

1 **Incentive-based management of the commons: Understanding gaps between**
2 **policy prescriptions and practice in the Amazon region**

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4 HUGO ROSA DA CONCEIÇÃO¹

5 Center for Development Research – University of Bonn

6 Walter-Flex-Strasse 3, Bonn, Germany, 53113

7 s5hurosa@uni-bonn.de
8
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10 JAN BÖRNER²

11 Center for Development Research – University of Bonn

12 Walter-Flex-Strasse 3, Bonn, Germany, 53113

13 jborner@uni-bonn.de
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¹ Corresponding author; Tel: +49 228 73 4976

² Corresponding author; Tel: +49 228 73 1873

47 **Abstract**

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49 *Keywords –*

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1. INTRODUCTION

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Agricultural expansion, colonization and related settling programs, as well as mining and logging, have been among the key drivers of deforestation in the Amazon region for many decades. Environmental policy responses in the countries with territory in the Amazon have traditionally relied mainly on command-and-control measures (i.e. disincentive-based policy instruments)³. More recently, both policy makers and the civil society increasingly promote incentive-based forest conservation policies (IBPs), such as payments for environmental services, as more effective and socially acceptable alternatives to purely disincentive-based conservation policies. IBP have also gained momentum in the debate on international climate policy, where Reducing Emissions from Deforestation and Degradation (REDD+) is looked to as a potential forest-based climate change mitigation mechanisms.

Experiences in countries such as Costa Rica, Mexico and Brazil have already accumulated considerable experience on IBPs. Most of the scholarly work on IBPs has so far focused on economic aspects of IBPs such as implementation costs, financial viability, conservation effectiveness, and welfare effects. Only a small amount of works try to conceptualize them within the public policy theory tradition.

This work contributes to the debate on the governance aspects of IBPs by analyzing two case studies in the Amazon region through the lenses of public policy theory. It is the result of the initial six months of an ongoing research project with the final objective of understanding the political and administrative decision-making processes that lead to the current policies' design. It is focused on governments, as they are the proponents and main implementers of the researched cases.

The article is organized as follows. Section 2 identifies the research problem in the context of the current literature on IBPs. Section 3 describes the analytical framework to be used for the analysis. Section 4 describes the cases of the System of Incentives to Environmental Services

³ Environmental policy measures can be divided in disincentives, such as fines and taxes, incentives, such as subsidies and payments for environmental services, and enabling measure, such as land tenure regularization (Börner, et al., 2008)

99 (SISA), in the state of Acre in Brazil, and the Sociobosque program, in Ecuador. Section 5
100 discusses the cases under the light of the theoretical framework, aiming at producing
101 theoretically and empirically sound hypothesis for further research. Section 6 concludes the
102 paper by pointing the next steps of the research project.

103

104 2. PROBLEM IDENTIFICATION: THE CENTRALITY OF GOVERNMENTS AND 105 POLITICAL PROCESSES IN INCENTIVE-BASED POLICIES

106

107 The actual implementation of IBPs was carried out in parallel with their conceptualization and
108 analysis in the academic literature. The most influential conceptualizations tended see IBPs as
109 “market-like trades” (Vatn, 2010) and emphasize the conditionality of incentives on additional
110 environmental services provision as preconditions for conservation efficiency.

111

112 The documented experience, however shows that many government led incentive schemes do
113 not prioritize efficiency criteria (Muradian et al., 2010). For that reason, other conceptualizations
114 of IBPs see them as mostly resembling public payments, placing, accordingly, a stronger focus
115 on governance aspects, highlighting the crucial role of institutions, sociopolitical embeddedness
116 and governments (Vatn, 2010; Muradian et al., 2010). In line with this conceptualization, several
117 articles have approached IBPs from a governance perspective, highlighting historical, political
118 and social processes that shape their design, implementation and impact (Andriamahefazafy et
119 al., 2011; Corbera et al., 2009; Brown et al., 2011; Corbera and Schroeder, 2011; de Koning et
120 al., 2011; Hajek et al., 2011; Kosoy et al., 2008)

121

122 Research on incentive-based environmental governance, however, has not yet taken into
123 consideration much of the debate in the field of public policy theory. Most of the public policy
124 theories mentioned by Arts (2012) in his review of theory use in forest policy analysis, for
125 example, have not yet served as a theoretical framework for the analysis of IBPs. Considering
126 the centrality of governments in their implementation, we believe that public policy theories can
127 offer highly valuable analytical lenses into IBPs, especially those in which the government is the
128 central actor, as in the two cases considered in this article.

129

130 We will use insights of theories concerned with agenda setting to analyze how IBPs were
131 introduced into the governments' agendas and using policy instrument design theories to
132 understand how were some specific design features selected. We focus on the historical and
133 institutional features of the cases and on the role of the main actors that shaped the policy
134 choices and policy design of the selected cases.

135

136 3. THEORETICAL FRAMEWORK

137

138 The paper, as stated in the previous section, has the twofold objective of understanding how did
139 the selected programs became part of their respective government's agendas and, afterwards,
140 what were the main reasons for the selection of specific design features. Our understanding is
141 that agenda setting and policy design are closely related processes but conceptually separable by
142 their timeframe, actors involved and context.

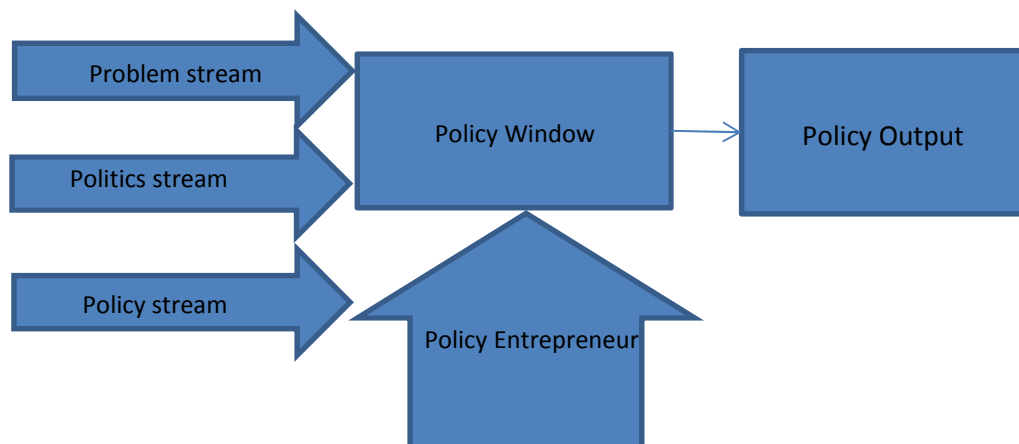
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144 John Kingdon (1984) introduced the “multiple streams” framework, which we rely on to analyze
145 how our two incentive-based programs made their way into the governments' agendas. The
146 framework suggests that policies are the outcome of the interaction of three streams, problems,
147 policy and politics, which join from time to time creating the so-called “policy windows” or
148 “windows of opportunity”, which are seized by actors, or policy entrepreneurs, to push specific
149 policies into the agenda.

150

151 Figure 1 –Multiple Streams Framework

152



153

154

155

156 The *problem stream* “consists of various conditions that policy makers and citizens want
157 addressed” (Zahariadis, 2007). Problems are usually brought to the public attention through three
158 main means: indicators and data; focusing events, such as disasters; and feedback instances, such
159 as from the media and previous programs (Zahariadis, 2007; Brunner, 2008). The *politics stream*
160 consists of three main elements, 1) the national mood or public opinion, 2) the actions of
161 organized political forces, such as political parties and pressure groups and 3) the legislative and
162 administrative turnover, in other words, the ideology of legislative representatives and executive
163 personnel (Zahariadis, 2007; Brunner, 2008). The *policy stream* is conceptualized as analogous
164 to a “soup” of policy ideas, which float around, interact and combine, receiving different
165 amounts of attention due mainly to their value, acceptability, and technical feasibility
166 (Zahariadis, 2007).

167

168 When the three streams join at some point in time, a policy window is created. Policy windows
169 occur when “problem is recognised, a solution is developed and available in the policy
170 community, a political change makes the right time for policy change, and potential constraints
171 are not severe” (Kingdon, 1984, p. 174). Policy windows are temporary instances in which
172 advocates of policy proposals have the opportunity to push them into the government’s agenda.
173 These advocates are called “policy entrepreneurs”, who “must be able to attach problems to their
174 solutions and find politicians receptive to their ideas (Zaharadis, 2007, p. 74).

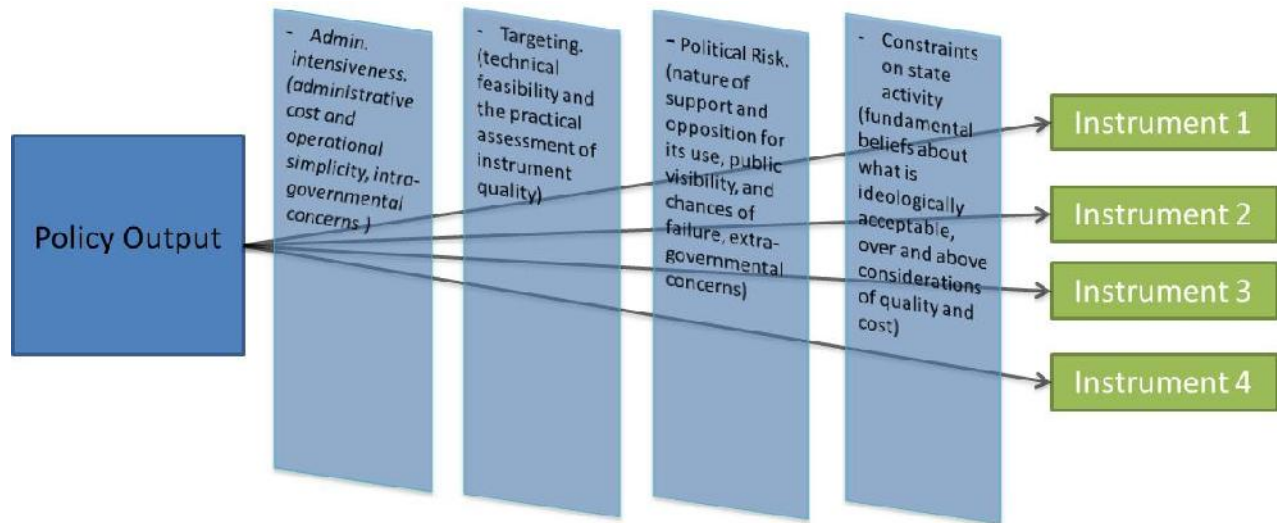
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176 Once a policy has entered the government agenda, other factors must be taken into consideration
177 for an analysis of the specific policy decisions of governments. At this stage of micro-level
178 policy, “factors such as the technical characteristics of the instruments and their match with the
179 context and dynamics of the problem(s) need to be addressed, as well as such political and
180 administrative factors as the past experiences of governments and target groups in using these
181 tools to deal with the same or a similar problem” (Howlett, 2009, p. 83). For that, we will apply
182 the criteria developed by Linder and Peters (1989): (1) *resource-intensiveness*, including
183 attributes such as administrative cost and operational simplicity, intra-governmental concerns (2)
184 *targeting*, related to technical feasibility and the practical assessment of instrument quality, (3)

185 *political risk*, including the nature of support and opposition for its use, public visibility, and
186 chances of failure, extra-governmental concerns and (4) *constraints on state activity*, ties
187 instruments to more fundamental beliefs about what is ideologically acceptable, over and above
188 considerations of quality and cost.

189
190

Figure 2 – Micro-level Policy Criteria



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192
193

Adapted from Linder and Peters (1989)

194 In the next section, we will provide an overview of our preliminary findings on the political and
195 policy making findings concerning the cases of the SISA Program in Acre and the Sociobosque
196 Program in Ecuador.

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4. CASE STUDIES

200 The information presented in this section is a result of interviews carried out in March 2013 with
201 representatives of the programs' implementing agencies and of organizations involved in the
202 design stage of the programs. The interviews represented the initial contacts of the researcher
203 with the main actors and institutions designing implementing the studied cases and consisted of
204 open-ended, exploratory questions, more flexible and suitable to the early stage of the research.
205 The interview results were supplemented by a review of relevant project documents and reports.

206

207 4.1 - SISA-Acre

208

209 Acre has a long and well-known history of forest-based social movements. Since the 1970s,
210 forest communities that earned their livelihoods from extracting forest products have protested
211 against the occupation of their traditional lands by loggers and cattle ranchers. In the 1980s, the
212 community leader Chico Mendes gained notoriety as the main face of the Amazon's
213 environmental movements, notoriety that was increased after his assassination in 1988. The
214 activism of Mendes and other community leaders attempted to associate the conservation of
215 forests with the well-being of its inhabitants, an association that was substantiated with the
216 creation of the first extractive reserves (*reservas extrativistas*) in the state in 1990.

217

218 Throughout the 1990s, some the participants of Acre's environmental movement engaged in
219 politics at the state and federal levels, and at the end of the decade the political group historically
220 connected with Mendes and the other leaderships was elected to the government of Acre. The
221 creation of the SISA program was seen by many respondents as the culmination of a series on
222 environmental policies implemented by this political group.

223

224 The first of these policies was the law for subsidizing rubber production (Chico Mendes law),
225 signed in 1999, and aimed at ensuring a minimal price for the product coming out of community
226 producers. In 2001, the state prepared the first phase of its Environmental and Ecologic Zoning
227 (EEZ), which was refined in 2007 and is the legal and spatial basis for all of Acre's
228 environmental policies. In 2008, the state passed the law for Valuing the Forests Environmental
229 Assets (*Valorização do Ativo Ambiental Florestal – VAA*), providing direct cash payments and
230 technical assistance on a voluntary basis for smallholders who commit not to deforest.

231

232 The VAA experience was the latest building block upon which the SISA was built. Launched as
233 a state law in 2010, the SISA was the product of an extensive participatory process that involved
234 the secretariats of the state government, local governments and the civil society. The
235 participatory process was initiated when the state government aimed at developing a state-wide
236 REDD+ program. During the consultation process, however, it was quickly realized that a
237 REDD+ project would not be sufficient for attending all the interests involved and would be a

238 missed opportunity to address environmental services other than carbon-related ones. In
239 Setember 2010, the bill of the SISA program was presented and approved at the state's
240 legislative assembly with negligible opposition and sanctioned by the governor.

241
242 | The SISA proposal encompass^{es} activities related to carbon storage and sequestration,
243 sociobiodiversity, water resources, climate regulation, soils conservation and traditional forest
244 knowledge. The carbon-related program was the first to be established, already within the law
245 that created SISA, although it has not been operationalized yet. Its organizational structure has at
246 its core the Climate Change Institute (IMC), responsible for regulatory aspects and project
247 administration. It also features a semi-private body (*Companhia de Desenvolvimento de Serviços*
248 *Ambientais* – CDSA) to ensure a more flexible structure for financial management and expansion
249 of financial resources available for the project. The third main body within the SISA, the CEVA
250 (*Comissão Especial de Validação e Acompanhamento do SISA*), will be responsible for social
251 control and for the establishment of standards for future environmental service-related projects.

252
253 One innovative aspect of the SISA is that it will not only develop and implement projects, but
254 also establish principles, safeguards, standards and indicators that must be followed by all
255 environmental service-related initiatives in the state. The SISA, therefore, aims not only at
256 making the state an inductor of environmental service enhancement activities, but also at serving
257 as regulatory umbrella for activities to be implemented in the state, by the civil society and
258 private actors. The Purus Project, to be implemented in the municipality of Manuel Urbano, is
259 the first to be constructed in accordance with the regulatory framework of the SISA.

260
261 Several operational details of the SISA have yet to be defined. Important elements of project
262 design, such as targeted beneficiaries, payment mechanisms, conditionality criteria, level of
263 incentives, enrollment mechanisms and etc. are still unclear and will likely be defined on a
264 specific base, according to the social group or environmental service to be addressed by sub-
265 programs and projects. The participatory nature of SISA's decision-making has to date meant
266 long processes, with much communication and deliberation and a not many executive decisions.
267 The interviewees tended to agree that it is worth it having a longer, participatory process than a
268 one that would exclude potentially impacted or interested actors.

269

270 4.2 – Sociobosque

271

272 Deforestation and poverty are also widely recognized problems in the forested regions of
273 Ecuador. The most recent estimates from the Ecuadorian government place deforestation at
274 around 60.000 hectares per year, driven mostly by commercial agriculture and cattle-ranching,
275 and poverty rates at around 59% in the Amazon region (MAE, 2011). The overarching national
276 development strategy (*Plan Nacional de Buen Vivir*) targets a 30% reduction in deforestation,
277 while also aiming at reducing poverty levels in the region.

278

279 Sociobosque was created in the context of the new Constitution (2008) and aims at reaching
280 some objectives of the *Plan Nacional de Buen Vivir*. The initial request came from the
281 presidency, who wanted a project that could tackle deforestation and contribute to poverty
282 reduction at the same time. The Ministry of the Environment of Ecuador (MAE) was responsible
283 for designing and implementing such project (de Koning et al., 2011). The MAE wanted
284 alternatives to command-and-control policies, already implemented for some decades in the
285 country and generally perceived as ineffective. The Ministry's staff searched for options and got
286 in touch with Conservation International (CI) and the German International Cooperation Agency
287 (GIZ), who were involved in the *Gran Reserva Chachi* project, which was built around
288 conservation agreements. In addition to the contributions from the *Gran Reserva Chachi*
289 experience, the design team of Sociobosque also organized a workshop to understand the
290 experiences of other countries where incentive based programs were being implemented, such as
291 Costa Rica and Mexico, as well as to gather advice from researchers.

292

293 The political acceptance of the program in the government, as well as its design and approval
294 were fast, with the start of the design activities in March of 2008 and the issuing of the
295 ministerial agreement that legally established the program taking place in November of 2008 (de
296 Koning et al., 2011). It did not face much opposition inside the government, only a slight
297 concern from the Ministry of Non-renewable Natural Resources, due to possible overlaps of
298 project areas and oil prospection sites. In spite of the political will, low opposition and the
299 support from the president's office, the perception of the actors that participated in the design

300 phase was that if the program had not been launched until the end of 2008, the window of
301 opportunity could be lost. The most salient actors at this stage were the then vice-minister for the
302 environment and the program officers of CI.

303
304 The implementing office was of Sociobosque was placed within the structure of the Sub-
305 secretariat of Natural Heritage, in Quito (de Koning et al., 2011), and monitoring was assigned as
306 a responsibility of the Sub-secretariat of Planning (SENPLADES), which also defines the budget
307 assignments for the project. The core team has around 12 people, plus around 25 field staff
308 (*tecnicos de campo*). Local NGOs are also major partners, aggregated to the project structure
309 through Memoranda of Understanding. The project also involves the autonomous governments
310 of the provinces and the municipalities.

311
312 In the remainder of the section, we describe some key design issues of the project, which have
313 been highlighted in the interviews and are salient in the literature.

314
315 *Conservation agreements* are the central legal mechanism around which Sociobosque is
316 structured. Based on the *Gran Reserva Chachi* project experience, the agreements are “a
317 transparent, voluntary, and participatory alliance, in which the owners or administrators of a
318 resource agree to protect the natural value of an area in exchange for direct, ongoing, and
319 structured economic incentives” (de Koning et al., p. 532). In Sociobosque, the conservation
320 agreements have a duration of 20 years, with the possibility of renewal. For communities, the
321 signing of the agreement must be done after participatory discussion and approval by a
322 community assembly. For individuals, the signing is negotiated in short interviews with the
323 program team, and both the man and the woman in the household must be signatories.

324
325 *Spatial Targeting*: Initially, Sociobosque targeted the forested areas of the country that are
326 owned with formal land titles by communities and individuals. In 2009, the project also included
327 *páramo* ecosystems (high altitude grasslands), due to their role in regulating freshwater flows,
328 and later the project also extended participation for families living inside protected areas who
329 held land titles prior to the creation of the areas (de Koning et al., 2011). The project also
330 constructed a prioritization map of the country’s ecosystems, based on “(1) deforestation threat;

331 (2) importance for the three ecosystem services: carbon storage, water cycle regulation, and
332 habitat for biodiversity; (3) poverty levels” (de Koning et al., 2011), with small technical
333 variations between forest and *páramo* areas (MAE, 2012). The areas considered of higher
334 priority are, accordingly, the main focus of implementation activities, although the project can be
335 implemented in all eligible areas.

336
337 Another relevant aspect related to the spatial distribution of project activities is the selection of
338 areas within the enrolled properties. The communities and individual owners decide
339 autonomously how much and where are located the areas within their properties that will be
340 eligible for the projects benefits. The selection of the area will determine the total amount of
341 direct cash transfers received by the community or individual (see below on the incentive levels
342 discussion) and will also have a major impact in the additionality of the program. The decision of
343 leaving the area to be included in the project in the hands of communities and land owners was
344 taken by the project’s technical team and not by any type of broader consultation, and was clear
345 since the beginning of the process. The project team estimates that between 20 and 25% of the
346 project area are under threat in the short term, but that there are will be an increase in threats in
347 the long run.

348
349 *Enrollment and conditions:* In order to apply for participation in Sociobosque, potential
350 participants must submit a series of documents, such as copies valid property titles, sketches
351 demonstrating which parts of the property will be placed under conservation, certificates of
352 formal existence as legal entities for communities (*certificado de existencia legal y personería*
353 *jurídica*) and records of the meetings where participation was approved by the community. After
354 the application stage, communities must prepare and approve an investment plan, and both
355 communities and individuals must sign a conservation agreement. The conditions stated in the
356 conservation agreements require participants not to promote land-use changes in the areas under
357 conservation, not to hunt in those areas and to provide information on conservation state, tenure
358 changes and compliance with the investment plans.

359
360 *Investment plans* describe how the communities intend to use the monetary incentive provided
361 by the Sociobosque. The rationale behind requesting investment plans is that they allow for more

362 transparent decision-making procedures and increase the sharing of information within the
 363 communities (de Koning et al., 2011), reducing the possibility of misuse of the incentives by the
 364 community leaderships. Investment plans are also important for facilitating the provision of
 365 technical activities to the communities by the program team, as they indicate clearly what type of
 366 activities will be implemented, allowing the program team to calibrate their assistance
 367 accordingly.

368
 369 *Incentive levels:* Sociobosque’s operational manual (MAE, 2012) defines six incentive level
 370 categories based on the size of the area defined by communities and individuals as under
 371 conservation. The general rationale for the specification of the benefit is that smaller areas will
 372 receive higher amounts per hectare, benefiting smaller land owners, who are usually poorer.
 373 Communities receive higher amounts than individuals and communities in *páramo* areas receive
 374 more than communities in forest areas⁴. The amounts also cumulate in properties of larger
 375 categories. The examples below illustrate the system:

376
 377 Table 1 – Payment calculation example for Sociobosque

Individual property in forest land			For 450 ha under conservation: $(50 \times 30) + (50 \times 20) + (350 \times 10) = \text{US\$ } 6,000$ per year
Category	Area under conservation (ha)	Payment value (US\$/ha/year)	
1	1 – 50	\$ 30	
2	51 – 100	\$ 20	
3	101 – 500	\$ 10	
4	501 – 5,000	\$ 5	
5	5,001 – 10,000	\$ 2	
6	10,001 or larger	\$ 0.5	
Community property in <i>páramo</i>			For 450 ha under conservation: $(50 \times 60) + (50 \times 40) + (350 \times 20) = \text{US\$ } 12,000$ per year
Category	Area under conservation (ha)	Payment value (US\$/ha/year)	
1	1 – 50	\$ 60	
2	51 – 100	\$ 40	
3	101 – 900	\$ 20	
4	901 – 3,000	\$ 10	
5	3,001 – 10,000	\$ 4	
6	10,001 or larger	\$ 1	

378

⁴ The decision to provide a higher value for *páramo* areas is due to its importance to watershed protection.

379 Payments are delivered in two transfers, one in May and one in October. If the money is not used
380 in accordance with the investment plan or if there is conflict, the following transfer is suspended.
381 The current values expressed in the operational manual are not the ones initially offered by the
382 project. The value of the benefit for communities was adjusted due to equity concerns, because
383 the per capita amount for individual contracts was usually much higher than the amount for
384 communities. The benefit for properties under 20 ha was also adjusted (doubled) to improve
385 equity. There were no amount reductions as a consequence of the adjustments.

386
387 Much of the literature on incentive-based policies suggest that, to be effective, incentive levels
388 should be based on, at least, the opportunity costs of avoiding deforestation (Muradian et al.,
389 2010). In the case of Sociobosque, however, effectiveness and additionality were not the only
390 criteria used in design decisions (de Koning et al., 2011). The project team considered that
391 “different levels of incentives depending on the specific location of a landowner would be cause
392 of intense social debate and would not be politically viable” (de Koning et al., 2011), and that
393 using opportunity costs to calculate incentive values would generate perverse incentives. That
394 would be especially the case with indigenous peoples, who would be less benefited, as they do
395 not pose strong threats. The project team predicted that the ensuing political tension with the
396 indigenous peoples could make program implementation unfeasible.

397
398 The calculation of incentive values was to be kept simple and straightforward, as it was believed
399 that more complicated systems would be hard to implement and difficult for the communities to
400 understand. Finally, the initial values were not based on any kind of technical assessment, but
401 loosely based on the incentive values of the programs presented in the initial Workshop and the
402 budgetary possibilities of the program.

403
404 *Participation:* The design stage of Sociobosque was admittedly not participatory. The
405 perception, as stated above, was that the window of opportunity for ensuring that the project
406 would be placed into the government’s agenda and budget was short, and that a longer
407 participatory process would jeopardize the project’s existence. Another rationale for not making
408 participation one of the main concerns in the design phase was that the participation in the
409 program was from the outset planned to be voluntary. For that reason, any individual or

410 community not in accordance with the program's provisions could simply decide not to
411 participate.

412

413 On the other hand, some specific design features of the project, such as the requirement of a
414 community approved investment plan, aim at making sure that the decisions taken by the
415 communities are decided in a participatory way, so that they would not end up representing
416 solely the interests of the community leaderships. The project also aims at fostering the
417 improvement of community organization and ensuring that the incentives provided by the project
418 are used to the benefit of the whole community.

419

420 *Land Tenure* in Ecuador, as in most of the Amazon region, is an extremely complicated issue,
421 with many inhabitants lacking land titles and with many of the existing titles having an unclear
422 legal status. Sociobosque's decision to include only participants with formal land titles was also
423 taken to ensure the project's feasibility, although it is recognized that such design feature might
424 exclude potentially relevant participants, both for environmental and poverty reduction
425 objectives. The project has no jurisdiction over the issuing and clarification of land rights, but the
426 staff tries to interact with the sections of agriculture and environment ministries responsible for
427 land tenure issues in the county.

428

429 5. DISCUSSION AND HYPOTHESES FOR FURTHER RESEARCH

430

431 In this section we will analyze the results of the case studies described in the previous section
432 under the light of the theoretical framework and formulate hypotheses for further study.

433

434 5.1 - SISA

435

436 *Problem stream:* In the multiple streams framework, a problem must be widely recognized and
437 the necessity for action acknowledged for it to become a policy target. Acre has been and is one
438 of the poorest states in Brazil, ranking low in most social welfare indicators. Deforestation rates
439 in the state are not the highest in the Amazon, but still tend to be in par with the Amazon
440 averages (Acre, 2011). The state, due to the characteristics of its environmental movement, has a

441 singularly long-standing tradition of conceptualizing deforestation and poverty as related
442 problems that require joint solutions. Such conceptualization became a guiding concept of the
443 government, embodied in the concept of *Florestania*⁵. It is therefore clear that there is
444 recognition of the relevance of deforestation and poverty as problems, and that they require joint
445 action.

446

447 *Politics stream:* The political context in Acre was very favorable to the introduction of the SISA.
448 The political support for the project within the government was full from the outset and
449 continues so during the ongoing design phase. The government's historical and ideological
450 connection with the environmental movement is a known characteristic of recent politics in Acre.
451 Another singular characteristic of Acre is the political continuity currently experienced in the
452 state. The same political group has been in power in Acre since the end of the 1990s, an unusual
453 situation for a state in the Brazilian Amazon, where changes of ruling party or of fractions within
454 the same party are the norm. Such political continuity is seen as key not only for the SISA, but
455 for the long term construction of Acre's environmental regime. The stability and high political
456 support can also explain the fact that key policies, such as the EEZ, the VAA, and the SISA are
457 state laws, instead of executive decrees or agreements, what gives them a much stronger legal
458 leverage. The interviewees understand that this fact is crucial for making sure that the policies
459 became policies of the state, and not only policies of the governing group.

460

461 *Policy stream and policy entrepreneurs:* Kingdon's framework asserts that out of the many ideas
462 floating in the "primeval soup" of policies, the ones perceived as feasible to implement and that
463 conform with the values of policy makers are more likely to be considered for adoption
464 (Zahariadis, 2007). Acre has been a pioneer in IBPs, since the introduction of the rubber subsidy
465 law in the end of the 1990s, although it had been predominantly social welfare initiative. The
466 VAA law has expanded and diversified the scope of economic incentives and made the forest
467 conservation component explicit. The SISA, therefore, conforms to a continuous support for
468 such policies in the state. It is being constructed as an initiator of more ambitious IBPs and as an
469 all-encompassing regulatory framework for such policies in the state. Another interesting aspect
470 of the policy stream in Acre is that the decision that SISA would go beyond a REDD+ policy,

⁵ *Florestania* is a portmanteau connecting the words *floresta* (forest) and *cidadania* (citizenship).

471 which was the initial idea discussed by the involved actors. The main policy entrepreneur in the
472 state was the former environment secretary and current director of the IMC.

473
474 *Micro-level policies:* as stated in section 4, the specific operational details of SISA are still under
475 construction. The extensive and time-consuming participatory process of SISA can be seen as a
476 function of the state administration's historical and ideological ties with the environmental
477 movement, indicating that they value a more inclusive and representative decision-making
478 process over an expeditious and centralized one. The 15 year period enjoyed by the current
479 governing group in power is perceived as an indication of political support from the population,
480 which allows for a longer period of deliberation before executive decisions be taken and project
481 actions start reaching the beneficiaries. SISA's design features, at this point, are characterized by
482 a complex operational structure, as it aims to be more than an inductor of project but an all-
483 encompassing regulator of activities.

484
485 5.2 - Sociobosque

486
487 *Problem stream:* Deforestation and poverty are long-standing problems in Ecuador, as indicated
488 clearly by high deforestation rates and poverty levels, and they have both been objects of public
489 policy for decades. The most recent development is that there has been a further recognition that
490 there is not a necessary trade-off between forest conservation and poverty reduction in the
491 country. As with the *Florestania* concept in Acre, the Ecuadorian government places the idea of
492 *sumak kawsay*⁶ as a goal of the government. Therefore, there is not only a widespread perception
493 of poverty reduction and forest conservation as policy problems, but also that they are problems
494 that must be tackled simultaneously.

495
496 *Politics stream:* The election of a new governing group in 2007 was perceived by the
497 interviewees as a turning point in Ecuador's environmental policy, as the new government placed
498 environmental protection as a central tenet of their development plan and provided stronger
499 support for environmental policies, in comparison with previous administrations. The low social
500 opposition to the project shows that the public opinion is at least not opposed to it, and the small

⁶ From the *Quechua* language, meaning "living well", and in a harmonious relation with the environment.

501 amount of political opposition faced by it also indicates that organized political forces are not
502 against it. For that reason, it is apparent that Sociobosque’s design faced virtually no political
503 hindrances.

504
505 *Policy stream and policy entrepreneurs:* It is hard to specify when IBPs became part of the
506 “primeval soup” of policies in Ecuador. It is though clear that the example of the *Gran Reserva*
507 *Chachi* project, the implementation of IBPs in other Latin American countries and the increased
508 academic debate on them in the mid-2000s were contributing factors. The existence of a wide
509 array of similar experiences in countries perceived as similar to Ecuador was an indication that
510 Sociobosque’s implementation would be financially and technically feasible. IBPs were also a
511 good fit for the policy makers’ values, as they were perceived a single solution to the dual
512 problem of deforestation and poverty in the region, with the potential of directly benefiting forest
513 dwellers. The main policy entrepreneur at this point was the vice-minister of Environment, but
514 the specific details of his preference for IBPs are not clear.

515
516 *Micro-level policies:* Several key design features of Sociobosque can be conceptualized through
517 Linder and Peters’ criteria. The project’s continuous broadening of participating potential, by
518 expanding the geographical scope of the project, and the continuous overall increase in the
519 amount benefits can be seen as a function of the ideological stance of the government, which
520 favors equity over efficiency, and an interest to assure support from local populations, although it
521 is not clear, at this point of our research, which force had a stronger influence. The decision to let
522 the definition of the areas under conservation be defined by the participants themselves was
523 made out of concerns for the external acceptability of the program, out of its ideological
524 acceptability by policy-makers, as well as seen as more relevant than technical assessments on
525 additionality. Other decisions, however, do not conform so swiftly with Linder and Peters’
526 criteria, such as the decision to only allow participants with valid land titles to participate. That
527 decision was made aiming at increasing operational simplicity, but has clear negative equity
528 impacts, as many poor forest dwellers in zones of environmental pressure do not have land titles
529 or the means to acquire them.

530

531 **5.3 - Hypotheses**

532

533

534

535

6. CONCLUSIONS

Comparative table of incentive based conservation programs in the Amazon region.

	SISA - Acre	SocioBosque - Ecuador
POLITICAL AND ECONOMIC CONTEXT		
Type of Jurisdiction	Federated Unit (state), direct election for governor and legislative assembly	Unitary, Presidential Republic, direct election for President
Political subdivisions	22 Municipalities	24 Provinces
Latest basic law (Constitution)	October 1989	September 2008
Time since major change in the government's ruling group	15 years	6 years
Ethnic make up	Multiracial (<i>Pardos</i>) 57,5%, Caucasian 33,0%, Afro-Brazilian 7,8%, Asian or indigenous 1,7%	<i>Mestizos</i> 71.9%, <i>Montubios</i> 7.4%, Afro-Ecuadorian 7.2%, Indigenous 7.0%, Caucasian 6.1%, other 0.4%
Area (km ²)	164,123 ⁷	258,238
Population	758,786 ⁸ (2012)	14,483,499 ⁹ (2010)
Deforestation rate (ha year)		
Remaining native forest area (ha)		
Drivers of deforestation and forest degradation in project area	Road paving, illegal logging, cattle ranching, agriculture	Mining, cattle ranching, agriculture
PROGRAM CHARACTERISTICS		
Proponent(s)	State Government	Government
Legal Basis	State Law 2.308/2010	Ministerial Agreement
Start date	2010	September 2008
Implementing Agencies	State Environment Secretariat (SEMA) and Climate Change Institute (IMC)	Environment Ministry, Sub-secretariat of Natural Heritage
Main Partners		CI, GIZ, SENPLADES, Local NGOs
Funding	State Government, KfW	Government, KfW
Budget		
Changes in project coordination leadership	0	0
Size of the team		Around 50
DESIGN CHARACTERISTICS		
Scale	Entire state	Forest and <i>páramo</i> areas
ES covered	carbon storage and sequestration, sociobiodiversity, water resources, climate regulation, soils conservation and traditional knowledge	Biodiversity protection, hydrological regulation, carbon storage (ES taken as criteria for spatial prioritization)

⁷ IBGE (2013)

⁸ idem

⁹ INEC (2013)

Duration	Not defined	Conservation Agreements last 20 years, with possible renewal.
Targeted beneficiaries	Not defined	Rural communities in targeted areas and individual land owners.
Deforestation threat in targeted areas (additionality potential)		20-25% of the project area in 2012 is estimated to be in threatened areas ¹⁰
Reference level/scenario		
Types of benefits	Conditional direct cash transfers, technical assistance, others to be defined	Conditional direct cash transfers, technical assistance
Amount direct cash transfer	Not defined	Between US\$ 0.5 and and US\$ 60 per hectare per year (see table in section X.X)
Payment modalities	Not defined	Differentiated by size of property, enrolled area, type of owner and type of vegetation. Smaller properties, communities and communities in Páramo lands receive a higher amount per hectare (see table in section X.X)
Cash transfer mechanism	Not defined	Two equally valued transfers to the beneficiaries' bank account per year, in May and October.
Criteria for conserved area selection	Not defined	Self-selection by the community/ individual owner
Enrolment requirements	Not defined	Valid tenure, legal establishment and geographical information documents, investment plan.
Conditions	Not defined	Not to promote land-use changes in the areas under conservation, not to hunt in those areas and to provide information on conservation state, tenure changes and compliance with the investment plans.
Enrolment procedures	Not defined	For communities: Signature of a Conservation Agreement and presentation and community approval of an Investment Plan. For individuals: Signature of a Conservation Agreement.
Number beneficiaries		123,431 (October 2012)
Leakage control		

¹⁰ Estimate from the program's staff

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