private-equity fund aiming to recover degraded lands with industrial forest plantations. It includes the development of the business model; negotiations with private partners, definition of the finance structure, instruments and vehicles to be used, and funding the public contribution to the fund.

2.4 **Component 3. Capacity building and governance.** The component aims at improving the State's institutional capacity to provide services effectively and with quality related to forest management and conservation, focusing mostly on SEF, IMAC, and ITERACRE (see ¶3.11-3.14). The component will finance technical assistance, equipment and minor works to: (i) modernize and streamline information systems for environment and forest management; (ii) improve administrative processes and review of organizational structures; (ii) streamline legislation and regulations, including update regulatory framework under the State Forest Law in line with more recent national framework for the forest sector; (iii) technical capacity and training especially in areas related to forest plantations, forestry concessions, and forest-based value chains; (v) modernize and rationalize infrastructure to provide technical assistance more efficiently to smallholders and traditional communities.

2.5 The technical design, feasibility and environmental and social impact analyses for Project components are being carried out with the support of a technical cooperation (BR-T1194; ATN/OC-12722-BR).

## 3. Legal and Institutional Context

### *A. National Framework for Environmental Protection and Management*

3.1 Brazil's environmental legislation is considered one of the most advanced in the world. The 1988 Constitution dedicated an entire chapter to the environment (article 225), which is the central underpinning of the country's sustainable development strategy. There is an explicit requirement, as part of the environmental licensing process for activities that pose a significant risk or impact to the environment, for an environmental assessment to be carried out and discussed through public hearings. Other prior federal legislation had also mandated government responsibility for maintenance of ecological equilibrium, ecosystem protection, control of potentially polluting

activities and restoration of degraded areas[1]. The constitution of the state of Acre enshrines these same principles.

3.2 The abovementioned environmental laws have created the National Environmental System (SISNAMA), composed by the federal, state, district and municipal public agencies tasked with environmental protection and environmental quality. It is the SISNAMA entities that carry out the environmental licensing (permitting) of projects and activities that have potential environmental impacts and risks. The National Environmental Council (CONAMA) has regulated environmental licensing processes and administrative procedures[2]. Besides the environmental agencies, other federal level public agencies have to be consulted depending on the activity/project or sector, such as INCRA (National Colonization and Agrarian Reform Institute), FUNAI (National Indigenous Peoples Agency), and IPHAN (National Historic and Artistic Patrimony Institute) in their respective remits.

*National System of Protected Areas*

3.3 Brazil has a comprehensive framework for the establishment and management of protected areas, enshrined in the so-called SNUC (National Protected Areas System), and created through Law nº9985/2000. The SNUC divides protected areas into two broad categories: i) integral protection areas whose objective is *strictu sensu* conservation: e.g. biological reserves, ecological stations, national parks, wildlife refuges, etc; and ii) sustainable use areas; where some use of natural resources is permitted under appropriate management e.g. national forests, extractive reserves, sustainable development reserves, etc. In Acre both categories combined total approximately 5,107,836 hectares, corresponding to over 31% of the state's area.

3.4 SNUC mandates a detailed, stringent stepwise approach to the creation of new protected areas encompassing land/territorial surveys, biological inventories, community engagement, elaboration of management plans, and enactment of management councils, amongst others. SNUC forbids the development of any activity with potentially negative environmental impact within the boundaries of existing protected areas. Also, according to CONAMA Resolution nº13/1990 any activity within a 10Km radius of a protected area (i.e. in its buffer zone) that could potentially affect its biodiversity components must be subject to an evaluation and associated environmental licensing by the appropriate SISNAMA agency.

*Forest Code and other Protected Areas*

3.5 Brazilian environmental legislation also protects natural habitats outside formally declared protected areas through the national Forest Code (Law nº 4.771/1965) [3]. The Forest Code limits use of private lands through three provisions. First, it declares areas of permanent preservation (or APP) as those that cannot have their natural vegetation cover altered; these encompass for instance riparian forests, hill tops, steep slopes, etc. Secondly, it mandates a compulsory set-aside known as legal reserve (or LR) as a proportion of any private property where vegetation must be maintained in its natural state, in addition to APP areas. This percentage varies nationally according to biome. In the Amazon the LR covers 80% of any property. However, there can be management of LR areas -e.g. through sustainable timber extraction- as long as it does not involve vegetation substitution or clear-cut. The third limitation involves alternative land uses in areas where vegetation has been completely removed. In the Amazon, clear cut is permitted only in up to 20% of the property area.

[1] Law n° 6938, of 08/31/1981 established the National Environmental Policy (PNMA). This law was subsequently regulated by Decree n° 99274 of 06/06/1990 (later modified by Decrees 122/1991 and 3942/2001).
[2] Resolution nº 237 (12/09/1997 that partially alters Resolution nº 001/1986 on environmental licensing.
[3] Forest Code (Law nº 4.771/1965): http://www.planalto.gov.br/ccivil_03/leis/L4771compilado.htm

*Legal Framework for Indigenous Lands*

3.6 The 1988 Constitution of Brazil established the legal basis for the protection of Brazil's first nations, their traditional lands and social organization, costumes, languages, creeds and traditions, *ad perpetum*. Under this legal basis the Federal State is responsible for demarcating, protecting the lands the indigenous peoples traditionally occupy, and for enforcing respect to their assets. Article 231 in the Constitution prescribes all elements of the nature of the IP beneficial ownership (possession, use and domain) of their land and its natural resources. In this context, indigenous lands are Federal public lands, for which IP are granted full traditional use rights. The legal protection extended to indigenous lands is akin to that of sustainable use protected areas. A detailed process is involved in demarcating and recognizing indigenous lands as functioning protected areas in perpetuity. There are 34 indigenous lands covering some 2,320,232 hectares, or 14.13%, of Acre's area. Together, indigenous lands and publicly protected areas make up over 45% of the area of the state (see Figure 1).

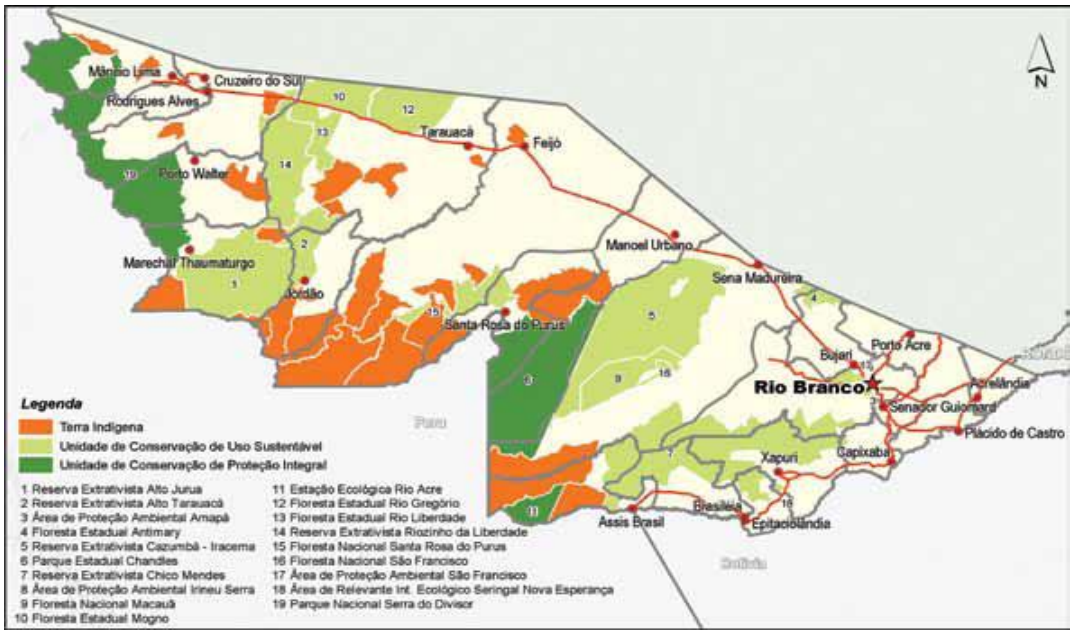



Fig. 1 – Protected Areas and Indigenous Lands of the state of Acre.

### *B. State Framework for Environmental Management*

3.7 The State of Acre has made significant advances in environmental management in the last 20 years. In particular, the State enacted a series of legal instruments to effect environmental planning and management. Acre has a State Environmental Policy (State Law nº 1117/1994, modified by State Law nº1698/2006), which established the State System of Environment, Science and Technology (SISMACT), as well as the directives and mechanisms for environmental management in the State, dictating basic norms for the protection, conservation and sustainable management of Acre's environmental and natural resource base as a fundamental premise for improvement of quality of life of the population.

3.8 Similarly, the State has a comprehensive legal framework[4] that covers, among others, water resources, access to genetic resources, agriculture (e.g. pesticide use and application), and the system of state protected areas. It is worth highlighting key public policy instruments that are closely associated to SISMACT: i) the State Policy on Water Resources (State Law nº1500/2003); ii) the Law on Access to Genetic Resources (State Law nº1235/1997); iii) and the State Forest Law (nº 1426/2001), which regulates the use of forests.

3.9 Regarding environmental planning, of particular importance for sound environmental management is Acre's Ecological-Economic Zoning (ZEE): a comprehensive framework that establishes the environmental, social and socioeconomic basis for land use planning and guides the development of all public policy instruments with a view to maximize the sustainable use and conservation of the state's natural resource base, land use, and development of infrastructure investments considering the potential and limits of the physical, biological, and socio-economic factors in the territory. The ZEE is Acre's principal development planning instrument, and it was enacted into law in 2007 (State Law nº1904/2007, regulated by Decree nº3416/2008). The ZEE, which was developed in a fully participatory manner, has since been used as a tool to define shared strategies, development scenarios and options for territorial management between government and civil society.

3.10 ZEE's zoning was done based on a multidisciplinary effort that used best available scientific knowledge of the physical and socioeconomic variables, including a multi-stakeholder priority setting exercise for biodiversity conservation (see Annex 1). The ZEE produced key geo-referenced information for decision making at different scales, which include a 1:250,000 scale Land Management Map[5] for Acre and detailed zoning directives prepared based on thematic studies and maps for natural resources, socioeconomics and political-cultural aspects. The Land management map defines three broad zones and their developmental priorities: i) Zone 1: consolidation of sustainable production systems; ii) Zone 2: environmental protection and sustainable use of natural resources; iii) Zone 3: priority areas for territorial management (i.e. land regularization); and iv) Zone 4: cities and urban settlements. As part of a third phase, the ZEE is presently developing detailed (zoom in) mapping for specific themes: *ethno-mapping* of indigenous lands (scale 1:50,000), municipal land use zoning (scale 1:100,000) zoning for Special Development Zones (ZED) and community development planning (ZAP) at a scale of 1:10,000.

*Acre's Institutional Framework for Environmental Management*

3.11 The state has a specialized branch of the public prosecutor's office responsible for overseeing compliance with environmental laws, and a dedicated contingent of state military police responsible specifically for environmental law enforcement.

3.12 In terms of the executive branch, the key institutions responsible for policy formulation, permitting and monitoring of environmentally related themes in a territorial context are SEMA – State Secretariat of the Environment, IMAC – State Environmental Institute, and ITERACRE – Land Institute of Acre. Together, these three institutions make up the state's Environmental and Territorial System – SISMAT, whose core function is to integrate all actions pertaining to environmental and territorial management.

[4] "Coletânea de Normas Ambientais do Estado do Acre" (PGE-AC, 2010): http://www.pge.ac.gov.br/site/arquivos/cartilhas/2010/coletaneanormasambientais2010.pdf

[5] http://mapas.mma.gov.br/i3geo/aplicmap/openlayers.htm?5240588525b4abfa480c71030d93c753 (see also Appendix 1 for the Territorial Management Map containing the priority land use zones)

3.13 SEMA was created in 2007 through a State Law (nº 171/2007). Its mandate covers all of Acre and it reports directly to the governor i.e. it has cabinet level status. Both IMAC and ITERACRE are executive agencies of SEMA. SEMA's main attributions, amongst others, are to: i) elaborate, coordinate and supervise the state policy on environment, biodiversity and ecosystems services, as well as protected areas in accordance with SISNAMA; ii) plan, execute coordinate and supervise activities related to access to genetic resources; iii) elaborate, monitor, and oversee implementation of Acre's ZEE; and iv) propose public policies for control, monitoring, enforcement, licensing/permitting and environmental education, as well as territorial planning and land regularization.

3.14 IMAC was created in 1986 (State Law nº 851/1986) as a semiautonomous agency responsible for environmental permitting, control, enforcement and monitoring. IMAC has regional offices covering the entire state (as per State Law nº1911/2007). ITERARCRE is also an executive agency of SEMA, and it was created in 2001 (by State Law nº1373). ITERACRE was established through State Law n. 1373/2001 also as a semiautonomous agency responsible for implementing the agrarian land tenure policies of Acre, in charge of promoting and executing rural land tenure planning, regularization, cadastre and land titling, land use regulation for public lands, and conflict mediation. ITERARCRE is also responsible for the State Land Registry.

### *C. Legal Basis for Forest Management in the Amazon*

3.15 According to the Forest Code, 80% of the area of each rural property in the Amazon Forest biome must be protected i.e. have its native forest cover maintained as Legal Reserve (LR). The remainder 20% may be used for agricultural purposes (with or without clear-cut), agroforestry and/or forest management for both timber and non-timber products. In addition to the 20% of the area of private properties that may be used for natural resource management purposes, the current legislation allows forest management to be carried out in public lands such as national, state and municipal forests6. The legal framework that established the regime of forest concessions was set by Federal Law nº11284/2006 (Law of Management of Public Forests for Sustainable Production), which also created the Brazilian Forest Service and the National Forest Development Fund. This law was regulated by the Residential Decree nº6063/2007.

3.16 In Acre, management of State Forests is regulated under the Forest Law nº1426/2001, known as the Forest Law. The Law provides a framework for conservation and sustainable use of forest resources, and includes three basic mechanisms for forest management: i) public productive forests; ii) concessions to communities; and iii) forest management concessions. The legal provisions establish that sustainable use in State Forests may be done through concessions or directly by the public entity of the State, but in any case exploration of both timber and non-timber resources must follow approval and supervision by IMAC and the state's Secretariat of Forests (SEF, see below). Also, the State Forest law instituted the State System of Natural Protected Areas (SEANP) consistent with the national system SNUC.

3.17 Traditional communities that inhabit SF in Acre have their rights recognized through State Law nº1382/2001, which regulates the destination and use of the state's public lands. Together with the Forest Law, these two pieces of legislation provide the basis for granting of full rights of use,

[6] According to both federal and state legislation (National Law 9985/2000 –the National Protected Areas System, SNUC– and State Law 1426/2001 – Acre Forest Law) State Forests are public, forested areas containing predominantly native species whose main objective is multiple use forest management through sustainable exploitation of forest resources (both timber and non-timber). This designation is consistent with Category VI protected areas according to IUCN (International Union for Conservation of Nature). As per the SNUC law, land tenure inside these state forests needs to be regularized by the State and any forest dwelling communities inhabiting the area be given the option to either stay and practice sustainable activities, as defined in the management plan for the state forest, or relocate elsewhere with secure land tenure afforded to them.

through *Agreements for Real Concessions of Use*[7], of up to 100 hectares per family living inside State Forests, as well as for the public lands under state land tenure regularization processes. Specific provisions for individual State Forests are enacted through separate legislation (e.g. as in the case of State Law nº1787/2006, which regulated community tenure and usufruct for State Forests of *Rio Gregorio, Rio Liberdade, Mogno*, and *Antimary*). Thus, forest communities in Acre have had their tenure situation recognized and their right to stay and make a living out of the forest according to a basic set of limits and regulations established by these laws.

*Requirements for use of forest resources*

3.18 Until recently, the Federal Environmental Agency (IBAMA) was the only agency responsible for environmental licensing for all activities related to management of forest resources. Since 2005, the federal government initiated a decentralization process for licensing forest management activities to the states. In 2006, a Cooperation Agreement was signed between IBAMA and the Government of Acre, through SEMA, IMAC and the State Forest Secretariat (SEF) for licensing forest management activities.

3.19 In addition to the system of environmental licensing the Government of Acre issues permits for forest removal, forest management, and wood log transportation regulated through a set of public administration instruments. Under the law, authorization for forest exploration is required regardless of scale or type of exploration (forest removal or forest management), and it may be granted without an environmental license when the area to be deforested is less than three hectares. Other common requirements for issuance of the environmental permits for forest exploration include: (i) project proposals must be signed by a chartered forest engineer or agronomist; (ii) project must comply with the Forest Code requirements; (iii) project sponsors must present of legal proof of land tenure; and (iv) land owners must file and register the demarcated legal reserve –LR– with the state land registry.

3.20 The forest management is regulated through several decrees, ordinances and associated resolutions: (i) Federal Decree n.5975/2006 establishes the general rules for development of Sustainable Forest Management Plans (PMFS), including the permitted uses of forest raw materials and penalties for infractions; ii) Decree n.6063/2007 establishes detailed legal reporting, and technical specifications as well as criteria and parameters for forest exploration, environmental impact assessment with baseline indicators for licensing and monitoring, content of forest inventories, criteria for elaboration of concession contracts, etc. It also stipulates the responsibilities and procedures for approval of PMFS and Annual Forest Operational Plans (POAF) by public agencies; (iii) Federal Ordinances IN n.93 and IN n.101 stipulate requirements for geo-referenced information about the property (e.g. location of the LR, APP and extraction areas) as well as land title requirements; (iv) Federal Decree n.6514/2008 stipulates administrative sanctions, due process and enforcement options for infringements of environmental provisions related to forest management activities; (v) CONAMA Resolution n. 406/2009 provides additional details about the technical specifications for formulation, presentation, technical review and execution of the PMFS plans of native forests in the Amazon biome; (vi) State Resolutions CEMACT/CFE n.3/2008 and CEMACT/CFE n.002/2010 regulate the environmental licensing, monitoring and supervision of areas under state forest management; and (vii) Federal Ordinance n.4 regulates forest management in Legal Reserve (LR) for rural smallholding farmers (on a subsistence basis) as well as for commercial basis on larger properties.

3.21 Currently, the PMFS are divided into categories depending on: i) property size, ii) landholder type (in terms of forest domain/holding), iii) products to be extracted, iv) intensity of forest

(i) [7] Concessão de direito real de uso

management, (v) forest type, and (vi) state of the forest cover. There are two broad categories of PMFS: (i) small scale, carried through by communities and small producers; and (ii) full PMFS, executed by lumber entrepreneurs, large producers and by the government through forest concessions. The main difference between these PMFS is in the cycle and intensity of harvest and in the use of machinery/mechanization for the exploration.

3.22 Until early 2000's, about 90% of the timber exploration in Acre was illegal, mostly because of the absence of the State in monitoring timber licenses. After state and federal efforts in regulating the logging/timber sector, including support to legislation, monitoring and law enforcement systems, and other economic incentives, it is estimated that nowadays some 85% of timber traded in Acre comes from approved PMFS. However, there remains considerable work to be done on strengthening the state apparatus to manage the forestry sector, including lowering transaction costs for approving PMFS and strengthening monitoring and enforcement on approved PFMS.

### *D. Framework for Reforestation and Forest Plantations*

3.23 The Federal Decree n3420/2000 created the National Program for Forests, whose main objective is to promote and finance the reforestation of native forestland and forest plantations on degraded areas. Coupled with the provisions of the Forest Code, the decree also regulates activities pertaining to restoration of Areas of Permanent Protection (APPs) and Legal Reserves (RL), and rehabilitation of degraded lands –especially in small rural landholdings. Federal Ordnance n$^{o}$5 establishes the methodology and procedures to be adopted for such areas.

3.24 Forest plantations in Brazil (known as '*silviculture*' enterprises) usually involve single crop of eucalyptus, pine, *acacia*, oil palm, rubber tree and, to a lesser extent, teak and araucaria pine. Environmental permitting is required for these projects as in any other activity that may pose negative environmental impacts on the rural landscape, as described earlier (see above). Some States have introduced simplified licensing requirements for plantations in small holdings; notably, in the southern states of *Paraná* and *Rio Grande do Sul*. However, some local non-governmental organizations have criticized this simplification in the absence of a detailed ecological-economic zoning in force in which priority areas for forest plantations would be defined according to a defined set of criteria including soil, topography, land use, social factors. Acre has yet to develop procedures and technical instructions specific for environmental licensing of forest plantations, but given that the State ZEE is in force, this should be relatively easy from a legal and institutional point of view.

## 4 Environmental and Social Setting and Context

*Socioeconomics and Demography*

4.1 Acre has an area of approximately 164.221 km², representing 4.26% of the Brazilian Amazon and 1.92% of Brazil's territory. It is located in the extreme southwest of the Brazilian Amazon. The State's total population is 732,793 inhabitants[8], residing predominantly in urban areas (72.6%), of which 46% in the State capital *Rio Branco*. The State's population is mostly composed of migrants and descendants of migrants from other regions of the country, who moved in from mainly from the country's Northeast since the 19$^{th}$ century, during the rubber economic boom, and who make up the traditional population in the state's rural interior. The rural population (27.4% of the State) is composed of peasants in traditional settlements, "extractivists" in differentiated settlement projects, traditional communities in protected areas and native

[8] Source: IBGE, 2010 Census.

indigenous peoples. Although most of the State's population is concentrated in few urban areas, the vast majority of Acre's rural communities are scattered and isolated.

4.2 As in the rest of the Amazon Region, rivers in Acre play a very important role in transportation. Twenty of the state's twenty-two urban areas are located along river banks, as well as several settlements located upstream the river network. To foster the use of rivers as transport routes, the Government of Acre has been investing, since 1999, to consolidate the intermodal connection with BR-364 highway (which runs on the southeast-northwest direction) in the *Envira* and *Juruá* river valleys, and with the BR- 317 highway, in the Acre river valley – the latter runs east-west. The government has also built a port infrastructure in the city of *Cruzeiro do Sul*. All these investments allow better access to national and international markets, attracting new investments. The Government of Acre relies on the ZEE to design appropriate strategies for efficient planning and environmental impact mitigation along these highways.

4.3 The State of Acre played a relevant role in the history of the Amazon region during the expansion of the rubber-based economy, as a result of the natural richness of the State's rivers and of the quality and productivity of the rubber trees within its territory. Acre has been the stage for the emergence of innovative social and political organizations in the last decades of the twentieth century, based on the defense of the economic value of natural resources. By choosing a development model that seeks to reconcile the economic use of forest riches with the modernization of activities that may cause impact in the environment, today the state once again attains strategic importance for the future of the Amazon.

4.4 Hence Acre's economy, since its formation process, has always been directly or indirectly based on the forest and on the social factors related to its exploration. The last decade was known as the *florestania* "Forest Government" and was marked by a clear recognition that Acre has an eminently forest-linked vocation. Therefore, it is understood that in the past, present and future, Acreans have the forest as a source of social evolution and development.

4.5 The vision of promoting Acre's development with strong environmental sustainability led to a detailed and participatory Ecological-Economic Zoning (ZEE) of the state, which now provides sound guidance to development actions. Based on the ZEE studies, a State Territorial Management Map (see Annex 1) has been prepared which reflects the *florestania* vision and indicates areas already altered by various human activities, those where land use and land use change need regularization, and those areas already under protection or that need to be preserved. The ZEE also developed a community classification for priority actions directed at social inclusion and economic development.

4.6 A total of 30 indigenous ethnic groups are present in Acre, which correspond to approximately 1.35%[9] of the total State population, or 4.8% of the rural population. The indigenous population lives generally in small groups, the vast majority in officially recognized Indigenous Lands (IL). The Constitution of 1988 established the legal basis to define these lands, where indigenous peoples have a full legal right to use of forest resources within these territories for subsistence and generation of income, in perpetuity. However, they are barred from exploring their forests on a commercial scale or leasing/ commercial concessions their lands for that purpose.

4.7 Agricultural and ranching activities in Acre were the main drivers of deforestation and resulting environmental impact throughout the 1970-90's, in close connection to unplanned/unregulated land use, land grabbing and occupation along the BR-364 and BR-317 roads opened during this period. This has led to historical deforestation 'hotspots' along agricultural frontier and rural

[9] there are diverging estimates for indigenous peoples in Brazil given that the official census lacks appropriate methodologies to take into account specific variables e.g. ethnicity http://pib.socioambiental.org/pt/c/no-brasil-atual/quantos-sao/diferentes-estimativas. The current estimates for indigenous peoples in Acre vary between 4,748 (Census) and 9,489 (FUNAI). Numbers here are based on the latter.

"colonization" settlements, resulting in approximately 12% total deforestation to date. Conversely, around 88% of Acre's area is still covered with primary forest.

4.8 The Government of Acre (GoAc) has a goal of ensuring protection for at least 80% of the state's forests, with a view to maximize the state's forest potential (currently, over 51% of the State forests are already protected through existing PA and indigenous lands). Hence, the GoAc has set a target of 25% of the territory (some 3.7 million hectares) to be under sustainable forest management for both timber and non-timber forest products, including the establishment of some 1.5 million hectares of State Forests[10]. Acre's commitment is to enable full certification of these areas according to international standards and best practices, such as those of the Forest Stewardship Council (FSC[11]).

*Climate and Other Physical Features*

4.9 According to the Köppen classification system, the climate of the region is of the tropical warm, seasonally humid type characterized by presenting abundant rainfall and a short dry season, which has no significant influence on the development of the vegetation due to the abundance of rainfall during the rest of the year. In climate terms, this allows the development of agricultural activities and cattle ranching without major limitations. On the other hand, the forestry sector is limited during the rainy season with respect to access to wood supply, which leaves a maximum of five months appropriate for the efficient use of this resource.

4.10 Acre's average medium annual temperature varies between 22ºC and 26ºC, with very low variation during the year, obtaining the highest average monthly registries during the months from September to April, while the lowest average monthly registries occurring between May and August. The hottest months are September and October and the coldest is July, also the driest month of the year. Notwithstanding abundant rainfall, forests in Acre are more fragile to climate change and anthropogenic perturbation than had been previously thought. The 2005 drought led to uncontrollable forest fires that damaged around 3.400 to 4,100 km2 of old-growth rainforests in eastern Acre. Climate models suggest that droughts similar to that in 2005 will become more common in the coming decades[12]. The lowest river water levels (< 2 m) for the Acre River (*Rio Branco* municipality) in the last twenty years occurred in 2005, 2007, and 2006.

4.11 Soils are generally poor in nutrients, due to the nature of the lithological features, the strong chemical decomposition caused by high temperatures and high humidity and the washing of nutrients due to heavy rain during great part of the year. In these natural conditions, the fertility of the soil is linked to the organic cycle. Due to the abundant vegetative cover of the tropical forest there is a constant supply of organic matter, mainly as litter that afterwards is transformed into humus. Due to climatic conditions and the action of microorganisms, the decomposition of the organic matter is very fast.

*The ZEE and Priority Areas for Forest Management and Biodiversity Conservation*

4.12 As mentioned above, Acre's ZEE is the authoritative compendium on the state's natural resource base. The biodiversity of the state's forests has been reasonably well studied[13] and a comprehensive scientific literature review formed the basis for the priority setting mapping exercise that culminated in the zoning for creation of integral (i.e. strictu sensu protection)

---

[10] http://www.imazon.org.br/publicacoes/livretos/identificacao-de-areas-com-potencial-para-criacao

[11] www.fsc.org

[12] Cox, P. et. al. (2003). "Amazon die-back under climate-carbon cycle projections for the 21st century". Hadley Centre, UK.

[12] Nepstad, D. et al (2008). "Interactions among Amazon land use, forests and climate: prospects for a near-term forest tipping point"

[13] e.g. Araujo, H.J.B. ; Silva, I.G. 2010. *"Lista de espécies florestais do Acre: ocorrência com base em inventários florestais".*

protected areas and sustainable use areas. This mapping of conservation priorities was part of a national effort coordinated by the Ministry of the Environment[14]. The first version of the mapping was concluded in 2003 and an update done in 2007[15].

4.13 The forest habitats in ZEE's Zones 1 and 2 are very important in terms of biodiversity conservation (see Figs. 2 to 4, Annex 1), where the GoAc has created protected areas and where it will expand protection coverage through the creation of new State Forests. Key plant and animal species inhabit these ecosystems, such as *Swietenia macrophylla* (large leaved mahogany) and *Cedrela odorata* (cigar-box wood, red cedar, or Spanish cedar), which have been incorporated respectively to the Appendix II and III of the CITES[16] convention, for being considered vulnerable species according to IUCN's red list[17]. In addition to these tree species, there are fauna species catalogued as vulnerable and with viable populations within existing protected areas and future forest concession areas[18]. Acre sits between the broader geography between the eastern slopes of the Andes and the interfluvial of the two major tributaries of the Amazon, to the west. Hence, a substantial degree of species endemism is expected, in particular where geographical barriers are more pronounced[19, 20].

4.14 Therefore, in order to ensure protection of sensitive ecosystems and maximize opportunities for biodiversity conservation, the Program adopts the precautionary approach as a core design feature through the combination of a tiered approach to biodiversity conservation and the best available forest management practices (see Box 1).

[14] See the process:http://homolog-w.mma.gov.br/index.php?ido=conteudo.monta&idEstrutura=72&idConteudo=6251&idMenu=5682

[15] For the biodiversity maps for all Brazilian biomes refer to: www.central2.to.gov.br/arquivo/24/191

[16] www.cites.org

[17] www.iucnredlist.org

[18] e.g. birds, mammals, etc (*Priodontes maximus, Alouatta seniculus, Panthera onca, Tapirus terrestris, Sciurus sanborni/ignites, Pipile cumanensis Mitu tuberosum, Ara chloropterus, Ara macao*)

[19] e.g. for birds, see: http://www.natureserve.org/aboutUs/latinamerica/pubs/endemicas_low_ENG.pdf, and Whitney, B. M. et al (2004). "A new species of Thamnophilus antshrike (Aves: Thamnophilidae) from the Serra Do Divisor, Acre, Brazil. Auk 121:1031-1039.

[20] e.g. for primates see: https://library.conservation.org/Published%20Documents/1998/A%20New%20and%20Distinctive%20Species%20of%20marmoset.pdf

Box 1. Levels of natural habitat and biodiversity protection under the SEANP

| **Biodiversity conservation** | **Forest Management*** |
|---|---|
| 1 –Acre's ZEE fully takes into account national biodiversity conservation priority setting (which included safeguards to protect rare, threatened and endangered species and their habitats) | 1 – FSC certification principles ensure compliance with major conservation priorities: maintenance of high conservation value forests[21]. |
| 2 – Establishment and creation of State Forests is done strictly according to the State's approved ZEE i.e. according to zoning areas and biodiversity attributes and in compliance with the Forest Law 1626/2001. | 2 – Requirements of environmental impact assessment designed to conserve biological diversity and its associated values. Conservation zones and protection areas are established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources |
| 4 –State Forest (SF) requires a detailed management plan containing a biodiversity baseline. Management plans include zoning that designates core areas for strict protection, and areas for sustainable use under traditional community management and sections for commercial sustainable forestry, against which monitoring measures are implemented. | 3 - Reduction of environmental impact of logging activities and maintenance of the ecological functions and integrity of the forest. Use of reduced impacts techniques to ensure maintenance or enhancement of forest attributes |
| SF Annual Operation Plans take into account conservation set-aside areas, scale and intensity of harvest, and rotation cycles to ensure maximum protection of biodiversity | |

* The federal and state level policy frameworks (see sections 3.A to 3.D) afford a similar level of protection of biodiversity as that provided by FSC certification. FSC, however, encompasses a range of additional issues that are normally captured by other legislation (e.g. labor), in addition to being third party verifiable.

## 5. Environmental and Social Risks and Impacts and Proposed Measures

*Safeguards Triggered by the PDSA II*

5.1 Due to the environmental sensitivity of the area of influence of the Program, and according to OP-703 and the safeguard policies filters, this operation has been classified as a category 'B'.

5.2 In addition to the Policy Directives automatically triggered under OP-703 (e.g. B.01, B.02, and B.03) based on the environmental characteristics and the nature of the activities envisioned for the program, the PDSA II Program triggers the following Directives, positively or potentially negatively: i) B.04 – other risks: wood sourced from Amazon; ii) B.05 – Environmental Assessment; iii) B.06 – Consultation; iv) B.09 – Natural Habitats (IUCN Category VI sustainable use protected areas); iii) B.10 – Hazardous Materials: pesticides management in forest plantations; community health and safety; and iv) B.11 – Pollution Prevention and Abatement: solid and other wastes).

[21] www.hcvf.org

5.3 Other safeguard policies triggered are as follows: (i) OP-704 (type-2 scenario where increased risk of forest fires has a potential to exacerbate hazard risk to human life, property, the environment or the operation itself); (ii) OP-765 (potential indirect impact to neighboring indigenous communities' livelihoods, where consolidation and/or creation of State Forests may limit access to resources; but also potentially indirectly benefiting these communities through consolidation of land tenure in adjacent areas and reduced encroachment pressure; both these issues should be considered during preparation of individual SF management plans); and (iii) OP-102 (access to Project information such as Project Profile, Loan Proposal and SEA). The triggering of OP-761 (Gender in Development Policy) will be ascertained during the social and environmental analysis.

*Potential environmental and social impacts and risks*

5.4 An initial analysis of proposed Program components and other detailed social and environmental assessments carried out for similar operations in Acre indicates that PDSA II overall impacts are expected to be positive, such as reforestation of degraded areas, enhanced public awareness and capacity regarding environmentally sustainable production activities, enhanced institutional capacity to implement forest management, environmental monitoring and enforcement, and socially equitable economic development from forest based income generation activities.

5.5 However, there are activities contemplated under PDSA II that are likely to cause environmental impacts. These are mostly related to the production sector directed at a forest-based economy. Accordingly, the activities aimed at promoting sustainable extractive forestry and forest plantations are responsible for triggering most of the safeguards included above.

5.6 Under the law, forest management in national and state forests is polycyclic, which means, the forest must be explored over several cycles, so that always a stock of trees is left for future exploration and allow for regeneration. Therefore, management must include measures to minimize impacts, stimulate forest regeneration and compliance with cutting cycle. Requirements for forest management are established in detail under the set of norms and technical instructions from IBAMA and monitored/supervised by the Federal and/or State applicable authority (see chapter 3).

5.7 Therefore, given these regulations, the adverse impacts are expected to be localized and reversible and may be minimized through the adoption of preventive and management measures such as careful planning of the execution of interventions and procedures that adequately give access to, and use of, natural resources, as defined in the State Forest management plans, specific sustainable forestry plans for authorized parcels within state SF, forest plantation management plans, and corresponding environmental permitting requirements associated with construction of forest access and management infrastructure.

5.8 The Program is not likely to pose significant negative impacts to human populations, and it is also expected to have generally positive social impacts. For instance: land tenure regularization for forest dependent communities, creation of alternative income generation options linked to forest management chains, greater access to markets, community capacity building and skilled job creation in forest related activities amongst others.

5.9 However, there may be social risks associated with: (i) community health and safety issues in connection with increased traffic as a result of forest harvesting operations in/near State Forests; and exposure to increased risk of forest fires; (ii) changes in livelihood practices for communities living in areas to be placed under formal protection and regulated resource; and (iii) indirect limitations to access to resources for traditional and/or indigenous communities in areas slated for consolidation and/or creation of State Forests, but also potentially indirectly benefiting these

communities through consolidation of land tenure in adjacent areas and reduced encroachment pressure.

5.10 The following is a brief overview of the key potential environmental impacts and social risks of the PDSA II Program (see Table 1).

**Table 1**. Summary of the main potential negative environmental impacts and social risks of the PDSA II Program.

| **Type of activity** | **Main potential negative impacts & risks** | **Mitigation of impacts & risks** |
|---|---|---|
| **Environmental** | | |
| Opening of access roads, logging plots and storage areas; and associated infrastructure; clearing of vegetation and earth works | Erosion; generation of noise, dust; solid and other wastes; localized deforestation and biodiversity loss; siltation/runoff to streams; increased risk of fire | Application of best construction practices and known mitigation measures regulated by the Brazilian Forest Service (SFB) and SEF; environmental control and monitoring of contractor's management plans; training of construction teams and communities; adequate planning of works |
| Timber harvesting activities (under reduced impact and selective logging regime) | Forest degradation and fragmentation; increased risk of fires with biodiversity and human health losses; erosion. | Technical assistance, training for communities; application of reduced impact techniques, best industry standards; monitoring and control of forest management plans; monitoring and control of environmental management. |
| Non-timber forest activities. | Unsustainable exploitation | Technical assistance, training for communities; monitoring of management plans; strengthen environmental monitoring and control. |
| Agroforestry production. | Risk of soil and groundwater contamination by chemical products; erosion. | Technical assistance, training for communities; environmental monitoring and control. |
| Forest Plantations and Reforestation | Soil and groundwater contamination by pesticides/herbicides, fertilizers; soil compaction and increased risk of fire (plantations) | Use of integrated pest management methods, biological control, use of plant extract-based products; minimum use of chemical products; fire prevention and control methods; environmental monitoring and control |

| **Social** | | |
|---|---|---|
| Construction of infrastructure for forest management<br><br>Creation of new protected areas (land surveys, cadastre, community engagement, elaboration of management plans, etc)<br><br>Consolidation of existing protected areas (State Forests): management plans, land tenure regularization, etc. | Community health and safety (increased traffic, exposure to forest fires);<br><br>Changes in livelihood practices for communities in Program area of influence (e.g. lack of/regulated resource use or access);<br><br>Indirect resource use limitations to neighboring human settlements<br><br>Encroachment on areas newly slated for creation<br><br>Inequitable access to land tenure regularization opportunities and/or inadequate compensation options<br><br>Unsustainable activities; inadequate management plans; deforestation; deficient technical assistance | Application of best construction practices and known mitigation measures, environmental control and monitoring of contractor's management plans, training of construction teams and communities, adequate planning of works<br><br>Strengthened monitoring and protection of the integrity of protected areas<br><br>Technical assistance, training for communities; monitoring of management plans, strengthen environmental monitoring and control<br><br>Development of management plans based on social risk assessment, community engagement, participation and outreach. |

## 6. Environmental and Social Strategy for the Operation

*Strategic Environmental and Social Assessment*

6.1 The state of Acre is currently conducting a Strategic Environmental and Social Assessment (SEA) for the PDSA II Program. This exercise follows on from, and builds upon, the state's previous experience with the first phase of IDB engagement in lending for sustainable development activities as well as from related investments e.g. the ProAcre program by the World Bank[22]. The SEA exercise is in line with IDB's adoption of a more programmatic and policy based approach to lending for forestry enabling activities, while at the same time ensuring environmental sustainability of investments downstream where attention is paid to potential environmental and social impacts of individual projects. Further, carrying out a SEA allows for an evaluation of cumulative environmental and social changes and opportunities and the potential interactions between different sectors in anticipation of the design of specific program activities.

6.2 The SEA exercise will flesh out the key foreseen environmental and social impacts resulting from Program actions. The terms of reference for the assessment were agreed upon with the Project team and will cover, amongst others: (i) description of the PDSA II Program; (ii) safeguards triggered by Program actions; (iii) consultation process; (iv) analysis of the legal framework; and institutional structure and capacity for environmental management; (v) the Program's Environmental and Social Management Framework (ESMF); (vi) description of relevant social

[22] Proacre: http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/EXTLACREGTOPRURDEV/0,,contentMDK:22120243~menuPK:503797~pagePK:34004173~piPK:34003707~theSitePK:503767~isCURL:Y,00.html

and environmental assets and factors; (vii) analysis of the potential direct and strategic impacts of the overall program; and (vii) Social-environmental management plan which will include annexes with information on forest management in Acre, guidelines for management plan for forest plantations and key social issues, and institutional strengthening needs to improve governance and manage impacts and risks. The SEA will be carried out in full consultation with local stakeholders and made available at the client's website locally in Brazil as well as at the IDB's website. The SEA should be finalized prior to the IDB analysis mission.

*Strategy for analysis of environmental and social viability*

6.3 As part of the ESS, the Project team has provided guidance and is monitoring the development of the SEA and the respective draft ESMF. The Project team will pay special attention to the following aspects/issues:

- Compliance of the PDSA II Program with the identified environment safeguards policies (OP-703; OP-704; and OP-765), in particular the key Directives of OP-703 triggered as per paragraphs 5.2 and 5.3 above; as well as confirm triggering of OP-761;
- Quality and content of the SEA document in order to verify compliance with IDB standards and requirements, especially the Environmental and Social Management Framework (ESMF);
- Evaluation of the Program's compliance with the applicable environmental, health and safety, labor and social laws, norms, regulations and other procedures including any applicable requirements for licenses and permits;
- Evaluation of institutional capacity of Acre state agencies to adequately oversee environmental, health and safety, labor and social management aspects of the Program – especially their management capacity and systems (plans, procedures, responsibilities, human and financial resources, capacity building and training activities, accountability and external auditing) in order to ensure PDSA II's adequate execution;
- Evaluation of the pertinence, adequacy, sufficiency, budgetary and human resources, chronogram, and quality control of the proposed environmental, health and safety, labor and social measures as well as their monitoring, as detailed in the Project's ESMF;
- Evaluation of the social risks and proposed mitigation and management measures involved in the creation of new protected areas (and associated infrastructure) and processes of land tenure regularization e.g. land surveys, cadastral information, social baselines, community census, natural resources and land use information, measures to avoid involuntary resettlement and/or livelihood displacements with adequate compensation for compliance with IDB's provisions under OP-710 if/where applicable,; existing legal and regulatory framework (e.g. the ZEE);
- Evaluation of compliance with OP-102 and the thoroughness of the process of public consultation and engagement with affected communities and associated stakeholders in the Program's area of influence. Adequacy of the Program's Communications Plan to encompass PDSA II's design, implementation and evaluation phases;

- Evaluation of potential indirect effects of the Program's activities on indigenous communities in PDSA II's area of influence in accordance to OP-765;
- Evaluation of potential environmental, health and safety, labor and/or social liabilities in connection with private lands targeted for forest plantations and reforestation investments. In particular, evaluation of properties' compliance with legal requirements under environmental laws (see sections 3.23 to 3.25 above);
- Evaluation of the Program's and/or state mechanisms for conflict resolution and procedures for addressing complaints in connection with Program activities;

6.4 Subsequent to the ESDD process and taking into account all the findings and any gaps indentified as part of the analysis phase, the IDB team will draft and Environmental and Social Management Report (ESMR), which will outline all the necessary management measures to be taken in order to avoid, minimize, mitigate and compensate/offset the negative environmental and social impacts and risks, as well as maximize the Program's potential benefits.

## Annex 1

Fig. 2. The Ecological-Economic Zoning (ZEE) of the state of Acre.

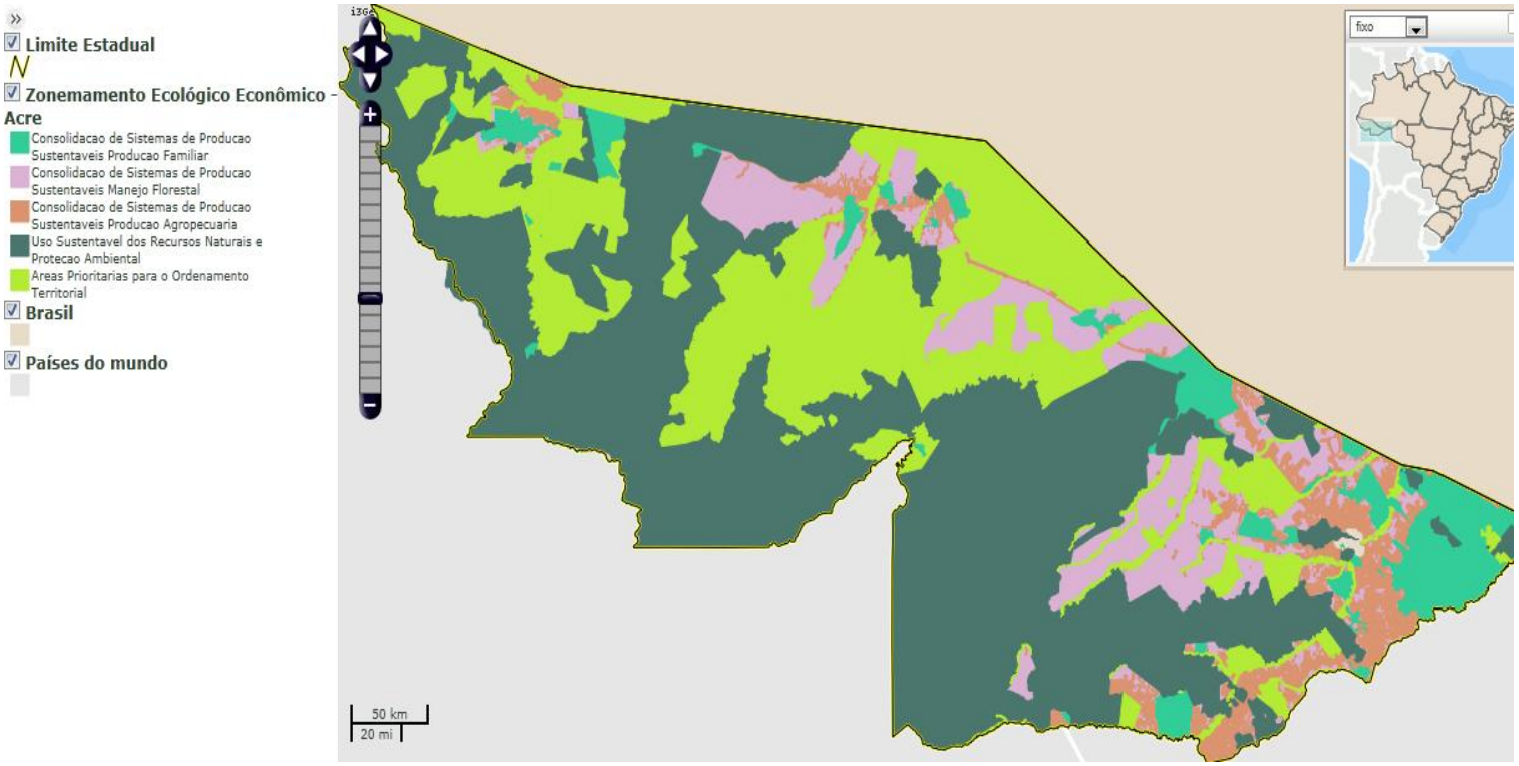


Fig. 3: Priority areas for biodiversity conservation in Acre (Ministry of Environment, 2003 and 2007).

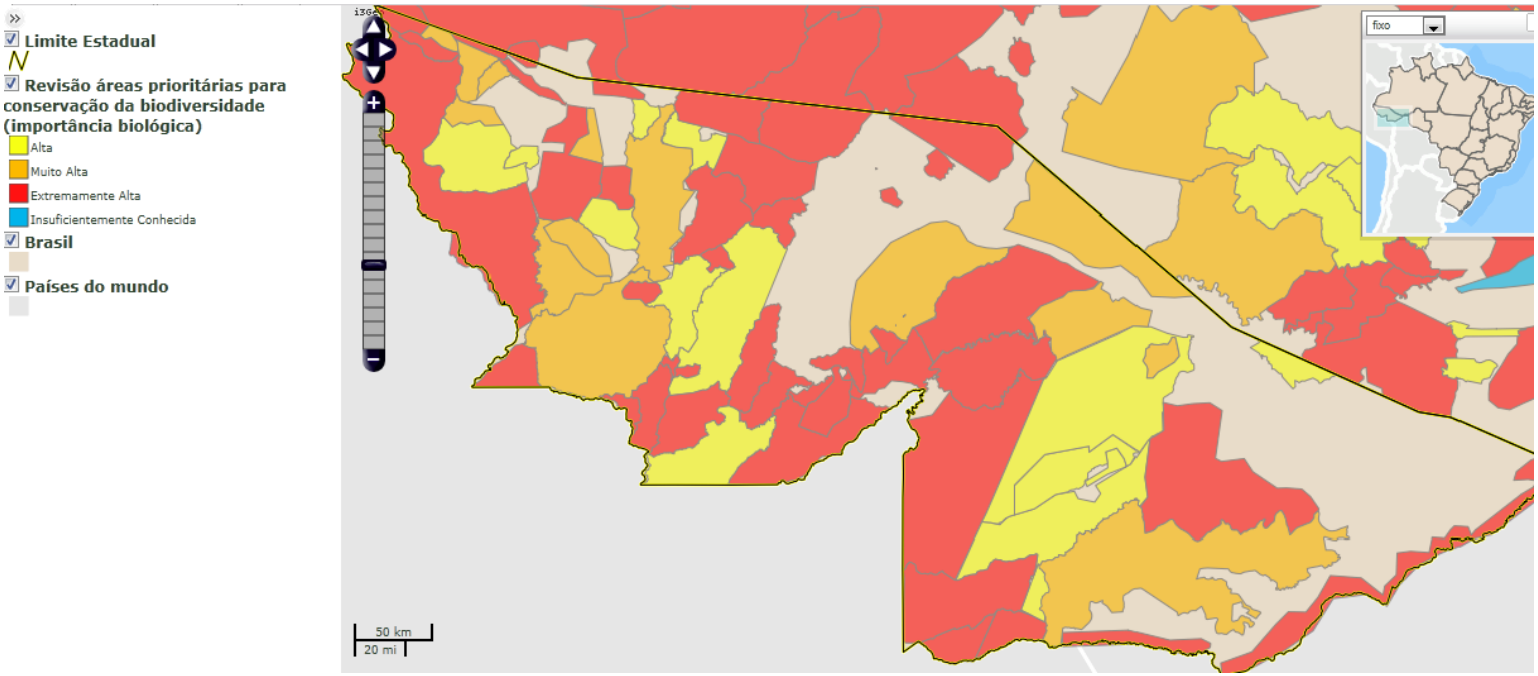
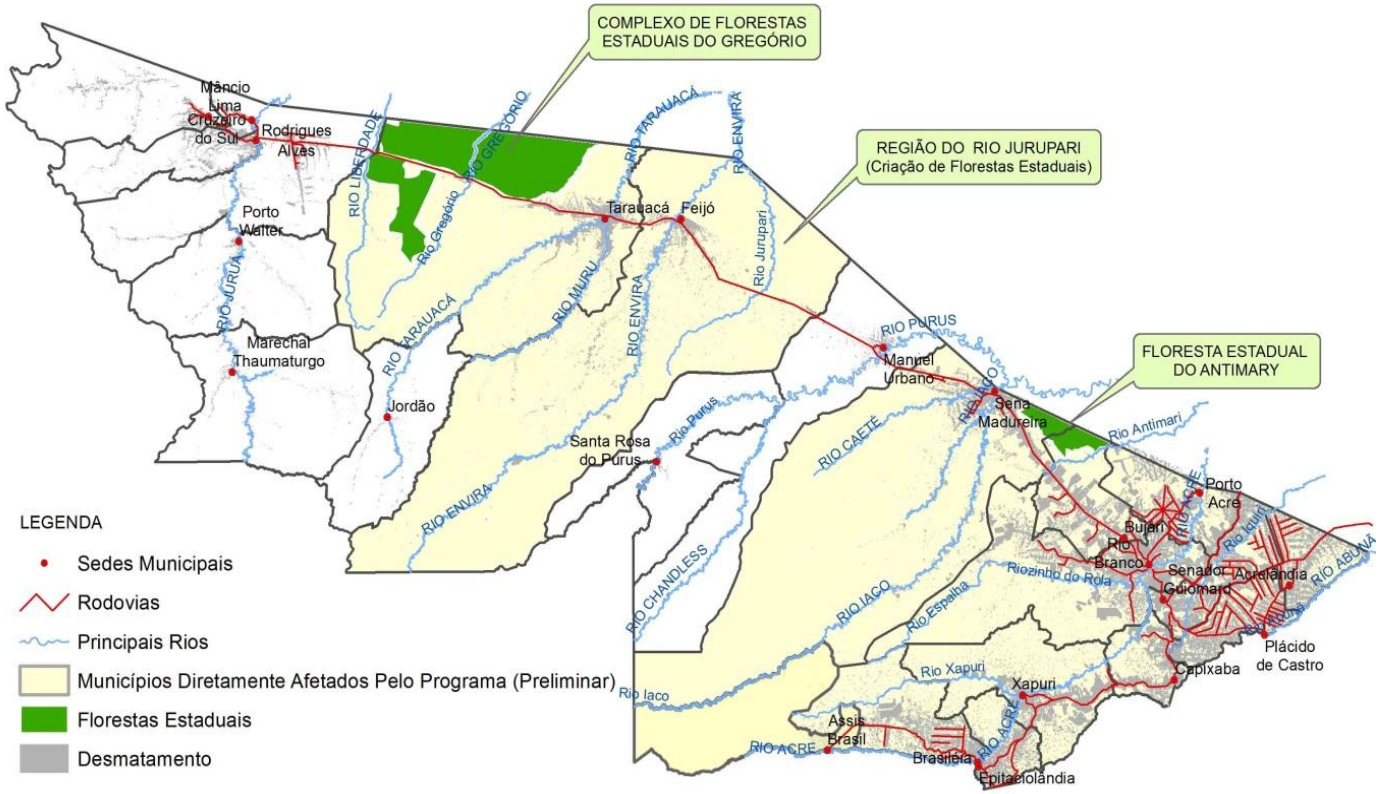


Fig. 4: Acre's ZEE – Preliminary indication of area affected by the Program: municipalities and location of State Forests



# INDEX OF COMPLETED AND PROPOSED SECTOR WORK

| Topic | Description | Expected date | References & hyper links to Technical files |
|---|---|---|---|
| Component #1: expansion and consolidation of the sustainable use PAs. | An individual consultant has been hired with resources from the TC (BR-T1194) to identify and prepare a priority list of interventions needed to create new protected areas (technical studies, public consultations, survey, identification, and titling and/or issuance of concessional rights to existing land occupation and ownership, demarcation of PAs boundaries, public infrastructure, etc), define the scope of the needed intervention, and cost the list of interventions, and develop a physical and financial chronogram. | Jan 2012 | IDBDOCS-#36149643-Technical Design Tropical Forest Management /TOR |
| Component # 2: Competitive forest based value chains | Three individual consultants and a consulting firm have been hired with resources from the TC (BR-T1194) to design the competitive grant scheme and a private equity fund for reforestation of degraded lands as well as the identification public sector interventions needed (R&D, Extension, and Infrastructure). In addition, their task would include: definition of the scope of the funds, costs to set up and finance the proposed funds, and develop a physical and financial chronogram. | Jan 2012 | IDBDOCS-#36303868-Assessment of Smallholders Value Chains for the Design and Execution of the Program/TOR |
| Component # 3: Institutional strengthening | A consulting firm has been hired with resources from the TC (BR-T1194) to: (i) asses the needs and design a proposal of institutional strengthening and capacity building to enable the main institution involved in the program to fulfill their mandate. In addition, their task would include: cost the needed interventions, and develop a physical and financial chronogram. | Dec 2011 | IDBDOCS-#36151721-Design of the Component on Improving Public Forest Administration/TOR |
| Analysis of project cost and economic viability | A consulting firm has been hired with resources from the TC (BR-T1194) to perform financial and economic appraisal of the whole operation. | Feb. 2012 | IDBDOCS-#36149600-Economic Assessment Program/TOR |
| Financial management/fiduciary issues and control environment | Fiduciary analysis will be carried out by the Project Team with support from the Country Office, Headquarter Specialists and an individual consultant hired with resources from the TC (BR-T1194). | Feb 2012 | IDBDOCS-#36259155-ToR #1. Technical Coordination of the Program / TOR |
| Operational Manual | An individual consultant has been hired with resources from the TC (BR-T1194) to help the GoAC to develop the Operational Manual for the Program. | Feb 2012 | IDBDOCS-#36278588-Institutional Assessment for the Design and Execution of the Program / TOR |
| Social and environmental safeguards | A team of three individual consultants have been hired with resources from the TC (BR-T1194) to carry out a Strategic Environmental Assessment of the Program. | Feb 2012 | IDBDOCS-#36269781-Environmental and Social Safeguards Assessment / TOR |

| | | | |
|---|---|---|---|
| Monitoring and Evaluation Plan | The project team in close consultation with SPD will develop the Monitoring and Evaluation Plan for the Program following the "state of the art" methodologies for impact evaluation of value chains and protected areas. | Feb 2012 | In progress. Literature review has been done. Collaboration with SPD has already started. |