Title: Shifting towards protected areas: challenges and interrogations for community forest management in Amazonas State.

Key words: community rights – forest governance – public policy

Author: Jean François Kibler, Chargé de Programme, GRET, kibler@gret.org

Abstract

The Brazilian government encourages since more than a decade various forms of community forestry, through the development and implementation of specific legislations and programs, both at federal and state level. Particularly, the state of Amazonas has been implementing since 2003 an innovative program (*programa Zona Franca Verde*) to encourage small scale forest management by local forest dwellers, both for wood and NTFP. The GRET accompanied during three years the Amazonas public institutions (environmental, land tenure, technical assistance) and the wood sector actors (small holders and communities, carpenters and sawmills) in the program implementation, through a specific project jointly designed and run with the Amazonas Secretary of Environment and local civil society institutions (Floresta Viva).

The paper analyzes the first results of the Amazonas program, which has met a series of difficulties in its implementation. Among the main constraints are the legal requirements for recognizing community rights on forest resources, the complexity and high transaction costs of the administrative procedures, the poor institutional implementation capacities and the lack of continuity in government policy.

The paper discusses the relevance of this policy in Amazonas. It stresses the implicit tendency to focus the forestry program in protected areas, which present a series of advantages and potential benefits in term of impact (social, economic, conservation) and feasibility (legal, financial, governance). Such evolution, which lets unsolved the situation of communities living outside protected areas, raises a series of interrogations and challenges that should be part of the next year agenda. Particular attention should be paid in strengthening the individual and collective capacities of the forest dwellers to actually control forest management and exploration and get fair and sound economical benefit.

(275 words)
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Introduction

The Brazilian government encourages since more than a decade various forms of community forestry. Particularly, the state of Amazonas has been implementing since 2003 an innovative program to encourage small scale forest management by local forest dwellers. During three years, the GRET accompanied the Amazonas public institutions and the wood sector actors in the program implementation, through a specific project jointly designed and run with the Amazonas Secretary of Environment and local civil society institutions (Floresta Viva). After a brief history of the new forest focused model of development built up in Amazonas, the paper describes the specificities of the program, evaluates the first results, and analyzes the main difficulties faced in its implementation. This review highlights the tendency to focus the forestry program in protected areas, which present a series of advantages and potential benefits in term of impact (social, economic, conservation) and feasibility (legal, financial, governance). Such evolution, which lets unsolved the situation of communities living outside protected areas, raises a series of interrogations and challenges that should be part of the next year agenda.

Forest resources, forest dwellers and development in the Amazonas

A brief review of history of the State of Amazonas highlights the role of the forest in the successive models of development until 2003, as well as the contribution of forest products in the economies of the rural families.

The state of Amazonas: a huge tropical forest of 130 million hectares

Amazonas is the biggest state of the Federal Republic of Brazil, with a total area of 1.57 million square kilometers, for less than 3.2 million inhabitants, 50% of which is concentrated in the modern capital city, Manaus. The remaining 1.6 million Amazonenses live in the 62 rural municipalities of the interior of the state, half of them residing in the small urban municipal centers. Around 120 000 families live in rural communities in a huge forest area of around 130 million hectares.

Rubber extrativism and caboclos

Besides the indigene tribes, first dwellers of the forest, most of the rural population of Amazonas originates from poor farmers native of dry North East Region, attracted by the rubber boom at the end of the XIX century and in the 1940s. Most of them used to collect latex from the seringa (Hevea brasiliensis), working as seringueiros for the seringalistas, land owners who controlled and organized the exploration of vast forest areas, the seringais. Settled in isolated small communities (colocações) along the rivers and tributaries (igarapés) for communication and transportation of latex and goods, they suffered hard living conditions and had no other choice than to learn how to survive and live in the forest. The rural communities of these auto-denominated caboclos based their economies on forest resources (fishing, hunting, extrativism of timber and not timber products) and small scale agriculture of subsistence (farinha of cassava, few cattle). During several decades, the exploration of the seringueiros, through various mechanisms of enforcement and indebtedness (aviamento) implemented by the seringalistas, financed the first cycle of economic development of Manaus, largely dependent on the rubber international market.
**Manaus Free Trade Zone**

Tackled down by the East Asian rubber plantation competition, the rubber cycle has been relayed in the late 1960s by a second cycle, still running and centered in Manaus, through the implementation of the Manaus Free Trade Zone and the development of the Manaus Industrial Park. Commerce and industry has been boosted by federal and state fiscal incentives, justified by the great distance separating the region from its markets. Today, more than 600 industrial companies established in the MIP generate around 120 000 direct employments, exporting two-wheels products, electronic components and computers, for a total bill of more than 30 billion US dollars. Manaus grew and modernized dramatically, concentrating the main formal economic activity of the State of Amazonas...as well as half of the population.

**Roads, agrarian reform settlements and the colonos**

Another face of Amazonas development in the 1970s has been the implementation of the federal policy of colonization, both for strategic and social motivations. The construction of roads across the forest aimed at linking the northern region to the rest of the country and reaffirming Brazil sovereignty upon Amazonia. The implantation of agrarian reform settlements (assentamentos) along the roads was the social response that the military government offered to the growing number of landless farmers in Southern Brazil. Each colono was “given” (actually “sold”) a plot of around 100 ha and a small credit facility, in order to build a house, clear the forest and start cultivating or raising cattle. The Institute of Agrarian Reform and Colonization (INCRA) was supposed to provide infrastructure, social facilities and technical assistance to the new comers. In the state of Amazonas, the first assentamentos have been settled in the southern part of the Amazonas, along the Transamazonian road.

**Logging, as a source of income for rural communities**

Logging became one of the key economic activities for the forest dwellers, particularly in the 1980s with the introduction of chainsaws. As a matter of fact, the demand for log and timber increased dramatically during these decades, boosted by demography and growth of urban areas (local markets of civil construction, shipbuilding, carpentry, furniture...), the extinction of atlantic forests in the southern states of the country (market of São Paulo), and the establishment of plywood industries around Manaus (exportation). Beside the local timber productive chains, active in all municipalities of the interior, it is worth stressing how the exploration of the flooded forests (varzea) is being relayed by the one of not flooded forests (terra firme).

Logging started in the most accessible forests, generally the varzea, to supply the plywood industries established around Manaus and Itacoatiara. The exploration, transport and commercialization were organized by the atravessadores, intermediates between the riverside rural communities (who became wood cutters) and the plywood industries (who financed the productive cycle). Logs were assembled in jangadas and transported to Manaus by flotation on the river.

The situation was different in the assentamentos, settled along the roads. The failed public assistance and the hard living conditions encouraged many colonos to negotiate “their” forests with logging companies, particularly interested by the facility of access and mechanized exploration in the terra firme, and the proximity of roads directly linked with the southern increasing demand.
The growing claims for rights on forest resources

With the modernization of Manaus and the end of rubber extrativism, the control of the 
patrões on the “their” seringais and seringueiros get looser and looser. Since the 1970s, reli-
gious and progressive movements worked actively in the rural communities for justice, de-
mocracy and development. In the 1980s, the indigenous tribes and rural communities initiate
their process of organization and emancipation, claiming for their rights on forest resources. In
the 1990s, environment and conservationist movements also start to advocate and call for for-
est protection, for preserving biodiversity and environmental services. They particularly point
out the failure of the classical model of assentamentos with private appropriation of not eco-
nomically viable plots of forest, which generally results in logging and land speculation.
These movements and claims for rights and better governance on forest resources, lead to the
demarcation of a wide range of protected areas, including indigenous lands (Terras Indíge-
nas) and different categories of Conservation Units (Unidades de Conservação¹). Simulta-
neously, the INCRA starts to implement new modalities of assentamentos, based on collective
rights and governance on forest resources (Projetos de Assentamentos Coletivos²). The demar-
cation of these different categories of territories resulted from collective struggles and active
mobilization of the social movement. They questioned the “rights” of the seringalistas, dis-
placed sometimes communities of caboclos out of newly delimited indigenous lands. In such
cases, these rural families were re-settled in assentamentos da reforma agraria specially
created around the municipality urban centers. Others decided to establish in the urban cen-
ters. All of them continue to use and claim rights on the forest resources, main source of in-
come in the interior.

Today, 28% of the Amazonas is demarcated in Terras Indígenas, for an estimated population
of 20 000 families. An additional 20 000 more families live in federal and state Conservation
Units, representing 26% of the state territory. Around 10 000 families live in assentamentos,
covering less than 1% of the Amazonas. The rights on the remaining 45% of forest are still
unclear, with many overlapping and confusion in term of “owner” (public forests / private
forests) and “rights” (private, ownership / possession / use). More than 70 000 rural families
live in this “not assigned” area.

The growing threats of deforestation

In contrast with the neighboring states of Pará, Mato Grosso, and Rondonia, the Amazonas
succeeded to keep intact 97% of its original forest coverage, mainly thanks to the industrial
development model concentrated in Manaus and the absence of roads in most of the state area.
However, even with less than 3% deforested area, the annual rate of deforestation actually
increased in the early 2000s (400 to 1000 square kilometers per year). Deforestation mainly
appears in the southern border of the State, which is threatened by the progression of the so
called “arc of deforestation”, resulting from a combination of a failed policy of colonization
initiated in the 1960s along the transamazionic highway joining Itaituba (Pará) to Porto Velho
(Rondonia), and the increasing pressure of logging, livestock and agri-business arriving
through southern States of Mato Grosso, Rondonia and Acre. Another affected area is the
Baixo Amazonas Region, downstream of Manaus, mainly due to the proximity with big cities
(Manaus, Parintins, Itacoatiara) and the facility of transportation up to the Atlantic port of

¹ Unidades de Conservação de Proteção Integral, Unidades de Conservação de Uso Sustentável
² Projetos de Assentamento agro-Extrativista (PAE), Projeto de Desenvolvimento Sustentável (PDS), Projeto de
   Assentamento Florestal (PAF)
Belem. Finally, two more roads are subject of preoccupation: the existing BR174 linking Manaus with Venezuela through the northern state of Roraima, and the BR319, which is planned to be paved between Manaus and the south of the country, through Porto Velho (Rondonia). The threats of deforestation are real and are seriously considered by the policy makers.

**Strengthened rules and control on logging and timber sector**

Although the main principles and rules for sustainable forest management already existed since 1965 (*código florestal*), it had not been regimented till the 1980s, and the logging sector was shown as one of the main contributors to deforestation, particularly in the public forests. The creation of the Brazilian Institute of Environment (IBAMA\(^3\)) in 1989 marked a shift in the federal forest policy, with the definition of higher standards for “sustainable forest management plans” and the application of an effective control of the respect of environmental rules, resulting in higher costs for timber and plywood companies. The creation of Indigenous Lands and Conservation Units also reduced the public forest availability for logging companies. In the Amazonas, the sector has been strongly affected in the 1990s. Very few companies succeeded to acquire forests and implement forest management plans. Most companies of Manaus and Itacoatiara decided to close. This affected the whole sector, including the wood cutters of the rural communities, who reoriented their activities towards the local sawmills and timber markets…

**Poverty in the rural areas and forest communities**

The implementation of this more restrictive forest policy directly impacted in the economy of the municipalities. Logging and timber actually represented a significant source of income for many families of the rural communities and municipal centers. Social indicators are worrying (IDH below 0.6). The lack of economic opportunities boosts the migration to Manaus. Many young people are attracted by illicit activities (narco-traffic) and finish in jail.

**Towards the “perfect combination” between forest and business**

Year 2003 marked a significant shift in Amazonas recent history, when the preservation and sustainable use of forest resources become strategic pillars of a new model of development in construction.

**The Amazonas model of development in balance**

Several factors and tendencies lead the policy makers to question the model of development adopted since the 1960s in Amazonas. Fiscal incentives in the Free Trade Zone of Manaus are seriously questioned by the industrial sectors of southern states of Brazil, challenging the economic sustainability of the Manaus Industrial Park. Migrations from rural areas to Manaus carry urban, social and economic challenges that are more and more difficult to face. Rural poverty feeds illicit traffics and violence that directly reach Manaus. Amazonas forests will be more and more targeted by logging, livestock and agribusiness, source of potential social conflicts in the interior and bad reputation for MIP products in international markets. In short, Amazonas needs to revise its model of development and take initiatives to sustain economic growth, manage social issues and contain deforestation.

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\(^3\) Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis
Looking for the “perfect combination”

The international agenda on biodiversity, forest management and protection, and climate change will open new perspectives for the policy makers. Forest resources, but also environmental services and marketing communication built on “forest preservation” and “sustainable development”, are economically valued in the international markets. They actually represent an enormous potential that could contribute to relay the fiscal incentives to the industrial sector of Manaus. An institutional magazine of promotion reveals the new vision of development for Amazonas. “Largest Brazilian State which could accommodate nearly 5 countries the size of Germany, more than 6 the size of Great Britain, or almost 3 the size of Texas”, Amazonas is “a green world where life explodes at each little piece of the region”. With “98% of its original canopy preserved, 50% of the stocks of carbon in the Brazilian Amazon Region and 16% of the planet’s fresh water reserves”, Amazonas joins natural richness and economic potential and reaches a “perfect combination” for business activities. This “perfect combination” is being built step by step during the two mandates (2003-2006, 2007-2010) of the current government.

The Green Free Zone Program

Launched in 2003, the Green Free Zone Program (GFZP) has been designed in response to the Manaus Free Trade Zone, with specific fiscal incentives for non-timber forest products (NTFP) coming from the interior. This governmental program aimed at generating income and employment in the municipalities of the interior, through a sustainable use of forest resources and the revival of forest productive chains for lumber, but also rubber, Brazil nuts, plant oils, jute and malva fibers, fishes and wild animals. A specific institutional arrangement was made, with the creation of the State Environment and Sustainable Development Secretariat (SDS) and the Amazonas Forest and Sustainable Business Agency (AFLORAM). The SDS started to issue specific state environmental norms on forest management. The AFLORAM provided technical support to rural families for adopting good practices and implement sustainable forest management plans. The Land Institute of Amazonas (ITEAM) and Environmental Protection Institute of Amazonas (IPAAM) were also mobilized, for recognizing local rights on forest resources and issuing the environmental licenses for the forest management plans. The SDS also coordinated the elaboration of Macro-Economic-Ecological Zoning (ZEE) of the Amazonas, and creates more than 10 million hectares of new State Conservation Units in four years. An aggressive campaign of communication was launched by the government to advertise the “change of paradigm” (“using the forest to protect it”), to get support from the municipalities of the interior and to project internationally a “green” image of Amazonas. The GFZP has been built in alliance with conservationist and social movements of Amazonas, and has been largely co-financed by the international community.

The state policy on climatic change and sustainable development

However, reviving sustainable forest productive chains appeared to be no so easy in the short term, for a series of legal, institutional, socio-economic and financial reasons, which will be developed below. The sustainability of the governmental program requires the consolidation of a specific legal framework adapted to Amazonas realities, the institutionalization of the technical services so that they can reach the most remote municipalities, and the building up of sound and trustable mechanisms of governance and control of the population rights on forest

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4 Amazonas Magazine, SEPLAN, 2009
resources. The cost of implementation of the program is hardly met by the State Budget capacity, and requires specific and sustainable sources of funding.

The Bali Conference in 2007 (COP13, UNFCCC) was the signal for a next decisive step. Government issued two fundamental state laws that establish the State System of Conservation Units (SEUC) and the State Policy of Climatic Changes, Environmental Conservation and Sustainable Development. A specific public private partnership is set up with the creation of the Sustainable Amazonas Foundation (FAS), entitled to manage the Forest Allowance Program (Bolsa Floresta), “the first Brazilian internationally certified initiative to reward traditional and indigenous populations for the maintenance of the environmental services provided by the tropical forests” in Amazonas State Conservation Units, and to manage environmental services from Amazonas State Conservation Units.

Meanwhile, Government proceeded to several institutional reforms, such as the extinction of the AFLORAM, the integration of forest and agricultural technical assistance, and the creation of a specific Joined Secretariat of Forests and Extrativism (SEAFE/SDS), in charge of the formulation of the State Forest Policy. A consolidated set of state norms on sustainable forest management is build up in 2008. New mechanisms of control of deforestation are set up, and a specific Program of Prevention and Struggle against Deforestation in Amazonas (PPCDAM) is designed. The macro-ZEE is finalized in 2009.

The small scale sustainable forest management program

The small scale sustainable forest management program (SSFM program) has been part of the new governmental strategy since the launching of the Green Free Zone Program in 2003. Based on an innovative paradigm (using the forest to protect it) and an implicit alliance (State / forest communities), this new and challenging program has been implemented in the last seven years in a continuous process of learning.

Two main community forest management experiences

In 2002, two main experiences of community forest management plans (CFMP) were references in Amazonas state: the one in a State Conservation Unit, the RDS Mamirauá, the other one in public forests of the municipality of Boa Vista do Ramos. In the RDS, 25 communities manage 25 CFMP in forests of várzea, with a yearly production of more than 6000 m³, sold in logs. They have received technical and administrative support of the Institute Mamirauá for more than ten years. In Boa Vista do Ramos, the Agriculture and Forestry Community Association (ACAF) manages a CFMP of 2400 ha in terra firme, with a yearly production of around 100 m³, explored and sold in sawn timber. All CFMP have been designed in conformance with the federal regulations, relatively complex in term o inventory and elaboration of the plans. The ACAF received support from different institutions, particularly the Federal Agro-Technical School of Manaus (EAFM), for around seven years. The CFMP will be certified FSC in 2005. Both experiences demonstrated that community forestry management was technically possible. However, they also indicated that community forestry management requires a long time to become sustainable, since, in both cases, the associations were still not autonomous for administrative procedures (approval of plans, accounting) and commercialization of products (market capitation, negotiation and respect of contracts), and presented some weaknesses in term of social organization for collective management.

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5 RDS : Sustainable Development Reserve, one of categories of Conservation Units defined by the SEUC.
The model of small scale sustainable forest management plan (SSFMP)

This evaluation inspired the technical, social and administrative choices made by the Secretary of State of SDS, who, in a state norm published in 2003, proposed a simplified model of forest management plan, to be adopted either by individuals or associations, called Small Scale Sustainable Forest Management Plan (SSFMP).

Socially, the modality of SSFMP is designed and oriented for the rural communities and small woodcutters, with a clear objective to generate income and employment for this target population. The SSFMP cannot exceed 500 hectares. Only one SSFMP is authorized per person or association. The state norm authorizes the emission of environment license for SSFMP established in public forests, provided that a legal association or community recognizes that the owner of the SSFMP has a traditional right to use the forest area to be managed.

Technically, the Legal Reserve Areas\(^6\), the Permanent Protection Areas (PPA)\(^7\), the minimum Diameter at Breath Height (DBH)\(^8\) for cutting, and the standard productivity of the forest\(^9\) obey the rules imposed at federal level by the IBAMA. The main difference resides in the conduction of the inventory, the planning of the cuts and the intensity of exploration. There is no need of complete inventory of commercial species. In very simple way, the forest manager identifies, marks and registers the commercial trees that he wishes to explore, provided that he can proof two remaining “daughter trees”\(^10\) of the same specie for each “mother tree” he wants to cut. All mothers and daughters are physically marked and numbered with iron plates nailed in the trunk, and their localization (coordinates X/Y) and main characteristics (specie, height, DBH, number) registered in a simplified tableau, in order to support the organization and control of the SSFMP. The planning does not split the managed area in separate plots to be explored year after year (in accordance with the cycle of regeneration). The manager can plan the exploration wherever he wants, year after year, according to commercial, economic and logistic strategies and the availability of commercial trees that respect the rules described above. There is no fixed intensity of exploration, since the legal standard productivity of the forest is respected on the whole forest (1 m\(^3\) per hectare of the total managed area after deduction of the Permanent Protected Area. For example, the owner of a SSFMP of 500 ha with 50 ha of PPA will be authorized to collect 450 m\(^3\) per year). All these methodological innovations in forest management aim at simplifying the procedures and gaining more flexibility in the exploration.

The implementation of the SSFM program

A short description of the complex administrative procedures for elaboration, approval and exploration of a SSFPM is given to understand the difficulties faced by the government to make the program accessible to the rural communities and wood cutters.

- Elaboration of SSFMP: Created in 2003, the Amazonas Forest and Sustainable Business Agency (AFLORAM) is structured in two separate technical directions: (1) the technical assistance, for elaboration of SSFMP and production of “managed forest wood” (MFW)

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\(^6\) In Amazonia, a land owner must keep 80% of the area in forest (called Area de Reserva Legal – ARL). He can explore this area through forest management plan.

\(^7\) Specific areas, such as the one along the rivers and watercourses, must be preserved and cannot be explored (called Area de proteção permanente - APP).

\(^8\) DBH: 45 cm. The DBH has been revised at 55 cm in 2006.

\(^9\) 1 m\(^3\) / year / hectare of the total managed area.

\(^10\) In portuguese, « filhas » and « mãe »
and for the adoption of good practices for non-timber forest products (NTFP); and (2) the support the commercialization of MFW and NTPF through sustainable forest productive chains, including certification when possible. Support to NTFP and SSFMP are also conducted separately. Ten to twenty young forest technicians recruited and trained by the AFLORAM are sent to the interior, in key municipalities chosen according to participatory diagnostic and political demands. The technician works alone in his area of action, without proper infrastructure, with the mission to promote forest management and assist the elaboration of SSFMP. He informs the population, receives the demands, organizes the logistic and the theoretical training, elaborates the SSFMP in the field together with the wood cutter, gathers and fills the administrative documentation for further environmental license. Based in Manaus, five geographical managers assist the technicians through field visits and institutional support. The manager plans the work of the technicians, gives the theoretical training, checks the documentations, approves and signs the SSFMP, and protocols the document in the Environmental Protection Institute of Amazonas (IPAAM).

- **Authorization of exploration**: In the IPAAM, the conformity of the SSFMP is checked by the juridical department and the 5 environmental analysts of the Agriculture and Forest Control Unit (GFCA). The GFCA analysts must carry out a previous field inspection of the SSFMP. In case of document missing or non coherent technical information, the IPAAM issues a “notification”, which indicates the items to be corrected before next submission. If approved, the IPAAM issues a License of Operation (LO) and an Authorization for Forest Exploration (ACOF). At that, time, LO and ACOF were issued for one year, with possibility of one year prorogation. AFLORAM technician was allowed to deliver the LO and ACOF emitted by IPAAM. After reception of the LO and ACOF, the SSFMP owner may organize the exploration of the authorized trees, as well as the commercialization of the MWF (log or sawn timber). At the time of the tree cutting, the iron plate must be taken off the trunk and nailed on the stock.

- **Authorization for transportation**: The SSFMP owner must then emit a fiscal note and ask for another authorization: the authorization for transportation of forest products (ATPF), through an incredibly complex process shared between IPAAM and IBAMA, all based in Manaus. Due to high corruption and traffic of ATPF for washing illegal logging, AFLORAM technicians are not allowed to handle them.

- **Renewal of authorization**: For further exploration in the SSFMP, the owner should elaborate a new inventory, and protocol a solicitation for LO and ACOF… Before that, he musts write (generally with the support of AFLORAM technician) a post-exploration report, to be handed over to the IPAAM for field inspection.

**Main reforms implemented since 2007**

In 2006, the ATPF is substituted by the Declaration of Forest Origin (DOF), emitted on line through a website system, where the volumes authorized in the LO and ACOF have been previously registered by SSFMP owner and controlled by the IPAAM.

In 2007, the AFLORAM is extinguished and the forest technical assistance is transferred to the existing in the Amazonas Sustainable Forest and Rural Development Institute (IDAM) and a newly created Sustainable Development Agency (ADS). In the IDAM, forest technical assistance for SSFMP is integrated with the agriculture technical assistance. Support to forest pro-

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11 Logistic costs for SSFMP elaboration are partially subsidized by the program.
ductive chains is lead by the ADS, also in charge of agriculture business. Both institutions dispose of very a limited technical staff for the forest agenda, most of it financed through extra-state budget funding.

In 2008, the SDS simplifies and complements the state environmental norms on forest management, including SSFMP, on the basis of previous experiences and evaluations. The IPAAM alleviates the procedures, by extending the LO validity to 2 years, and exempting SSFMP from previous field inspection when elaborated with technical support of the IDAM.

Since 2007, the SDS, through the SEAFE, coordinates the formulation of the State Forest Policy. An Inter-institutional Working Group is created by the SDS to coordinate the implementation of the SSFMP program.

**Mixed results**

The evaluation of seven years of program implementation reveal a sound interest of rural populations for the adoption of SSFMP, to be compared to relatively poor results in term actual of surface, volumes and beneficiaries, although the institutional experience acquired during the learning process must be valued.

*More than 1000 SSFMP elaborated*

More than 1000 SSFMP have been elaborated and deposited for environmental license in the IPAAM between 2003 and 2009. The demand for SSFMP increased and reveals a real interest of forest communities for the activity. This is not very surprising: a rapid economic estimation indicates that the timber exploration of 100 m3 log per year can provide an net income of around 1000 Reais per month, or approximately 400 US$, twice a official minimum salary\(^{12}\). The program raised true expectations for income generation in the rural population.

*Less than 15% with license of operation (LO)*

Less than 15% of the SSFMP deposited in the IPAAM had received LO in 2009, for a total authorized volume inferior a 25 000 m3 log… This volume has to be compared to the internal demand for wood estimated at 500 000 m3. This indicator reveals the failure of the program until today, due to several causes analyzed below. This low rate of approval undermines the confidence that rural communities in the program… and let unsolved the lack of legal opportunities of income generation from forest resources for the rural communities.

*Unexpected recuperation of the program facilities*

The field evaluations show cases of mis-appropriation of the program facilities by external agents who were not the target population. For instance, there are cases of people, generally urban dwellers motivated by immediate profit or land speculation, who took benefit of personal relationships for making approve SSFMP on public forests where they did not have any right of use. Another example is given by the cases of SSFMP elaborated in plots of assentamentos, and which are “sold” to timber companies or intermediates for illegal logging washing. Such occurrences are unavoidable and are not the majority. However, they contribute to affect the confidence in the program and generate frustration.

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\(^{12}\) 100 m3 log x 50% = 50 m3 sawn timber. 50 m3 sawn timber x 500 R/m3 = 25.000 Reais gross income. 25.000 R x 50% = 12.500 Reais net income / year. 12.500 R / 12 = 1.000 Reais net income/mês.
Institutional experience

Although the results may appear negative, the experience acquired since 2003 must be valued and represent a precious institutional capital for the definition of the next reforms and policies.

Main constraints and difficulties faced in the past years

The main difficulties faced by the SSFM program until today are clearly due to the limitations of the government capacity of implementation, rather than to the lack of capacity of the target populations to adopt practices of sustainable forest management.

The legal recognition of the community rights on public forests

The recognition of the community rights on public forests is probably the most acute difficulty faced by the program today, which froze most of SSFMP elaborated by the program.

As we described above, nearby 45% of the territory has not been yet officially “assigned”, and is object of private and public rights. Some of these rights are rights of ownership, other are rights of use. Some are considered legitimate, other probably not. Many of these rights are not duly or correctly registered. Some possibly result from undue appropriation. The peculiar land tenure history in Amazonia, the inexistence of a unique public cadastral framework, and the presence of numerous municipal registrar offices (cartórios) for land transaction registration, result in a very confused situation, where it is very difficult to say which rights belong to whom. It is precisely in this category of forests that most SSFMP have been implemented, in an attempt to create an alliance with rural communities for protecting the forest by using it. The SSFMP have been approved in this “unassigned” area (mainly public forests) on the basis of simple “declarations of use” allowed by state environmental norm published by the SDS in 2003. However, and in strict application of federal and state law, these “declarations” have been questioned by the Public Ministry in 2007, paralyzing most of the SSFMP elaborated. To overcome this blockage, the Institute of Amazonas (ITEAM) started to implement a very interesting mechanism of participatory social control for land regularization (fóruns da terra) and for issuing “rights of use” on state public forests (Concessões de Direito Real de Uso), which resulted impossible due to very strict rules determined by Federal Law on Public Forests and State Land Law. Meanwhile, a national program (Terra Legal) has been launched by Brasília to accelerate the regularization of land tenure in “un-assigned” federal public forests.

The non consolidated environment legislation

Federal and state environmental norms have changed several times since 2003, affecting the institutional efficacy in the program implementation.

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13 Falsified documentation (grilagem)
14 The current land tenure situation is inherited from: (1) a restrictive interpretation of the Déclaration Internationale des Droits de L’Homme of 1789, which results in the concept of full rights on land (private ownership), and (2) the land appropriation and distribution during the Portuguese colonization, which results in top-down issuing of rights on land, by the Crown first (sesmarias), later relayed by the public authority since the advent of Republic.
15 When not privatized public lands returned to public authority (erras devolutas) in 1850, they have been distributed between the federal, state and municipal levels. Each public sphere has its proper land institutions (SPU, INCRA, ITEAM, municipal land secretaries) and systems of registration (cadastres).
In a strict interpretation of the Brazilian legislation, a State norm cannot be less restrictive than a federal norm. This “legalist” interpretation has been regularly put forwards by juridical departments of IPAAM or IBAMA to question the technical innovations proposed by the model of SSFMP (see above). The implementation of the DOF, in substitution of the ATPF, is another example of federal change that carried a lot of confusion in its implementation by the IPAAM. Obviously, these repeated changes have weakened the implementation of the program. A specific state legislation on forest and environment would probably help to consolidate the rules and facilitate their diffusion and application.

An inadequate institutional arrangement for SSFPM authorization and control

The administrative procedures, from the stage of elaboration of the SSFMP till the commercialization of timber, is extremely long, complex and cumbersome, and entails a high number of to and fro from the field to the capital to obtain the different legal documents necessary.

The centralized structure of the IPAAM elevates the operational costs of the GFCA for the field inspections, approval and control of the SSFPM. It also prohibits the fluent access to IPAAM services for most of the rural communities of the interior, due to high transaction costs such as travel and housing costs. Furthermore, the obsolete internal organization of IPAAM results in lack of transparency and unpredictable delays in the analysis of the SSFMP. These two characteristics, worsened by the insufficient staff, close the direct access to environmental legality for most of the rural dwellers in the interior. Several options are in discussion: the des-concentration of IPAAM services in some key municipalities (considered too expensive), the decentralization of the environmental control of SSFPM to the municipalities (seen as too risky, politically and for the forest), the modernization of the IPAAM and the implementation of services on line (expensive and not very adapted to current rural dwellers’ abilities). Intermediate alternatives are discussed, such as a “co-control” shared between IPAAM and municipalities, or the establishment of multifunctional services (sharing the cost of infra-structures between several institutions). For the moment, the reality is that rural dwellers are excluded… and some smart persons take profit of this situation by offering intermediation services and abusing of their “power of representation” for illegal logging washing.

The difficulty to implement a local sustainable productive chain approach

The experience shows that it is very difficult to legalize sustainable productive chains, particularly the ones which provide the local demand (for furniture, civil and naval construction), due to competition of illegal timber and to the non-legalized situation of most of the actors of the productive chains.

As a matter of fact, there are a lot of facilities to acquire illegal wood in the municipalities, which competes with “managed forest wood”, necessarily more expensive due to the additional planning and transaction costs. Also, we did observe several cases, where the lack of availability of “managed forest wood”, due to non emission of LO for SSFMP, discourages the local sawmills and carpenters to seek environmental license for their business. Simultaneously, the absence of local enterprises with environmental license discourages the wood cutters to elaborate SSFMP. It is therefore very difficult to create synergy and the diffusion of forest management is blocked. What is worse even, is when the few individuals who courageously took the option of environmental legalization, appear to be the most controlled (because registered and identified)... and fined! The legalization of productive chains requires global programs, institutional coordination, and synergy between promotion and control actions.
The financing of the program: how to justify? who will pay?

All institutions claim for more physical, financial and human resources to be able to implement the services of their attributions. There is an enormous gap between the discourse of the program and the State budget resources allocated for its implementation.

Several questions are involved: the economic relation “cost / benefit”, the delay before net positive returns, the political strategies… On one side, a high public investment would be needed in the short term if it were to carry out des-concentration, modernization and “staffing” of the institutions, zoning and cadastre of lands… On the other side, it is expected that taxation returns will take time until sustainable productive chains are consolidated, and there are even doubts about their economic viability without tax exemption. Besides, rural families potentially concerned with forest activities represents 20% of the total population, and we estimate that less than 5% are directly involved in timber productive chains today. When compared to the 80% urban dwellers (50% concentrated in Manaus), we understand that electoral strategies enter in the final decision. Furthermore, there is very little flexibility in public budget allocation, since health and education, for instance, remain the priorities in term of social investment in Amazonas.

This situation raises a series of strategic questions: how to justify the public investment? who will pay? How to finance the transition? We have shown how the government is looking for the “perfect combination” through public-private partnerships and a marketing communication on green state and business. Particularly, two strategies have been developed which could contribute to finance the program with extra-budget resources: the valuation of environmental services on REDD markets, and the bidding of forest concessions in the State public forests. Today, both are centered in State Conservation Units.

Priority to forest management in the state conservation units?

Although the first community forest management experience in Amazonas has been developed in the RDS Mamirauá, the conservationist sectors made, until recently, a strong opposition to the implementation of the small scale forest management program in the Conservation Units. The main fear was that SSMFP would encourage individual land appropriation and hit with community governance on forest resources. However, this position has been evolving in the recent years, with the increasing demand from the proper Conservation Unit dwellers (for whom timber may represent a significant source of income), and the acceptation that SSMFP can be managed at community level (and not exclusively at individual level). The difficulties faced in “not assigned” forests and the consolidation of the system of State Conservation Units, open new perspectives for community forest management, which we will analyze in this section.

Sustainable Use State Conservation Units and SEUC

Amazonas counts 41 State Conservation Units, covering 19 million hectares and regimented since 2007 by the Amazonas State System of Conservation units (SEUC). Most of them are Sustainable Use State Conservation Units (SCU-su). This category of Conservation Unit allows the sustainable exploration of the forest resources, including logging, provided that some

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16 Considering both timber and non-timber productive chains. We estimate that around 15,000 to 20,000 families are currently concerned with logging and timber productive chains in the State of Amazonas.
conditions are respected. The SCU-su must have a “Management Plan” and a “Management Board”, duly elaborated and constituted according to SEUC procedures. The conditions of forest exploration must obey the rules described in the Management Plan. The implementation and the exploration of a SSFMP must be approved by the Management Board. There are 32 SCU-us in Amazonas, covering 15 million hectares (32 units). Linked to the SDS, the State Conservation Unit Center (CEUC) is in charge of the implementation and management of the state conservation units, and works actively to establish the Management Boards and finalize the Management Plans.

**Extrativist Reserves (RESEX) and Sustainable Development Reserves (RDS)**

RESEX and RDS are the two main sub-categories of SCU-su. They cover respectively 1 million hectares (4 units) and 10 million hectares (15 units). In accordance to the rules and decisions defined by the Management Plans and Management Boards, the rural communities who traditionally reside in the conservation unit or make use of some of its resources, may implement forest management, generally community forest management.

**The State Public Forests (SPF)**

The State Public Forest is another sub-category of the SCU-su. They cover 2,6 million hectares (8 units). The same rules as described above apply for communities living inside SPF. Generally, the SPF have been created with a clear objective of sustainable forest exploration for timber and non-timber production, principally through mechanism of concession, authorized since the Federal Law on Public Forests (lei 11.284) published in 2006. The SDS is currently elaborating the State Decree which institutionalizes the management of the concessions in the State Forests. Concessions will be delivered through bidding process. Although communities may compete, it is expected that most of the concessions will be explored by big timber enterprises. Government would like to launch the first concession in 2010.

**A set of favorable conditions for community forest management**

Considering the legal, institutional, governance and financial constraints faced by the government in the implementation of the SSFM program, the Sustainable Use State Conservation Units appear to present a series of favorable conditions.

Although there are still local unsolved claims, the land tenure issue is relatively solved and consolidated through the Decree of Creation of the SUC-us. A state norm edited by SDS authorizes the implementation of SSFMP in areas out of claims. The zoning and the Management Plan determine the areas authorized for forest management. The existence of an association of UC dwellers and a Management Board, create the conditions for participatory governance on the forest area. A consolidated institutional arrangement (CEUC, IPAAM) guarantees a sound control of the forest management. The public private setting up (FAS) opens perspectives for sustainable financing though REDD mechanisms. The Forest Allowance (Bolsa Floresta) provides economic incentives to UC dwellers.

All these characteristics of the SUC-us present the legal conditions for implementation SSFMP, and also offer a better guarantee for technical assistance, monitoring and control of the quality of the forest management.
Potential of community forest management in State RDS and RESEX

Today, the total production of the state of Amazonas is around 1,000,000 m³ log/year. IBAMA registers indicate that 50% of this production is legally exported to other states. Remains 500,000 m³, corresponding to the estimated internal demand.

We tried a simplified evaluation of the potential timber production of community forest management inside State RESEX and RDS. For that purpose, we considered two hypotheses: (1) in the first one, the rural communities assume the whole process of forest management, including the non mechanized exploration, in accordance to the technical proposal of the SSFMP\textsuperscript{17}; (2) in a second hypothesis, communities still elaborate and control the forest management, but we envisage the possibility for the communities to sub-contract the mechanized exploration to external operators, allowing the exploration of a wider area\textsuperscript{18}. The simulation shows a total potential production ranging from 70,000 m³ log/year (hyp. 1) to 1,400,000 m³ log/year (hyp.2). This has to be compared to the current authorized production of the SSFMP (25,000 m³ log/year), the internal demand (estimated at 500,000 m³ log/year) and the current total production of Amazonas (around 1,000,000 m³). This rough simulation\textsuperscript{19} suggests how the political choice made will influence the contribution of community forest management in the timber sector, ranging from 7% of the internal demand to more than 100% of the total current production (internal demand and exportations).

In a social perspective, the community forest management could, directly or indirectly, involve around 10,000 families, living inside the SUC-us, compared to a total rural population estimated at 120,000 families. These approximations\textsuperscript{20} suggest that focusing the SSFM program to SCU-us would still let aside more than 90% of the rural population of the Amazonas.

The simulation, based on the available information, suggest that community forest management inside SUCus could have a significant social and economic impact… however not sufficient when compared to the global situation of Amazonas.

Potential of concessions in State Public Forests

In a similar approximation, we estimate that State Public Forests, managed and explored by both timber enterprises and communities, offer a potential production of 600,000 to 800,000 m³ log/year, which could easily complement the state RESEX and RDS production, particularly for exportation. Forest concessions offer another advantage: the annual payment of the renting of the concession. An approximation based on existing experiences in Brazil indicate that concessions could provide to the government an annual extra-budget income of 24 to 32

\textsuperscript{17} Exploration of 1% of the surface of the Conservation Units through SSFMP managed and directly explored by the communities, with an average annual production of 350 m³ log / SSFMP, considering one SSFMP per UC or community.

\textsuperscript{18} Exploration of 20% of the surface of the Conservation Units through SSFMP managed by the communities and explored by subcontracted timber enterprises, with an average annual productivity of 0.67 m³ log / hectare (30 years cycle, intensity of exploration of 20 m³ log / ha: 20/30 = 0.67).

\textsuperscript{19} There are several other criteria and factors that should be considered to actually approximate the available potential production for the demand intern, such as the localization, logistics … and willingness of the SCU dwellers to implement SSFMP!.

\textsuperscript{20} These figures should be corrected, by adding the number of “users” of the UC (living in the UC buffer zone), and screening inside the rural population the families who would really have interest in forest management.
million Reais\textsuperscript{21}, which is quite relevant if compared to the current budgets of the main institutions in charge of the sector (for instance: twice the current budget of the IPAAM).

**Conclusion**

This review of the forest policy and the Small Scale Sustainable Forest Management Program run in the State of Amazonas reveals unexpected tendencies, strategic interrogations and new challenges for the coming years.

The consolidation of a State System of Conservation Units offers sound conditions and opportunities for developing small scale forest management by the communities, with a significant potential contribution to the Amazonas timber sector. Contribution may be even higher than current production, if conditions allow the communities to sub-contract the exploration of the forest management plans to timber enterprises. National programs also suggest that small scale forest management may be extended to federal conservation units, which would increase the potential of timber production.

The implementation of concessions in State Public Forests not only offers the similar guarantees of a sound environmental control of sustainable forest management, but also would allow the government to collect a regular income from the concession fees, that could contribute to enhance the state institutions in charge of the sector. Quite significant, the timber production would probably be oriented to national and export markets.

Altogether, existing State and Federal RESEX, RDS and Public Forests could theoretically have, in the future, a potential sustainable and legal production of 2 to 4.5 million m\(^3\) log / year\ldots approximating the current timber production of Mato Grosso (3.6 million). Considering the increasing prices and demand for legal tropical wood, timber production could become a strategic economic sector in the model of development of Amazonas in a close future.

More than 50\% of the rural population (70,000 families) lives in the 45\% of the Amazonas territory, a “not-assigned” area with a confused land tenure configuration\textsuperscript{22}. There is a high probability that this area will be targeted and object of land appropriation and deforestation until Ecological Economical Zoning and land cadastre are completed. The structural weakness of the state institutions and the limited public budget allocated to reinforce them, raise interrogations about the real capacity of the state to control this huge forest area (68 million hectares) in the coming years. In this perspective, government may have a strategic interest to maintain and strengthen the alliance with rural communities for controlling this area during the transitional period. Particularly, this implies the building up of effective conditions for small scale forest management, considering the high impact of timber productive chains in term of income generation for the rural communities.

For both inside and outside conservation units, the development and consolidation of small scale forest management raises a series of challenges to be faced urgently. Three of them appear to be top priorities. In term of public governance, the consolidation of a State legal framework (environmental, land tenure) and the modernization and de-concentration / decentralization of the institutions (ITEAM, IPAAM, IDAM, ADS) are indispensable for promoting sustainable productive chains. The setting up of social and institutional governance on the

\textsuperscript{21} Hypotesis: 40 Reais / m\(^3\)

\textsuperscript{22} Rural population living outside Conservation Units, assentamentos and Terras Indigenas
forest (UC Management Boards, fóruns da terra…) is a key issue to be addressed in priority. The strengthening of the community capacities to administrate the forest management plan, control the exploration and negotiate the production will determine their possibility to get fair and sound economical and social benefit. Experiences of partnership “enterprise / community” developed in the State of Pará, show that the strengthening of community capacities would become top priority in the hypothesis of sub-contracted exploration of community forest management plans by timber enterprises.

The timing and modalities of financing will determine the capacity of the Amazonas to implement successfully these reforms. Amazonas government created the conditions and mechanisms (REDD, concessions) to catch sustainable and significant financial resources to consolidate the State System of Conservation Units. It is hoped that these incomes will not delay too much, and that part of them can be oriented outside the Conservation Units, to enlarge and consolidate the necessary alliance between government and rural communities, for both forest protection and income generation in the weakest forest area of the interior.

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Selected bibliography

CEPAL, Análise Ambiental e de Sustentabilidade do Estado do Amazonas, Colección Documentos de proyectos, CEPAL, Santiago, Chile, 2007

GOV. do AMAZONAS/SDS, Macro Zoneamento Ecológico Económico do Estado do Amazonas, Manaus, 2008

GOV. do AMAZONAS/SDS, Plano estadual de prevenção e controle do desmatamento no Amazonas, Manaus, 2009

GOV. Do AMAZONAS/SDS, Portal da Madeira Manejada, http://www.florestavivaamazonas.org.br


MERLET M., La gestion à petite échelle de la forêt dans la politique forestière de l'Etat de l'Amazonas, rapport de mission dans le cadre du Projet Floresta Viva, 2008

Map: Protected Areas (Indigenous Lands and Conservation units) in Amazonas