Design of a FM for socioeconomic development of territories in the surrounding of large scale infrastructure projects by supporting sustainable forest chains

Project K: RedLAC-CAFÉ Knowledge for Action Project

Fund:

Brazilian Biodiversity Fund

Country:

Brazil

Director:

Rosa Lemos

Project Coordinator(s):

Manoel Serrão and Leonardo Geluda

Author(s):

Felipe Barbirato and Leonardo Geluda

Date of elaboration:

24/09/2018

Case Study

Design of a FM for socioeconomic development of territories in the surrounding of large scale infrastructure projects by supporting sustainable forest chains

1. Executive summary

The "Forest Innovation" financial mechanism (FM) lies at the intersection between socio-economic development and sustainability in territories around large infrastructure projects through the local environmental potentialities (environmental assets). The pilot of the initiative is the territory around the Jirau hydroelectric power plant with an installed capacity of 3.750 MW[1], located at the Madeira River[2] in Porto Velho municipality, state of Rondônia, Brazil (Figures 1 and 2). The main challenge consisted in developing an intervention (investment) model to revert the usual negative impacts from such large-scale ventures in order for them to act as vectors of sustainable development. Another important challenge involved the structuring of a cooperative environment among a wide range of stakeholders that enables the financing and support to address the territory´s demands in the forest sector.

The territory is located in the Legal Amazon[3], a region known for high deforestation rates and unsustainable – in many cases, illegal – forest exploitation. On the other hand, projections indicate that global and domestic demand for wood (logs and processed wood) will increase in the future and markets already signal that a continuous and legal source of wood is imperative to establish business relationships.

[1] https://www.esbr.com.br/a-usina (accessed in September 2018)

[2] The madeira river is second largest affluent of the Amazon river: https://www.britannica.com/place/Amazon-River/Physiography-of-the-river-course (accessed in September 2018)

[3] The administrative unit known as the Brazilian Legal Amazon encompasses the states of Acre, Amapá, Amazonas, Pará, Rondônia, Roraima, Tocantins, Mato Grosso and part of Maranhão. It consists of an area of more than 5 million km2 (two thirds of Brazil) and covers the Amazon biome, 37% of the Cerrado and 40% of the Pantanal and is characterized by a mosaic of ecosystems. Source: https://uc.socioambiental.org/en/amaz%C3%B4nia/the-various-amazons/ (accessed in September 2018)

Figure 1: Jirau hydroelectric power plant is among the largest hydropower plants in the country

Credit: Felipe Barbirato/FUNBIO

Figure 2: Pilot project location in Brazil

Source: Elaborated by FUNBIO. Shapefiles sourced from the Ministry of Environment[4].

[4] http://mapas.mma.gov.br/i3geo/datadownload.htm

The ultimate goal of the mechanism is the social wellbeing and the strengthening of ecosystem services at the territory through an acceleration platform that provides a governance arrangement that favors cooperation between multiple (financial) mechanisms and actors to meet different demands by reaching interested funders and investors through specific projects, activities and sustainable ventures in the forest sector. Platforms are models of action in which a governance arrangement allows and encourages dialogue, synergies, cooperation and complementarity between the agents of a territory so that coordinated strategic actions maximize the results of interventions. The platform allows for both niche (specialty) and synergies of intervention, promoting financing through resources (financial and non-financial) with different characteristics (risk disposition, expected return, timing, volume, etc.)

The model envisaged will encourage entrepreneurship initiatives and sustainable markets in the region while promoting the valorization of the standing forest, with income generation and by leveraging synergistic initiatives already under way at the territory and taking advantage of the potentials promoted by the large infrastructure project present in the territory.

The strategic and operational arrangements envisaged in this model of performance can be replicable into other territories that also possess an environmental potential (environmental resources) around large-scale infrastructure projects. The benefits at the territory level are three-fold as the proposed model of operation positively affects the territory´s environment, society and economy.

2. Background (context)

The FM (pilot) inserts in a context where fast-growing and significant land-use changes occur at the territory. In recent years, official deforestation rates[5] in Rondônia were among the highest in the Legal Amazon of Brazil and illegal logging occurs both in public and private areas, leading to the degradation of terrestrial ecosystems and depletion of natural resources, habitats and, ultimately, biodiversity. Agriculture is a key productive sector in the country and is the main vector of land-use change in the territory. In Rondônia, the sector´s Gross Domestic Product[6] (GDP) grew by more than 10% and 9% in 2016 and 2017, respectively. Cattle raising, coffee and soybeans are the main activities. Figures 3 and 4 below illustrate the overwhelming presence of agriculture across the Legal Amazon in the country.

Figure 3: Agricultural fields in the Legal Amazon in Brazil

Credit: Felipe Barbirato/FUNBIO

[5] http://www.obt.inpe.br/prodes/dashboard/prodes-rates.html# (accessed in September 2018)

[6] GDP is a monetary measure of the market value of all the final goods and services produced in a period of time in any given region (e.g. municipality, state or country)

Figure 4: Agricultural fields in the Legal Amazon in Brazil

Credit: Felipe Barbirato/FUNBIO

In recent years, the pilot territory has experienced the presence of large-scale infrastructure projects, including Jirau power plant, that generate both positive and negative impacts in the region influenced by them. The FM consists of an investment platform designed to support transformative positive changes, acting as a gravity center to improve the effectiveness of forest conservation and restoration finance, increase alignment among a wide range of actors and reduce transaction costs for donors, public agencies and implementing partners in the private sector and civil society. Our proposed model combines three intervention strategies that aligned will result in a rational and sustainable stock of natural assets through sustainable forest management in areas to be reforested and through conservations actions. That will reduce the deforestation pressure (legal and illegal) in areas with standing forests in the territory and will generate direct and indirect benefits in terms of social wellbeing and biodiversity conservation too. Figure 5 below illustrates the premises and the implementation and enabling axis (i.e. the "lines of action") within the FM.

Figure 5: Financial Mechanism strategy overview

Premises	Socio-environmental criteria	Funbio safeguards	Social participation	Engagement of multiple partners	Focus on local potential and environmental assets
Implementation axis	Sustainable Forest Management (timber)		Sustainable Forest Management (non-timber)		
	Conservation		Forest restoration		
Enabling axis	Portfolio of projects | Training and capacity building | Entrepreneurship and production organization support | Research and Development | Access to raw materials, markets and credit | Guarantee in order to access credit | Business plans | Others				

The forest restoration requirements as per the Law of Protection of Native Vegetation (National Law 12.651/2012) create opportunities to reconcile sustainable forest management (woody and non-woody products) and conservation strategies. Furthermore, the agenda is at the heart of the national efforts to reach the country´s climate pledges in the Paris Agreement through its Nationally Determined Contribution (NDC).

The FM will deliver a long-term vision and planning supported by a specific multi-stakeholder governance under a platform that combines financial resources with different objectives and risk tolerance in a long-term horizon. The mix of strategies considered (conservation, sustainable forest management and restoration) and funders´ profiles require an integrated landscape approach that connects not only the different forest chains, but also the links within each chain. This connectivity is justified as an attempt to maximize social and environmental benefits, allowing for broader levels of scalability and financing of projects, activities and ventures that generate a propitious environment for sustainable business practices in line with conservation objectives. The approach allows minimizing risks through a portfolio of financers, projects and activities. It acknowledges that different financing sources will support different phases of the FM – in terms of the projects, activities or ventures supported - based on the capital´s risk-aversion and objectives. The proposed approach is similar to start-ups and incubators environment where an invested company moves forward as it reaches specific stages of maturation.

The stakeholders identified throughout the initiative represent different sectors from society. Interacting and engaging with them was imperative and greatly contributed to identify the priority demands at the territory that the FM needs to address. Key stakeholders engaged include different institutions (representatives) from the Federal, State and Municipal governments, private sector, third sector and academia.

Some aspects led Funbio to take on this challenge. Firstly, the institution had a previous partnership with Engie (largest shareholder in Jirau power plant venture). Secondly, Funbio considers that there is a tendency among the main agencies and donors to magnify refundable resources and finally, there is an international *momentum* for acting on sustainable landscapes initiatives through programs or public-private partnerships. Last, but not least, Funbio sees the need to promote intervention models that sustain an alternative and sustainable trajectory in comparison with the baseline scenario in territories around large-scale infrastructure projects.

3. The Process and Approach

Firstly, Funbio concentrated efforts in creating a favorable environment for the initiative through interaction and consultation with local stakeholders. In this sense, the mapping of stakeholders and the informal interviews conducted allowed Funbio to understand the key aspects and challenges in the forest sector at the territory. Funbio organized two events in the territory (Porto Velho municipality): a seminar regarding the Forest Innovation initiative in November 2017 (with 63 participants) and a participatory workshop in August 2018 (with 23 participants), both of which propitiated the rapprochement needed in order to develop the FM.

The relationship built with stakeholders (not only those who attended these events) represented a crucial step towards the design of the mechanism. The events made it possible to Funbio to: (a) identify and prioritize the main bottlenecks that negatively affect the forest innovation in the territory, (b) identify relevant acting partners and, finally, (c) determine how the mechanism can help overcome the barriers in a long-term perspective. The central objective was to build and validate the "niches" of action of the FM based on priority demands with local actors through social participation, engagement and empowerment. The identification of the lines of action of the FM (i.e. specifically, which projects and activities it will support and how) was a challenging but fruitful process. Figure 6 illustrates the process and approach.

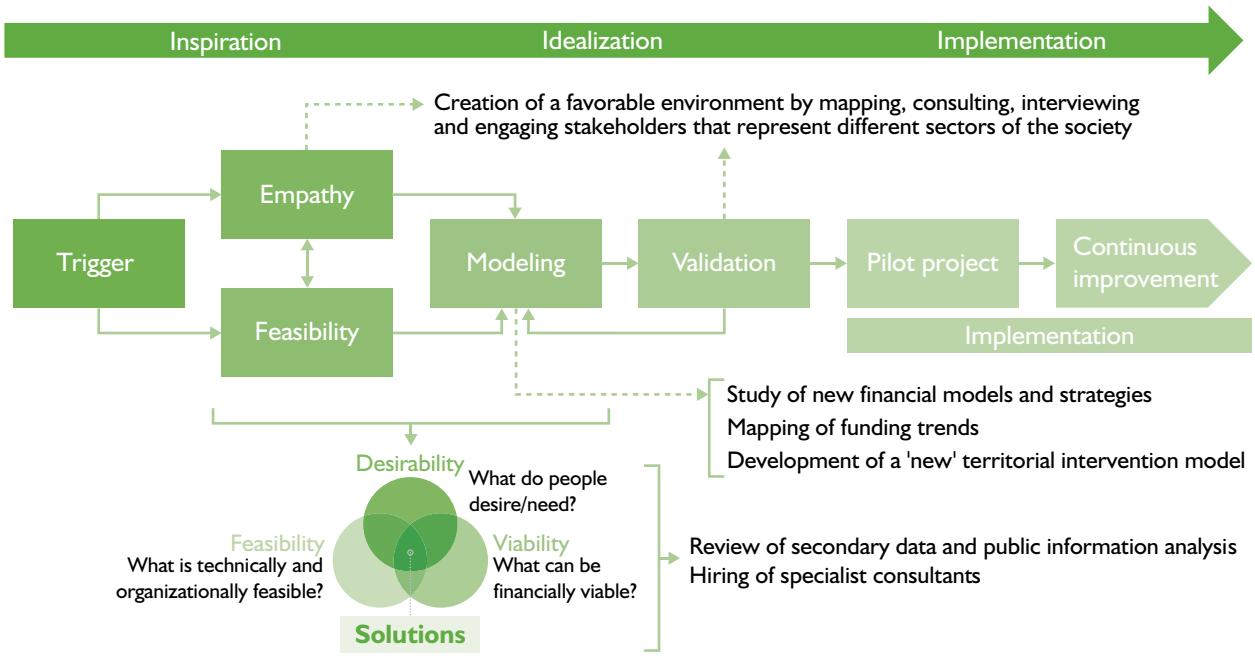
In conducting its work, Funbio hired three specialized consultancies that provided technical subsidies for the initiative. The scopes of work in the consultancies involved the topics of "sustainable forest management for timber and non-timber products", "forest restoration methods, costs and financing sources" and "innovative ecosystems for territorial development". Table 1 illustrates the main recommendations in each consultancy hired as part of the project:

"The mix of strategies considered (conservation, sustainable forest management and restoration) and funders´ profiles require an integrated landscape approach that connects not only the different forest chains, but also the links within each chain."

Table 1 : Main recommendations from the consultancies hired as part of the project

Consultancy	Main recommendations
Sustainable Forest Management	• Urgency in establishing a rational and sustainable stock of timber in the forest-industry relationship ◦ *Rational: There is not enough area of native forests to meet the demand of the local industry indefinitely* • Opportunities to conduct forest management in areas to be restored (e.g. Legal Reserve areas that need to be restored) considering timber management in medium/large properties and adoption of agroforestry systems in small properties ◦ *Rational: Use and economic exploitation of private areas according to the National Law 12651/2012 (Forest Code), social dimension of interventions (e.g. jobs and income generation through agroforestry systems) and opportunity costs of the land for rural private landowners* • Opportunities to select species and direct production towards high added-value markets (eg: native species with high socioeconomic potential, logs with small diameter, exotic species with high market value, etc.) ◦ *Rational: Tropical forestry aligned with conservation objectives and sustainable business ventures*
Forest restoration methods, costs and financing sources	• Need to consider rural owners and the agriculture sector in the forest restoration strategy ◦ *Rational: Agriculture is the main vector of deforestation in the territory* • Financial mechanism offering "Support Packages" (group of actions / activities jointly supported) ◦ *Rational: It is a way to reduce the risk perception of individual agents and guarantee the scale / effectiveness of the forest restoration in the fragmented landscape of the territory* • Proposal of action through NAREEs (Support Centers for Ecological and Economic Restoration) ◦ *Rational: Presence and articulation in the territory. Offer of «Support Packages», with specialized and multidisciplinary action. Coordination, intelligence and support to the forest restoration. NAREEs may even charge for services rendered as the platform matures, allowing new sources of funds to be channeled to other purposes*
Innovative ecosystems for territorial development	• Opportunity and need to transform the Environmental Regularization Program (PRA) into an instrument to scale up sustainable development by generating a forest-industry relationship based on planted forests ◦ *Rational: Need for legal conformation, current and potential demand for timber require a smart, rational and sustainable way of exploiting forest resources in the long-term* • Proposition of an acceleration system for the forestry sector in the territory through a platform with multiple mechanisms ◦ *Rational: Structuring a Forestry Innovation Ecosystem in the territory requires the configuration of several integrated mechanisms (between each other and over time), combining not only refundable and non-refundable capital, but also other types of benefits, resources and support that go beyond capital* • "Roadmap" proposal for the implementation and operation of the Forest Innovation acceleration platform ◦ *Rational: The implementation and operation of the mechanisms was conceived considering that the demands (bottlenecks), opportunities and actors involved in the territory evolve (change) as the ecosystem matures*

Figure 6: Process and approach in designing the FM



Other activities carried out as part of the process included:

(a) Feasibility studies, including the spatial assessment of synergies, challenges and common potentialities present at the territory;
(b) Identification of bottlenecks, demands, opportunities, challenges from the territory;
(c) Review of secondary data sources;
(d) Engie Pioneer leadership training[7];
(e) Signing of cooperation agreements with strategic partners;
(f) Development of business plans considering intervention opportunities in the forest sector (e.g. forest restoration in a business context acting as the foundation for sustainable forest management, i.e. tropical silviculture);
(g) Mapping of actual (and potential) financing sources, including global and national tendencies;
(h) Mapping of innovative models of financing strategies, including blended finance;
(i) Designing the FM concept, structure and governance, including its General Operational Manual;
(j) Elaborating the action strategy and intervention model to foster the forest innovation at the territory (platform with multiple mechanisms in a long-term horizon);
(k) Validation of key aspects within the financial mechanism (platform) with a "Monitoring and Counselling Committee"[8],
(l) Initial prospecting efforts under a fundraising campaign with national and international partners (bi and multilateral), including public funds and impact investment operators.

4. The Challenges

Firstly, the pilot territory possesses virtually no culture of investing in forest sustainable business practices. In that sense, the FM has the immediate challenge to initiate this cycle of investments by ensuring the promotion of forest chains through reliable market demands and agents coordination. As such, the creation of an enabling environment starts by bringing together different actors, from different sectors, that somehow relate with the forest productive and supply chains. Funbio has conducted this activity throughout the project´s lifetime and this must continue on the way forward.

Another challenge consists in structuring the FM as a tool able to give the necessary scale for the sustainable landscape intervention but national efforts under the restoration agenda and the law enforcement are lagging behind in practice. Two manners of tackling this challenge is through key stakeholders mobilization and engagement (for example, the State Secretary for Environment and Development in the case of the pilot territory) and by designing the FM in a flexible manner so that it can be either scaled up (or adjusted) to accommodate opportunities (or turnovers related with political or legal environment).

An important risk considered is the absorption of the project by the partner company creating an image for the FM that is associated with enterprises that bring significant environmental impacts. The proposed model and FM originate "from" the territory and aim to deliver "to" the territory (i.e. it doesn´t belong to the partner company nor the hydropower venture). In that manner, the model proposed considers a diversity of stakeholders and agendas and its ultimate success, in practice, depends on many exogenous factors.

Another relevant challenge has to do with the economic and political instability that Brazil has faced in recent years, with few perspectives of improvement in the short-term, and there could be spillover effects from those on the initiative (for example, due to lack of political will or risk perception of private actors, investors or donors[9]).

The time spent on project preparation through feasibility studies, financing sources, innovative models mapping and the FM design did not allow for an actual project implementation.

5. Remaining challenges

The immediate challenge is the actual implementation of the project, which depends on the political will from many diverse stakeholders in the territory. Another challenge lies in the political turnover as Brazil´s general election[10] approaches - for example, efforts in terms of communication and engagement with state secretaries could be lost in that scenario. Although fundraising is also a key challenge, efforts in this sense have already initiated through formal and informal dialogues in addition to the network of stakeholders present in the events organized along the initiative.

Other aspects to overcome include continuous communication, monitoring and a constant management of expectations. Furthermore, the way forward will require great efforts in terms of a strategic coordinated planning and portfolio management towards a large-scale (landscape) approach in light of the uncertain scenario ahead in the country.

[7] The pilot project was the study case in an Engie corporate training that generated many subsidies coming from many professionals in different areas in the company

[8] Key stakeholders have been approached considering the public, private and civil society sectors

[9] As an example, during the initiative, part of the State Environmental Agency team was replaced in April 2018. The former Governor renounced his post in order to run for the Senate in the country´s next general election due in October 2018.

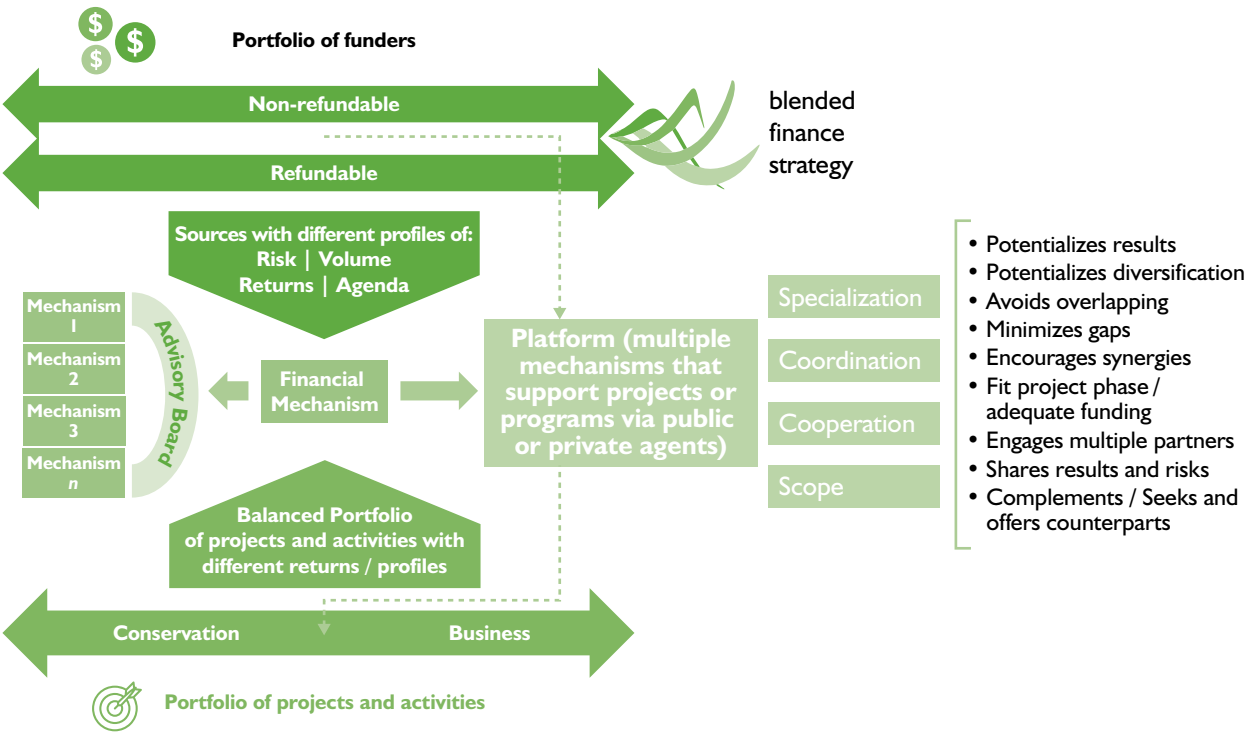
[10] In October, Brazilians will vote for Presidency, state Government (or District in the case of Brasília, the capital), Senate, Federal and State Congress (or District in the case of Brasília).

6. Results

During the process of the mechanism design, Funbio engaged and consulted with a diverse spectrum of local and external stakeholders (Appendix A) therefore creating a positive perspective regarding the way forward for the actual implementation of the FM. The good receptivity by different stakeholders represents an important accomplishment to enable a cooperative environment towards the actual project implementation.

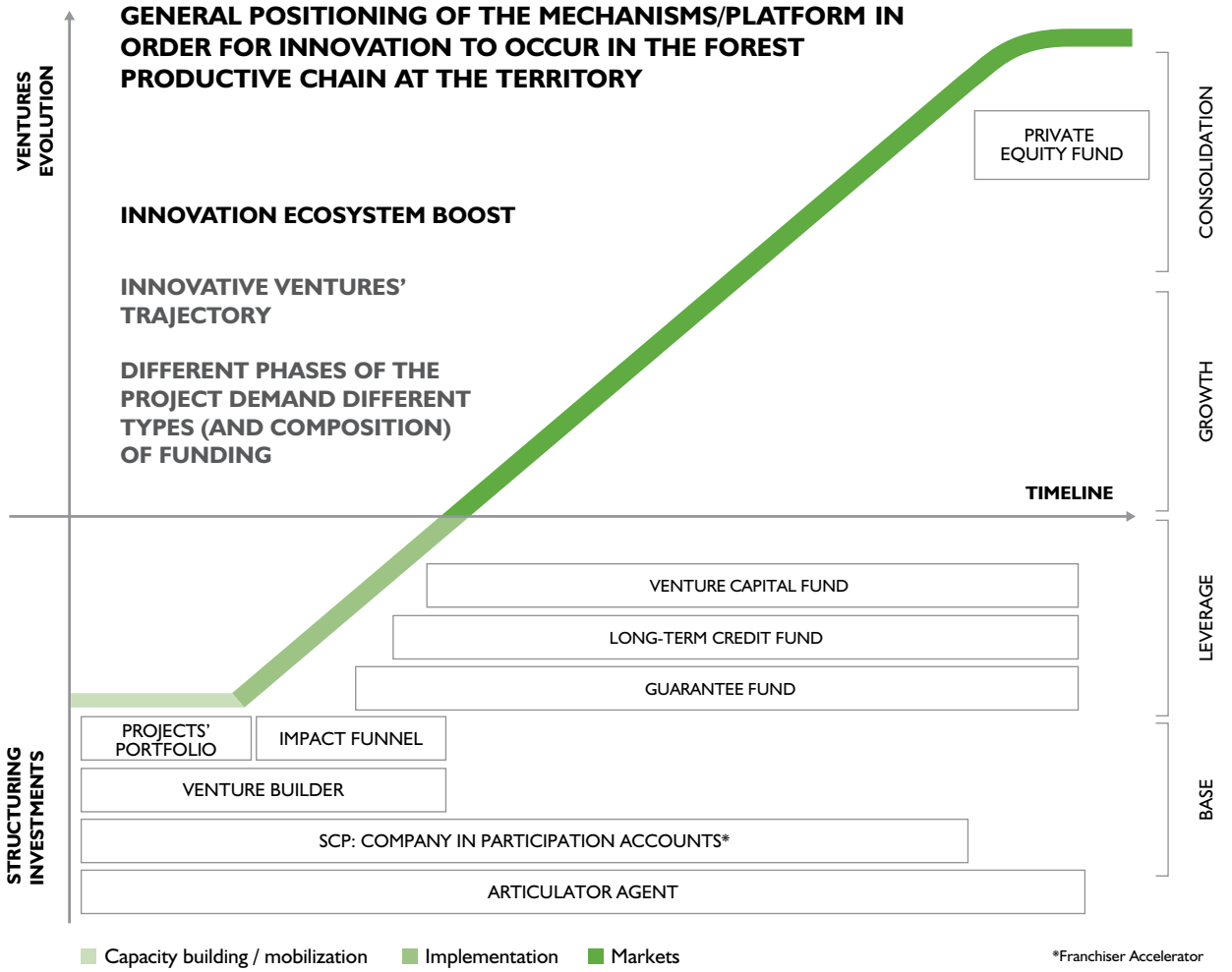
Perhaps the main positive consequence in the process consists of the formulation of an innovative ecosystem model for the territory´s forest sector consisting of a platform nesting a diversity of mechanisms. The essence of the platform consists of an Acceleration System that will blend and leverage, under a long-term strategy, multiple sources of financing with different objectives, supporting a portfolio of projects with different potentials for social, environmental and economic deliveries where the underlying aspect is the territory´s sustainability (Figures 7 and 8). The mechanisms envisaged will offer resources that go beyond financial capital in order to meet the challenges imposed on territories that receive large enterprises. It is replicable in other contexts, being a financial mechanism developed for the territory - belonging to the territory - in order to take advantage of and enhance local opportunities, including those promoted by the large infrastructure venture itself.

Figure 7: The financial mechanism pilot overview



> **"Perhaps the main positive consequence in the process consists of the formulation of an innovative ecosystem model for the territory´s forest sector consisting of a platform nesting a diversity of mechanisms."**

Figure 8: Mechanisms in the platform boosting the innovation ecosystem in the forest productive chains in the territory



Credit: Elaborated by Centers of Reference in Innovative Technologies (CERTI Foundation) as part of a consultancy hired by the project

The proposed approach allows for risk sharing among different actors, investors and donors. It aligns business opportunities in the forest productive (supply) chains with forest conservation and climate strategies among implementing partners and market agents (for example, by promoting the forest restoration in adherence with country´s Forest Law and commitments made under the Paris Agreement).

The mechanisms included in the platform (i.e. the general FM) take into account the different links in the forest productive chains, the different forms of support and financial resources (refundable and non-refundable), access to markets, inputs and raw materials, training and capacity building, the favoring of conditions for the execution of Research and Development, among others. Specifically, the mechanisms proposed include, for example, the creation of an Articulator Agent in order to (a) promote impact entrepreneurship and new ventures across organizations, (b) enable sustainable production and (c) provide guarantee in order to access credit. As consequence of its implementation, the FM will help creating the necessary conditions for the modernization of the forestry industrial and technological park in the territory, the shift in the economic paradigm - by incorporating a sustainable forest vision in a business context - and the establishment of a favorable institutional environment that is essential for the execution of the FM itself.

The time and effort needed in order to communicate and engage with stakeholders at the territory were higher than initially planned and in the process of designing the FM, Funbio recognized the extent of the challenge involved in designing and implementing a project of such novelty[11], scale[12] and ambition[13]. There was a change of government in Rondônia in April 2018[14], which imposed further challenges to Funbio regarding communication and engagement with the State Secretariat for Environment and Development (SEDAM).

[11] For example, through innovation in terms of financing, governance arrangements and interventions
[12] For example, through a landscape approach that encompasses several stakeholders from different sectors of society
[13] For example, by promoting and enabling sustainable forest productive chains in a territory where high rates of deforestation (legal and illegal) are present
[14] The former Governor resigned in order to run for the Senate in the October´s general elections

The Monitoring and Project Counselling Committee meetings did not happen as initially planned. The final decision was to validate aspects within the financial mechanism design through individual meetings. For this activity, Funbio considered three key stakeholders that represent different sectors from society: Imaflora (Institute for Forestry and Agriculture Management and Certification), BVRio Institute (market mechanisms for environmental assets) and Kaeté Investimentos (private equity asset management and impact investment). Regarding the biorefinary implementation, the partner company (Engie) decided not to continue with this venture. The current FM design considers a much broader scope of biomass demand and opportunities for intervention in the forest sector productive/supply chains - beyond Legal Forest Clearing opportunities that in practice did not materialize.

Table 2 shows the activities that were not carried out and the respective comments about them. Additional comments are included in the Progress Report spreadsheet (Annex 1).

Table 2: Other activities not conducted according to the original workplan

Activity	Justification and comments
Implementation of the legal feasibility strategy	It was not an issue/bottleneck to the project.
Analysis of legal conformity possibilities for the financial mechanism	It was not an issue/bottleneck to the project.
Design of monitoring tools, including the monitoring strategy	We have created the basis for developing the monitoring strategy (assessment of the social, environmental and economic baselines), but the indicators and strategies will be developed after project completion. The complexity of the territory and of the proposed mechanism took longer than expected and affected the execution of these activities.
Organization and realization of the fundraising roadshow events	The design of the financial mechanism (platform) is pre-requisite for the roadshow, therefore this will need to occur in the next steps. Although not done in a formal way, some events allowed for approximations and expositions about the project for the identified opportunities with potential lenders.
At least 1 sponsor found to enable de operation of the financial mechanism	The design of the financial mechanism (platform) is prerequisite for the capture of a sponsor, therefore this will need to occur in the next steps. There are multiple financing possibilities and some institutions have shown interest or synergy with the project.
Meetings with potential donors	Initial efforts conducted through informal meetings. However, the design of the mechanism (platform) is prerequisite for the roadshow, therefore this will need to occur in the next steps. Some institutions have shown interest or synergy with the project.
Effectiveness of the operation (including inviting, training and coaching board members)	The completion of the financial mechanism design (platform) is a prerequisite for the establishment and operation of the Board, therefore this will need to occur in the next steps.
Design pilot project	Dependent on the financial mechanism design completion and fundraising campaign.
Monitoring the biorefinery implementation – and related activities	The company decided not to continue with this venture. The monitoring was performed, what was not implemented was biorefinery itself (which was an exogenous decision regarding the execution of the project). The current FM design considers a much broader scope of biomass demand and opportunities for intervention in the forest sector productive/supply chains.

As next actions for actual project implementation, Funbio recommends focusing on: (a) communication for the purposes of stakeholders´ engagement and expectations management at the territory level; (b) fundraising campaign and the need of a local sponsor and (c) formalizing partnerships already built with different actors for the purpose of establishing the Advisory Committee of the FM (platform of mechanisms).

The non-implementation of the activities listed above impact on the execution period of the proposed mechanism. However, Funbio's interest in implementing this model of intervention in territories will make the implementation gaps reversed in the post-project period.

Table 3 below illustrates the adherence of the proposed mechanisms with actors, deliverables and funding sources. Figure 9 below illustrates the mapped financing sources for the acceleration platform. More information on this can be found in the excel spreadsheet part of the Technical Report Annex 2B.

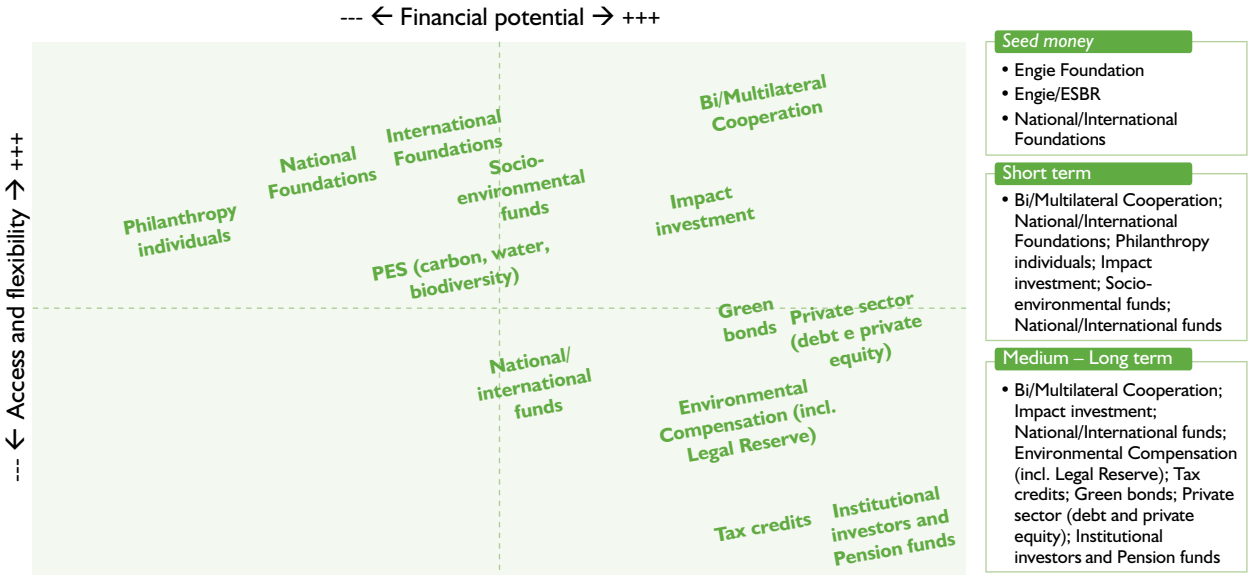
Table 3: Adherence of the mechanisms of the platform with actors, deliverables and funding sources

Relationship of the mechanisms with deliverables, actors and funding sources

- ⊖ Strong relationship
- O Moderate relationship
- ▲ Weak relationship

	Mechanisms	ARTICULATING AGENT	INNOVATION AND IMPACT FUNIL	VENTURE BUILDER	SOCIETY IN ACCOUNTS PARTICIPATION (SCP)	GUARANTEE FUND	LONG TERM CREDIT FUND	VENTURE CAPITAL FUND	PRIVATE EQUITY
Deliveries	Technical/Technological/Innovation support	⊖	⊖	⊖	⊖			▲	▲
	Business support	⊖	⊖	⊖	⊖	O		⊖	⊖
	Non-refundable capital	O	⊖	⊖	▲				
	Refundable capital	O		O	O	⊖	⊖	⊖	⊖
	Access to inputs	▲		O	O				
	Support to production organization	⊖	▲	O	⊖				
	Capacity building	O	⊖	⊖	⊖	▲	▲	O	O
	Resarch and Development	⊖	⊖	⊖	O				
Actors	Seeds collectors	O	▲			▲			
	Seedlings suppliers	O	▲			▲			
	Small producers (Agroforestry systems)	⊖	▲	⊖	⊖	⊖	▲	▲	
	Large producers (tropical silviculture)	⊖	▲		▲	⊖	⊖	▲	O
	Actors (pre-processing)	O	▲	▲	O	O	▲	O	
	Actors (post-processing)	⊖	▲	▲		O	O	O	⊖
	Actors (finishing)	⊖	▲	▲		O	O	O	⊖
	Developers of new solutions	⊖	⊖	⊖		⊖		⊖	
	Strictu Sensu conservation initiatives	O	O	O					
Sources	Non-refundable capital	O	⊖	⊖	▲				
	Refundable capital	O		O	O	⊖	⊖	⊖	⊖

Image 9: Financing sources mapped for the platform



The project manager attended two events held in Brasília that strongly relate with the FM background and objectives: one workshop organized by CIFOR[15] and another organized by WRI/GIZ[16], in April and May 2018 respectively. During the initial phase of the project, Funbio was invited to give a speech about the project in the "Forest Perspectives for the Conservation of the Amazon" Seminar held by Center of Studies Rioterra (a NGO) at Porto Velho in June 2017. In addition, the Brazilian Forum on Climate Change through its work group of Deforestation in the Amazon identified the project as a contribution to the implementation of Brazilian NDCs. These are important recognition of the work carried out.

7. Benefits Observed

The creation of a cooperative and knowledge-sharing environment among the stakeholders of the project is a benefit that will last even if the FM does not reach an operational status in the short-term. The results from technical consultancies and studies made in the scope of the project are products for the society and the events carried out in the territory shared the main findings with participants. Considering the way forward, there is a need to reflect on other means of making these technical subsidies publically available as the initiative has produced a lot of relevant information in the process.

The formulation of an innovative ecosystem model for territories with large infrastructure projects consists of a platform that nests a diversity of mechanisms targeting the forest sector and that will generate positive results towards the strengthening of ecosystem services and social wellbeing in the territory. The implementation of this model in other territories also presents good opportunities in order to achieve broader goals in terms of the territory impacted but also through performance in other agendas that are linked with environmental resources (such as climate, food security, healthy soils and biodiversity). The general model and the platform´s governance arrangements are reproducible and replication shall consider each territory´s local economic, environmental and social circumstances (for example by researching, conducting feasibility studies and consulting/ engaging with local stakeholders).

Once structured, the FM will enable financial investments for forest productive chains through a reliable strategic planning and efficient operational and financial management of resources. This financial investment will focus on supporting the different links within the forest productive chains in order to ensure access to markets and the sustainability of the FM (resources are limited). Conventional forms of (uncoordinated) financing usually do not address issues such as "added value" and "markets accessibility" and focus solely on expected return on investment and debt repayment.

The design of the FM allowed Funbio to widen and deepen its knowledge in the forest sector, while recognizing new niches of performance in terms of financing and interventions. Other benefits include the strengthening and formulation of new partnerships and the recognition of the extent of the challenge involved in designing and implementing projects of such scale and ambition.

8. Lessons Learned

There is a necessity to create a cooperative environment among the stakeholders of the project as well as to seek for partnerships. The goal is to work within the different links from each type of forest chain and not only with a punctual business initiative. If Funbio had chosen not to intensively incorporate other players, the FM would not accurately represent the territory's forest innovation needs and opportunities.

The process of consulting and engaging stakeholders comes with the need of managing expectations but this approach is what enables a real commitment with the territory and it is likely to make the fundraising roadmap more successful too. The project is only viable through engagement and it is imperative to remain as close as possible to the territory.

There is also a need to include diverse types of financers in order to have multiple financing strategies in a platform that will support a portfolio of projects and activities. Reaching out for potential investors in the private sector requires a language expertise to reach the niche sectors of impact investors and institutional donors. This challenge translates into reaching out for robust sponsors, both in terms of the FM and the territory.

Because the FM inserts in many different agendas (such as forest restoration, climate and biodiversity conservation) there is also a need to count on experts (consultants) in the respective fields. The challenge is to combine relevant technical expertise that each agenda requires without losing focus on the macro (strategic) activity of designing and implementing a FM that can generate positive outcomes in the real world. In addition, the process of innovation intrinsically demands new forms of thinking and because the design of any FM already requires a great level of expertise in many different areas, reaching out for an expert partner that combines all of that is indeed a challenging task. Innovation ultimately depends on time and resources availability, sponsors/ investors risk bias and finally, multiple actors thinking and behaving collectively.

[15] Workshop title: Policy Network Analysis on REDD+

[16] Workshop title: Low Carbon Agriculture and Restoration of Ecosystems as Inductors of National Agricultural Resilience in a Climate Change scenario

Figure 9: Workshop participants engagement (Aug 2018)

Credit: Felipe Barbirato/FUNBIO

Figure 10: Workshop participants (Aug 2018)

Credit: Felipe Barbirato/FUNBIO

Figure 11: Groups' discussions during Workshop (Aug 2018)

Credit: Bruno Negri/CERTI

Figure 12: Bottlenecks in the forest sector identified and ranked by workshop participants (Aug 2018)

Credit: Bruno Negri/CERTI

> **"The challenge is to combine relevant technical expertise that each agenda requires without losing focus on the macro (strategic) activity of designing and implementing a FM that can generate positive outcomes in the real world."**

Figure 13: Seminar participants (Nov 2017)

Credit: Alexandre Rotuno/Center of Studies Rioterra

Figure 14: Participant engagement during Seminar (Nov 2017)

Credit: Alexandre Rotuno/Center of Studies Rioterra

APPENDIX A

List of stakeholders engaged during the Financial Mechanism (platform) design

Institution	Sector
Federal University of Rondônia	Academia
Faculty of Human sciences, Exact sciences and Language studies of Rondônia	Academia
Federal Institute of Education, Science and Technology of Rondônia	Academia
State Secretariat for Environment and Development (SEDAM)	Public
State Secretariat for Planning, Budget and Management (SEPOG)	Public
State Secreteriat for Agriculture (SEAGRI)	Public
Municipal sub-secretariat of Agriculture and Supply (SEMAGRIC)	Public
Ministry of Environment (MMA)	Public
Brazilian Forestry Service (SFB)	Public
Rondônia State Audit Office (TCE)	Public
Brazilian Corporation for Technical Assistance and Rural Extension (EMATER-RO)	Public
Brazilian Agricultural Research Corporation (EMBRAPA-RO)	Public
Ministry of Agrarian Development (Terra Legal Program)	Public
Brazilian Institute of Engineering Assessments (IBAPE-RO)	Public
Social Service for Industry (SESI)	Private/Public
National Service of Industrial Learning (SENAI)	Private/Public
ENGIE (Jirau HPP enterprise majority shareholder)*	Private
ESBR (Jirau HPP enterprise)	Private
Grupo ROVEMA	Private
Votorantim Cimentos	Private
Nativa Consultoria Ambiental e Florestal	Private
Rondônia Industries Federation (FIERO)	Private
Resolve Assessoria Ambiental	Private
AMATA (Forest management)	Private
MADEFLONA (Forest management)	Private
Prime Florestal Consultoria Ambiental	Private
Santo Antônio HPP enterprise	Private
SGMA Energia	Private
Floresta Viva Consultoria Florestal	Private
Evergreen Forestry Investments*	Private
AGROICONE (Agriculture, Energy and Sustainability)*	Private
Center of References in Innovative Technologies (CERTI)*	Private
Agroflorestar Porto Velho	Private
STCP Project Engineering	Private
BVRio Institute*	Private
Kaeté Investimentos (private equity asset management and impact investment)	Private
GVCes (Getúlio Vargas Foundation Sustainability Studies Center)*	Civil Society/Academia/Private
Jirau Environmental Observatory	Civil Society
Ação Ecológica Guaporé (Ecoporé)	Civil Society
Centro de Estudos Rioterra*	Civil Society
Instituto Rondoniense de Turismo (IRTUR)	Civil Society
Cooperative of Rural Producers of Jirau Environmental Observatory (COOPPROJIRAU)	Civil Society
RECA Cooperative for Agriculture and Forestry (COOPER-RECA)	Civil Society
IMAFLORA – Institute for Forestry and Agriculture Management and Certification	Civil Society

* Partnerships officially established


RedLAC


café