

# DEFORESTATION AND POLICIES ON SMALL-SCALE MINING: CASE STUDY MADRE DE DIOS

LENIN VALENCIA



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## Environmental Policy and Management Program

Environmental Policy and Management Program contributes to the development of environmental and natural resource public policies and promotes the strengthening of environmental institutions to ensure the development of sustainable investments. The program works with a decentralized, trans sectorial and human rights focus in the implementation of legal and institutional tools promoting:

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- The application of the Strategic Environmental Assessment in policies, plans and programs.
- The development and enhancement of Climate Change policies.
- Improvement of environmental impact assessment and environmental control tools for investment in infrastructure and productive and natural resource extraction projects.
- Implementation of transparency and accountability mechanisms aimed at enhancing environmental justice, citizen participation and indigenous people rights.
- Design and implementation of incentives and finance mechanisms for promoting good environmental practices.
- Environmental risk management in investments projects.

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# EXECUTIVE

## SUMMARY

This document explores the evolution of the small-scale mining policies in Peru and their impact on the land configuration of Madre de Dios. The study shows how several changes in small-scale mining policies since the 1970s have increasingly affected the process of deforestation in this region, known as the Peruvian capital of biodiversity. The document focuses especially in the period between 2002 and 2015 due to the escalation of gold mining activities during these years, and due to the fast increase of deforestation associated to this activity. The main findings of this study are as follows:

- › Small-scale mining policies for the Amazonian context should consider at least six components for intervention: formalization, technical assistance, auditing, administrative simplification, land management, and prevention of criminal activities and interdiction.
- › Small-scale mining policies between 2002 and 2009 have focused mainly on processes of formalization, neglecting other relevant elements of intervention, especially those referring to land management and technical assistance, crucial to strengthen the orderly development of small-scale mining activities. Along with the international prize of gold, this type of policies have encouraged fast processes of deforestation of the Amazon tropical forest in Madre de Dios.
- › In the face of the emergency situation in Madre de Dios, since 2010 the national Government has initiated actions to prevent crime associated to mining activities, using progressively more police and military forces. However, these actions have been unable to stop the advance of illegal mining activities in the Tambopata National Reserve.
- › Since 2012, the State initiated a new formalization process which, in the case of Madre de Dios, has not yet achieved the formalization of over 4 thousand miners who started this process.
- › The policy of granting concessions in the Amazon has not been a satisfactory condition to prevent the deforestation nor to manage it appropriately. On the contrary, in areas like Guacamayo and La Pampa, the access to claims of various kinds has been used as an occupation strategy by different agents linked to gold mining in order to take over the territory through formal/legal means.
- › The processes of deforestation due to mining are not always immediate, but adjust to the formalization timing of the State. Deforestation due to mining in non-mining concessions in Madre de Dios increased, not in the most accelerated period of mining growth<sup>1</sup> (2006-2009), but rather in the 2010-2015 period, one characterized by stricter regulations in the area.
- › Between 2006 and 2015, the Peruvian Government had a small-scale mining policy, which for practical purposes legitimized a significant part of the invasions into forest premises, granting mining claims over other kinds of previously granted claims.

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1 Growth measured by the number of mining concessions granted.

- › The absence of a territorial planning policy has favored an unorganized granting of mining concessions, an increase of conflicts among users of the forest, and the expansion of deforestation due to gold mining, be it formal, informal, or illegal.

Considering that the formalization process of small-scale mining has not yet concluded, and that in July of 2016 a new Government took office for the period 2016-2021, this document recommends some prioritized lines of action focusing not only on issues of formalization, auditing, and monitoring, but also those aspects referring to administrative simplification, specialized technical assistance, and land management. The following measures are suggested:

- › Developing a policy for small-scale mining with more specific strategies of technical assistance and formalization, and based on the social, productive, and geographical features of the small-scale mining operations.
- › Strengthening the sectorial and trans-sectorial institutions associated with the small-scale mining, such as the National Authority for the Formalization of Small-Scale Mining (Dirección Nacional de Formalización de la Pequeña Minería)<sup>2</sup> and the Office of the High Commissioner (Oficina del Alto Comisionado), both recently created in 2012 and 2013, respectively.
- › Strengthening the political dimension of the formalization process, defining communication and negotiation mechanisms with agents involved and affected by this policy (associations of small-scale miners, farmers, forest users, etc.).
- › Improving the land management policies by encouraging processes of land zoning that allow, among other aspects, the implementation of a unified registry of claims and the implementation of agencies to resolve conflicts due to overlapping of rights.
- › Improving public management capacities of the regional governments prioritizing, for example, the incorporation of Madre de Dios within current State reform processes as the one started by SERVIR<sup>3</sup>.
- › Strengthening the foreign policy of Peru against illegal mining with neighboring countries (Ecuador, Colombia, Brazil, Bolivia, and Chile<sup>4</sup>).

Finally, the document recommends strengthening the policy to fight against illegal mining through clearer policies to prevent and effectively punish crimes associated with illegal mining along the whole value chain. In order to do this, the following is required:

- › To strengthen the National System of Prevention of Money Laundering, updating the policy instruments and goals of the National Plan against Money Laundering) and incorporating achievement goals related to illegal mining issues.

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2 In spite of the differences, the Chilean experience of the National Mining Company, as the sector authority guiding the policies on small-scale mining in this country, is a good example of a state body that “corrects the mistakes of the financial markets” and “provides technical assistance” to the sector of small-scale mining which allowed to generate economies of scale and access the necessary technological means to ensure a competitive entry of the small-scale mining into the globalized markets (ENAMI). For further information, please visit <http://www.enami.cl/acerca-de-enami/quienes-somos.html>

3 SERVIR is the National Authority of the Civil Service, in charge of promoting the implementation of the Civil Service Law to improve public management in Peru.

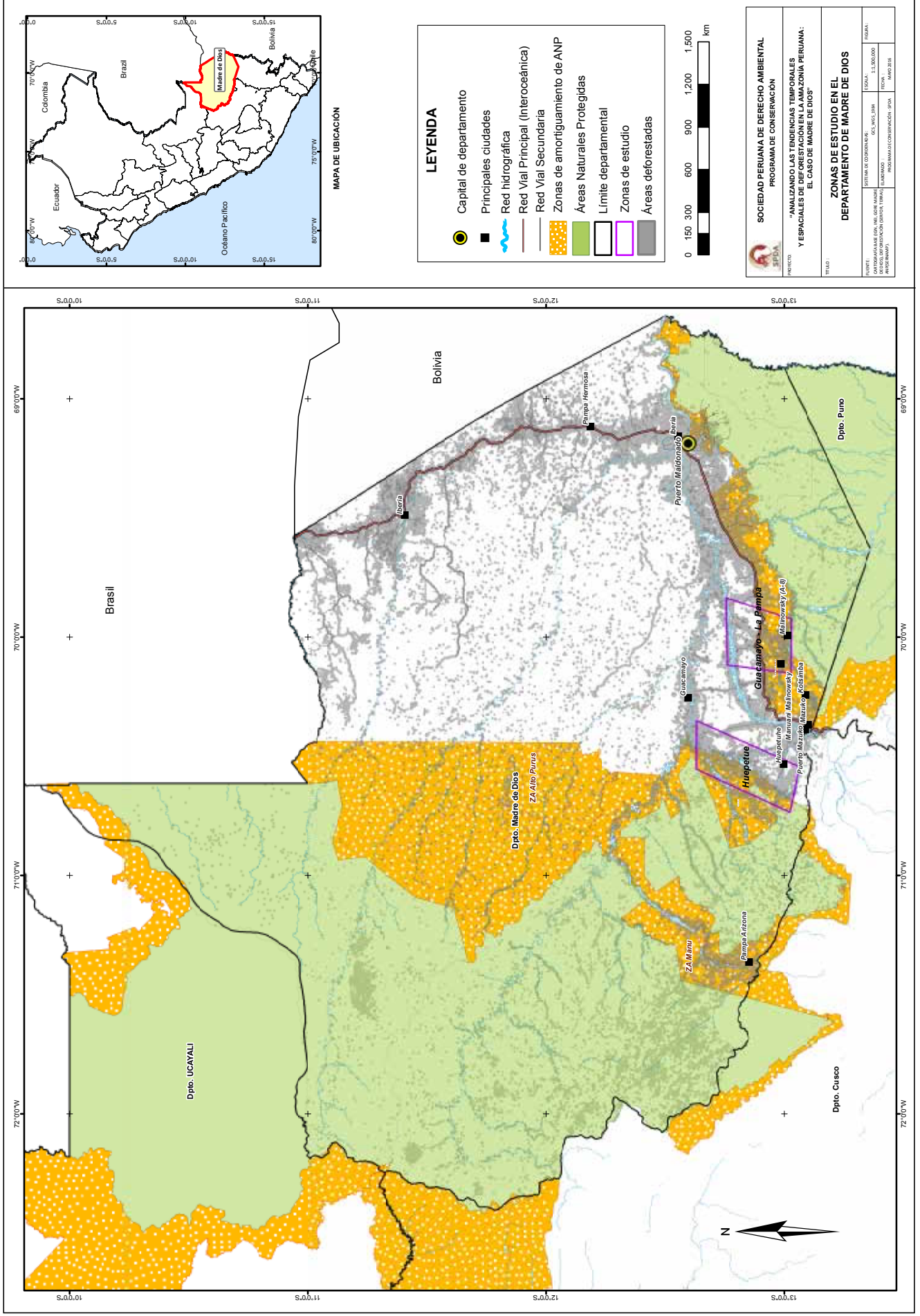
4 Apparently Chile has turned into a new half-way point for purchasing and exporting illegally mined in Peru.



- › To have a clear strategy of intervention of the National Police (Policía Nacional) that clarifies and delimits the possible actions of support provided by the Armed Forces of Peru according to the principles of legality and the rule of law, within a framework of respect for human rights and fight against corruption.
- › To strength the cooperation agreements with neighboring countries and to develop more specific actions of cooperation with the destination countries of the illegal gold.

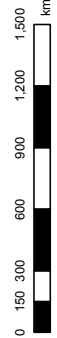
The elaboration of this document has been possible thanks to the financial and logistical support of Global Forest Watch. The access to its service platform and databases has been crucial to carry on the proposed analysis. The results presented here are part of the research and analysis efforts carried out by the SPDA since 2010 to generate information that may contribute to improving the policies regulating small-scale mining activities in the region. The author wishes to thank the comments and contributions from Claudia Benavides, Isabel Calle, Manuel Ruiz and Ruth Noguérón to the elaboration of this policy brief, and takes full responsibility for any mistakes or omissions in this document.

Map N° 1. Location map: Madre de Dios and areas of the study



**LEYENDA**

- Capital de departamento
- Principales ciudades
- ~ Red hidrográfica
- Red Vial Principal (Interoceánica)
- Red Vial Secundaria
- Zonas de amortiguamiento de ANP
- Áreas Naturales Protegidas
- Límite departamental
- Zonas de estudio
- Áreas deforestadas



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PROGRAMA DE CONSERVACIÓN

PROYECTO: "ANALIZANDO LAS TENDENCIAS TEMPORALES Y ESPACIALES DE DEFORESTACIÓN EN LA AMAZONIA PERUANA: EL CASO DE MADRE DE DIOS"

TRABAJO: ZONAS DE ESTUDIO EN EL DEPARTAMENTO DE MADRE DE DIOS

FECHA:	SISTEMA DE COORDENADAS:	ESCALA:	PROYECTO:
11/02/2010	UTM	1:250000	13
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INVESTIGADOR:	INVESTIGADOR:	INVESTIGADOR:	INVESTIGADOR:

Source: In-house compilation.

# INTRODUCTION

Madre de Dios is one of the most biodiverse regions in the planet, and is known as the Peruvian capital of biodiversity. With an area of over 32 thousand sq mi, and almost 60% of its territory composed of natural protected areas, this region is located in the southeastern end of Peru, and borders Brazil and Bolivia to the east. In addition, the river bearing the same name crosses it —it is part of the sub-basin of the Madeira river (Brazil).

Until the 1990s, Madre de Dios was one of the best-preserved areas of the Peruvian Amazon. However, the accelerated growth of the gold mining during the past decade has changed this scenario. The emergence of a third gold rush<sup>5</sup> between 2006 and 2015 has turned this region into the second most significant area of deforestation due to gold mining in the rainforests in South America<sup>6</sup> (Álvarez & Aide 2015). Moreover, this third gold rush has worsened the social and environmental issues associated to this activity, for example, increasing the cases of human trafficking and mercury emissions on the environment.

This accelerated growth can be explained in part by the international prices of gold, but there are also a number of domestic factors associated to regulations and institutionalized practices regulating the access to natural resources, which this document analyzes.

The small-scale mining policies have been one of the most important channels of State intervention to address issues resulting from informal gold mining in this region, especially because unlike Brazil<sup>7</sup>, the main type of mining activities in the Peruvian Amazon (and especially in Madre de Dios) has been one of informal small-scale operations<sup>8</sup>.

This policy brief intends to analyze the characteristics of small-scale mining and its impact on the processes of deforestation in Madre de Dios. Our analysis focuses on three areas of mining exploitation: Huepetuhe, Guacamayo, and La Pampa (see Map N° 1), the most important gold mining locations in Madre de Dios, developed between the mid-1970s and 2015, accounting for about 90% of the deforestation due to mining in this region.

The document is divided into four sections: in the first section, it presents the theoretical considerations and the categories of analysis orienting the study. In the second section we present the characteristics and changes in the small-scale policies since the 1970s. The third part examines the spatial expansion of the informal and illegal mining in Madre de Dios, and the fourth part presents recommendations to improve the policy for small-scale mining.

5 Madre de Dios experienced two previous gold rushes: in the mid-1950s and afterwards between 1975 and 1985. None of these had the magnitude and impact of this third gold rush.

6 According to Álvarez & Aide, between 2001 and 2013 almost 30% of all the deforestation due to mining in South America was generated in Madre de Dios (Álvarez & Aide 2015). This calculation is close to the estimates made by Asner and others on deforestation until 2013, with approximately 50 thousand hectares of deforestation due to mining (Asner et al. 2013). We have to consider that these 50 thousand hectares account for more than 30 years of mining exploitation but at least 50% of which has been generated in the past 10 years.

7 The Brazilian Amazon basin has also formal, mid-scale, and large-scale mining operations; thus deforestation is not only attributable to small-scale or informal mining. The cases of Ecuador, Colombia, and Bolivia are similar to the Peruvian case: there are no formal, large-scale mining activities in their Amazon regions, therefore deforestation may be attributed to mining operations classified as “small-scale” in these countries.

8 In Peru, the term “informal mining” is understood as one in which the miner does not comply with all the legal requisites to operate. Since 2010, the term “illegal” has been introduced in the Peruvian legislation to distinguish between small scale informal miners and those who are not necessarily small but operate as such, usually in areas forbidden for mining activities (for instance within natural protected areas).

# POLICIES ON SMALL-SCALE MINING, INFORMALITY AND ILLEGALITY: THEORETICAL CONSIDERATIONS<sup>9</sup>

Small-scale mining<sup>10</sup> is associated—in the social imaginary and the technical debate—with a reality of informality. Thus, the State actions to define and regulate this sector are based mainly on diagnoses on informal economies. For example, the small-scale mining policies in Peru<sup>11</sup> have generally been inspired by “formalization” proposals originally developed for other sectors of the informal economy, focusing around four areas: formalization (granting rights of use and permits), administrative simplification, specialized technical assistance (on production, financing, and trade), and auditing and monitoring actions on the part of the State. However, when dealing with informal activities closely related to the use and management of natural resources, other themes or elements need to be taken into account.

In this document we propose two additional and important policy areas: land management and prevention of illicit economies. Regarding land management, the analysis of the environmental variable, generally absent in the debates around informal economies, has clearly shown the generation of negative externalities in this sector, and the need to have land management policies that can regulate and reconcile different and competing economic activities within a territory (Valencia 2014a, 2014b). Regarding illicit economies, even if the theoretical development is still insufficient on the links and differences between informal economies and crime economies, several Latin American governments have encouraged a prevention approach on crime chains since the last decade, as part of their efforts to stop the growth of illegal mining activities in the region.

A small-scale mining policy intending to reduce informality in this sector should pay attention to the six themes mentioned above. Moreover, we need to consider that the degree of implementation of four of these approaches (land management, administrative simplification, formalization and technical assistance) can be influenced by the greater political context, especially by two relevant factors: in the first place, the type of economic policy in place in a given country (as measured by the level of economic opening), and in the second place, the prevailing mining and natural resources policy approach in the country. This greater political context may explain, to a great extent, the preferences of some governments for certain approaches.

---

9 One of the greatest limitations in the analysis and evaluation of the formalization policies for small-scale mining in Peru and Latin America is the lack of theoretical basis to examine this issue. Since 2012, we have tried to pursue this task. This section summarizes these efforts, connecting two fields of theoretical production which have influenced the design of formalization policies in Peru and the world: that of the informal economies, and the role of the State to regulate the economy.

10 In this study, we understand by small-scale mining all activities within the parameters of artisanal and small-scale mining, as defined by the Formalization Act No. 27651.

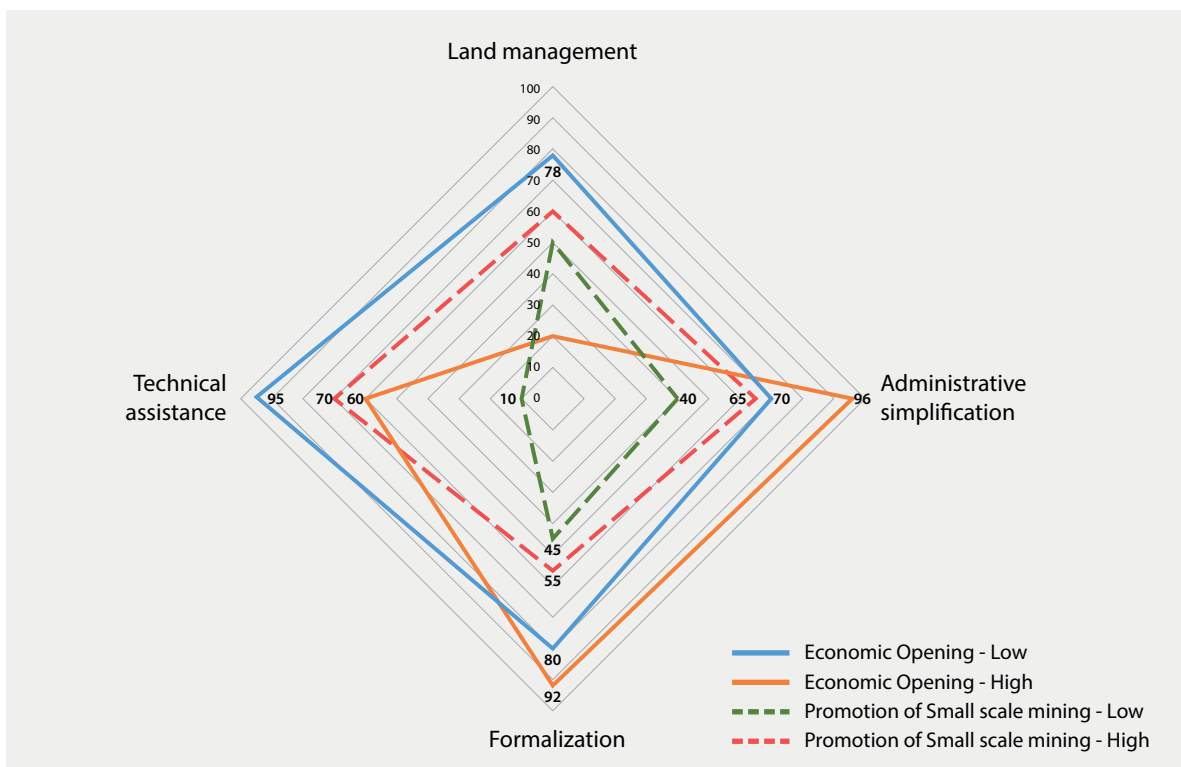
11 These analysis guidelines might be used in other countries in the region with similar conditions, such as Colombia, Bolivia, Brazil, and Ecuador.

In addition, apart from the economic policy or the vision on the mining policy in a given country, policies tackling the themes of illegal/shadow economies, and State auditing and monitoring capacities can be essential to prevent corruption and ensure the effective implementation of the small-scale mining policies, whatever their nature.

The analysis presented here can become a guideline to evaluate small-scale mining policies in other countries so that decision makers can evaluate where more emphasis is needed in order to have balanced small-scale mining policies. This analysis proposal can also provide citizens with a better understanding on the ways the political context can have an impact on the implementation of these approaches.

The evidence for the Peruvian case shows that the small-scale policies promoted since 2002 in a context of economic opening has been characterized by a lack of clear sectorial policies, and by a disjointed land management which has favored the expansion of the informal mining and the development of connections with illicit activities, with effects on deforestation such as the ones witnessed in Madre de Dios. In the following sections, we present information supporting this analysis and accounting for the Peruvian Government actions to address the expansion of gold mining in Madre de Dios and its influence on the patterns of land occupation and, therefore, on deforestation.

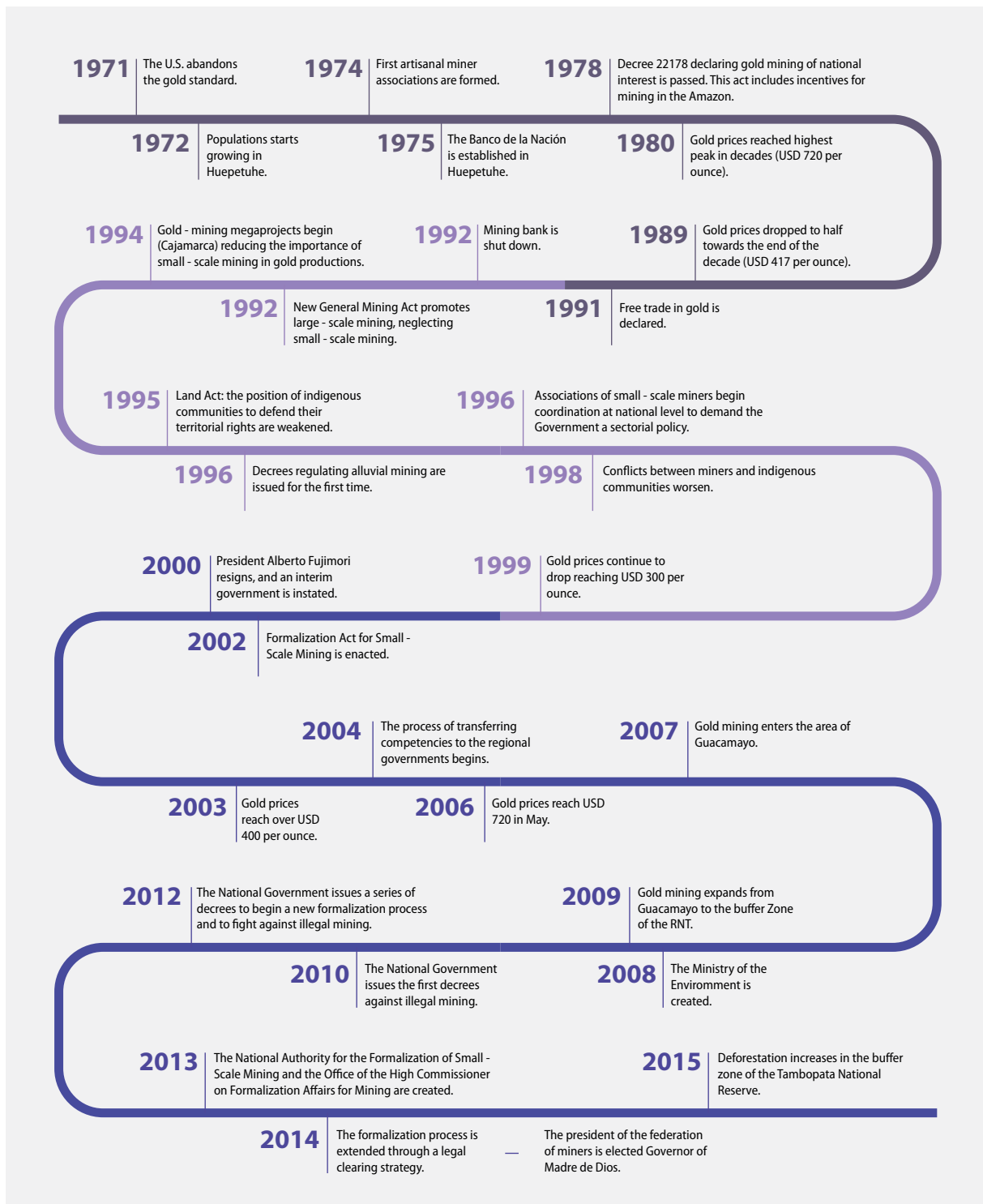
**Chart N° 1. Political economy of small-scale mining**



Source: In-house compilation.

## MADRE DE DIOS: POLICIES ON SMALL-SCALE MINING AND THE OCCUPATION OF SPACE

Chart N° 2. Timeline of Small-Scale Mining Policies



The small-scale formalization policies can be divided into four big periods: a first period of promotion of small-scale mining, with direct State participation (from the end of the 1970s to the end of the 1980s), a second period of State retraction to regulate/encourage this activity (the whole 1990s), a third one of emphasis on formalization (from 2002 to 2009) and the last period of indiscriminate containment of informal mining with negative effects on small-scale mining (since 2010 to the date). Each period is linked with changes in the patterns of occupation of the space in Madre de Dios and with the processes of deforestation.

## 1970s – 1980s: Formalization with promotions

The policy approach of direct State intervention in the promotion of economic activities in the 1970s also affected the sector of small-scale mining. In this framework, the State decided to strengthen the actions of the Mining Bank (Banco Minero) in order for the Bank to play its double role as a platform of financial and logistics services, and as a control and regulating mechanism for this activity. This support was not accidental but coincided with an untypical upturn in gold prices and with a period of regional economic crisis, from the mid-70s, which would result in the 1980s' Latin American foreign debt crisis.

The actions of the State during this period (1970s and 1980s) were marked by ambiguity and contradictions: on the one hand, it encouraged the productive development of artisanal miners, but at the same time it granted mining concessions to non-local miners over areas already being worked by local small miners without foreseeing potential conflicts between these two types of miners.

This context of State ambiguity and favorable international prices gave way to the formation (in Madre de Dios) of a "social productive network", a series of small-scale mining organizations and associations which, in contrast with previous periods, consolidated their presence in the land through the construction of permanent settlements and combining their mining, agricultural, and forest activities. In the 1970s and 1980s the most important small-scale associations in Madre de Dios were formed, and they played a key role in the processes of negotiation with other local actors and in the elaboration of the 2002 Formalization Act (Valencia, 2014a).

## 1990s: Formalization with no promotions

The reforms of the 1990s meant for the small-scale mining (and for various other vulnerable sectors of the Peruvian economy) a retraction of the State in its promoting role. The new framework of the economic policy in the 1990s favored large-scale investments and gave a series of measures which indirectly influenced the development of informal and illegal mining. The four most important measures affecting the expansion of informal mining were: the declaration of free gold trade (DS 005-91-EM-VMM, issued in March of 1991), the reduction of the role of the development banking (DL 25478, issued in May of 1992), the reforms to the agricultural property (DL 653 of 1991 and the Act 26505 of 1995) and the dismantling of the planning systems for land management:

- › **The retraction of the development banking** involved closing the Mining Bank, and the reduction of opportunities for small-scale miners to gain access to appropriate financial sources, especially in areas with little presence of private banking, such as Madre de Dios. With this measure, the indirect control and audit channels were weakened, as well as the mechanisms to build information that institutions like the Mining Bank had accomplished.
- › **The free gold trade** weakened the ability of the State to ensure mechanisms of gold traceability, key to prevent, for instance, the links between informal and illicit activities such as drug trafficking. This has become a monitoring gap which has only been partly addressed since 2012 (Benavides 2015, 246).

- › **The measures regarding agricultural property**, initially thought to promote investment in large-scale mining and agriculture, also favored the granting of mining to small-scale miners, which weakened the position of indigenous peoples to defend their territorial rights. These conditions generated a series of conflicts between informal miners and indigenous communities in Madre de Dios along the whole decade (Benavides 2015, 246).
- › **The dismantling of the planning systems for land management.** In 1992, the National Planning Institute was dissolved, therefore reducing the State capacity to plan and coordinate the use of natural resources. Since then it has been difficult to reintroduce the need for planning and forecast in the Peruvian public policies. This vision of policies has limited decisively our ability to arrange technically and politically the economic uses of the Peruvian territory, affecting negatively our capacity to support activities with mid mid- and long term returns (for example, forestry activities) and which under “normal market conditions” cannot compete with more profitable activities, such as gold mining.

With this new governmental vision, small-scale mining was considered a lesser activity, politically valued only as a mechanism to fight against poverty and to generate jobs<sup>12</sup>. In this line, its promotion was left mainly in the hands of international cooperation agencies, with actions focusing on improving the environmental and occupational management of the running units<sup>13</sup>, with no strategic vision to generate clusters for small-scale mining integrated to larger processes of territorial development.

The retraction of the Peruvian Government generated an organized reaction of different small-scale mining guilds and their national articulation to promote the elaboration of sectorial policies. Between 1996 and 2001, the small-scale mining guilds promoted the creation of a national policy oriented to small-scale miners which resulted in the passing of the Small-Scale and Artisanal Mining Formalization Act in 2002 (Act #27651). It should be noted that the issue of the small-scale mining was not expressed by then in terms of “illegality”, but rather “informality”, so much so that the main regulation oriented to this sector, called “Formalization Act”, did not include any reference to the issue of illegal mining in any of its articles.

In environmental terms, the accumulated deforestation due to mining activities in Madre de Dios between the decades of 1970 and 1990 reached some 25 thousand hectares approximately (AIDER 2012), by it was not the main cause of deforestation in the region. The very debate of the Formalization Act shows this situation was not yet perceived as a core problem by the decision-makers and stakeholders, but rather those issues around mercury and human trafficking (Valencia 2010a).

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12 This approach, linked with paradigms such as those of the World Bank, which saw small-scale mining as a social problem, contrasted with another approach, more proactive and State-driven like the Chilean, which saw mining “as an business opportunity that emphasizes its contribution to production and exports” (Chaparro 2004, 29). With this approach, the Chilean Government entrusted the National Mining Company with the development of actions oriented to this sector.

13 One of the most important projects supporting small-scale mining has been the GAMA Project, financed by the Swiss cooperation. See footnote 14.



## 2002 - 2009: Promotion with no direct State intervention

By the beginning of the 2000s, informal mining was already an issue of concern in different countries and multilateral organizations, such as the World Bank, due to the social and environmental issues associated with it. The policies for small-scale mining recommended the development of at least four components to address the issue: formalization (giving right of usage and permits) administrative simplification, specialized technical assistance (in production, financing, and trade), and actions of auditing and monitoring carried out by the Government.

The Formalization Act provided elements for the development of all those levels of action, but until 2009, the actions of the Government in Madre de Dios focused almost exclusively in conflict resolution between miners in the formalization process and indigenous communities, as a precondition for miners to gain access to the formalization process (see Map N° 2). This was rather a temporary and reactive response, which did not address the causes of the problem: the accelerated encouragement of mining activities throughout the Peruvian territory as part of policy to establish favorable conditions for large-scale multinational mining companies, the absence of sectorial policies supporting the sector of small-scale mining, and the weak actions of auditing and monitoring.

Regarding the technical assistance policies, the few experiences of technological transfer, such as those proposed by the GAMA Project<sup>14</sup>, did not continue as State policies. Not to mention they could not keep up with the growth of the sector since mid-2006, when the gold prices favored an accelerated growth of informal mining in the whole country. As Chaparro points out, this has been a constant in Latin America: technical assistance programs end when the international cooperation is over, "having no continuity even when the interest of providing technical assistance to small-scale mining has been permanent" (Chaparro 2004, 18).

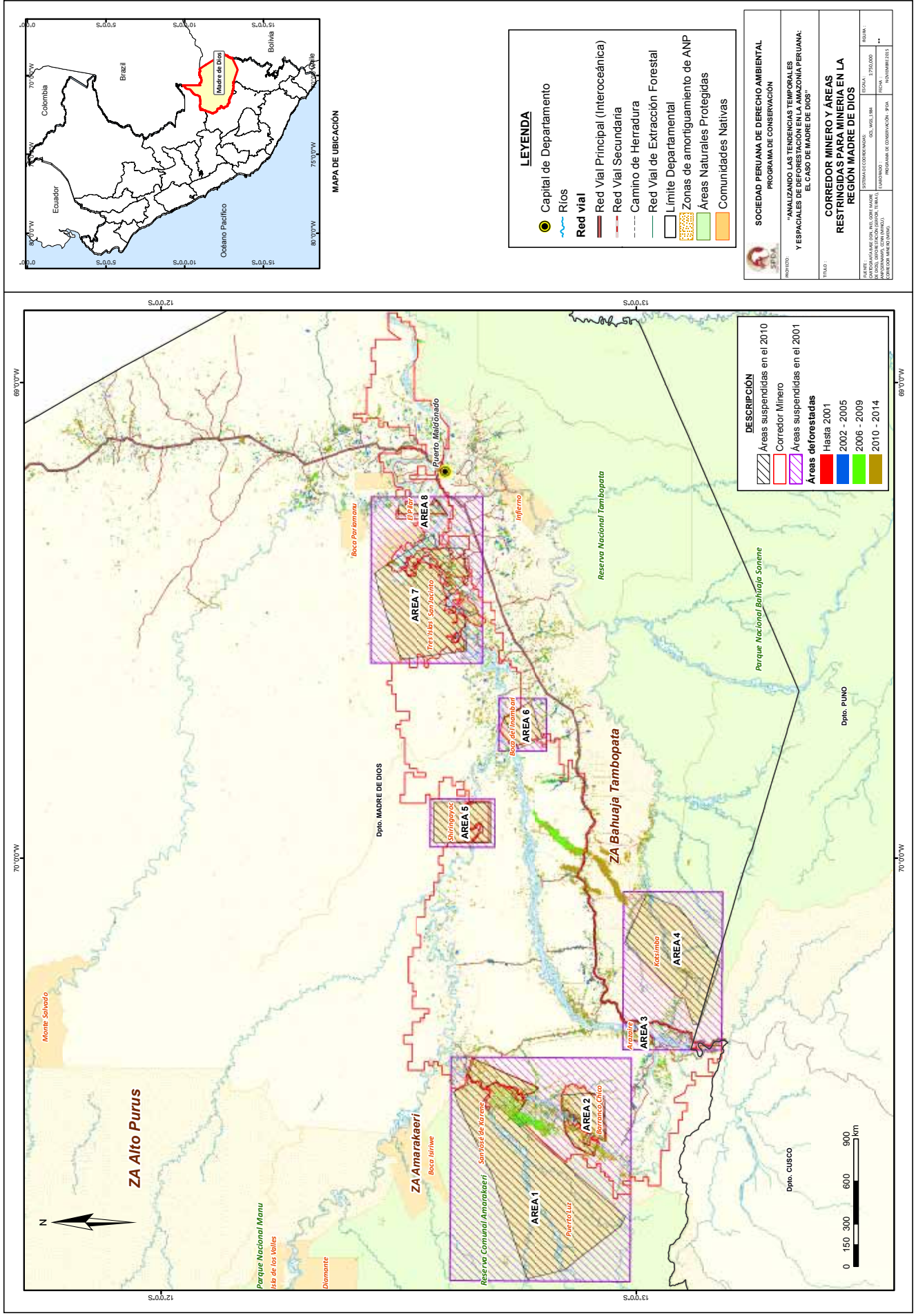
The administrative simplification and the auditing and monitoring actions became a more complex task when the competence to lead these components was transferred to the regional governments as part of an inadequate decentralization process that increased the resources of the regional governments, but not so much their capacities to make decisions over those expenses (Baca 2006, 25). The Formalization Act had not incorporated the "decentralization" variable, adapting to this new public management framework on the way, in a context of constant pressure and high expectations of the local population for this new level of government to solve the urgent tasks resulting from the accelerated growth of gold mining in the region.

In spite of the limitations, between 2002 and 2005, the formalization process occurred in a relatively stable scenario: the national and regional governments had to solve the cases of informal mining prior to 2002, which in the case of Madre de Dios involved attending the conflicts between miners in the formalization process and the native communities (see Map N° 2). Also, the main focus of the mining activity was concentrated in Huepetuhe, which by then had approximately 11,074 hectares given in concession for mining, accounting for 60% of the areas of mining interest in Madre de Dios for this period (see Chart N° 3).

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14 The "Environmental Management in Artisanal Mining" project (GAMA Project), jointly funded by the Swiss Cooperation and the Ministry of Energy and Mines, had the main goal "to improve the environmental situation of artisanal mining, thus contributing to the sustainable development of the areas where this activity is carried out in Peru". It was carried out between 2000 and 2008 in the departments of Puno, Arequipa, Ayacucho, and Ica in three stages. [<http://www.gama-peru.org/gama/tiki-index.php?page=Resumen+del+Proyecto>]

**Map N° 2. Areas suspended for granting of mining claims 2002-2010**



Source: SPDA.

Since 2006, the scenario got more complicated with the accelerated and informal growth of gold mining, first in Guacamayo (2006-2009) and later in La Pampa (2010 to the date), both exploitation locations adjacent to the Inter-Oceanic Highway. In this context, the national Government began to outline initiatives to harden the sanctions to informal miners working outside institutional arrangements. The regional Government prioritized the resolution of conflicts between miners and indigenous communities (priority to local actors) so the miners may continue with their formalization process. To a lesser extent, the regional Government promoted the development of land management tools to avoid overlapping conflicts. So in 2009 it issued a regional ordinance to implement a unified land registry, and finished the process of macro-regional ecological and economical zoning, which later served as an important input for the mining zoning process which began in 2010. However, these efforts were insufficient in the face of the aggressive growth of gold mining in the region.

## 2010 - 2015: Containment of informal mining with no special promotion for small-scale mining

The beginning of unauthorized gold mining within the buffer zone of the Tambopata National Reserve (RNT) was one of the breaking points for the national Government to make a shift in its policies to regulate the sector. In February of 2010, the national Government issued the Emergency Decree 012, with a series of measures that have served as parameters of the formalization policies between 2010 and 2015. Three of them are especially highlighted:

1. Declaring an exclusion zone prohibiting all types of artisanal or small-scale mining (the decree did not rule out the possibility for medium- or large-scale mining) within this zone. The area comprised, among others, the buffer zone of the RNT, whereas the area allowing mining had an area of 545,811 hectares (see Map N° 2).
2. Prohibiting mining with dredges and similar equipment in riverbeds and bodies of water.
3. Defining the concepts of illegal and informal mining, and arranging a series of measures to address each of them—the most important for the case of illegal mining being the development of interdiction actions.

In contrast with the previous period, in this stage the State actions of the Executive branch deepened with a less relevant role of the Congress and even more marginal role of the Judiciary branch. The outgoing President Alan García (2006-2011) initiated this process by issuing the Emergency Decree 012-2010 and the administration of President Ollanta Humala (2011-2016) continued and deepened this trend by issuing a series of decrees within a framework of a request for delegation of powers of the Executive branch to the Legislative in order to make laws on this issue.

From 2010 to 2015, the greatest efforts of the Executive branch to define the State framework of actions against informal and illegal mining meant:

1. **Policies less open to processes of consultation** with actors associated with this sector or affected by these measures. If the Formalization Act of 2002 had incorporated unions of small-scale miners from the most important mining settlements of the country in its design (Madre de Dios, Puno, Arequipa, La Libertad), since 2010, the absence of these actors in official settings to discuss these issues became more than obvious.

2. **Development of inter-institutional coordination structures** to address the issue. Up until 2005, the actions to formalize small-scale mining had been in the hands of the Ministry of Energy and Mines. Since 2006, as the informal/illegal mining issue became more complex, efforts of inter-ministerial coordination began with the Presidency of the Council of Ministers (PCM)<sup>15</sup> as the coordinating organism. However, it wasn't until May of 2013 that this leadership was consolidated with the creation of the Office of the High Commissioner on Formalization Affairs for Mining, Interdiction of Illegal Mining, and Environmental Remediation, directly linked to the PCM. In addition, after over a decade of leading actions to formalize small-scale mining nationwide, in July of 2013 the National Office for Mining Formalization was officially recognized as an entity of the Ministry of Energy and Mines, and in charge of “proposing and evaluating the policy on the mining formalization of the mining sector, proposing and/or issuing the necessary regulations, as well as promoting the execution of activities oriented to the formalization of mining activities” (DS 025-2013-EM).
3. **Less participation of the regional governments** within the inter-ministerial structure, even though the decentralization process gave them a key role in the organization process of informal mining. Even when the regional governments had a series of flaws, the monitoring of the Executive Power to the actions led by the regional governments, and the incorporation of these governments in the most important decision-making spheres on the issue was key to monitor the effectiveness of the proposed measures, especially considering that several of these measures had to be implemented by the very regional governments.
4. **A greater emphasis on the themes of formalization, auditing and monitoring**
  - › **In the field of formalization**, the national Government issued a series of decrees to redefine the formalization stages and requisites in five steps. However, its implementation was hampered by the lack of decision on aspects regarding land management (legal clearing of the rural lands in areas associated to mining developments, unorganized granting of concessions of various kinds). With these shortcomings, most miners in the formalization process were tangled in the third step, where informal miners should prove they had an authorization to use the superficial land, whether from a private owner (for example, if it was an agricultural property) or from the State (if it was a mining or other kind of claim).
  - › **In the field of auditing and monitoring**, actions of auditing and monitoring were strengthened, oriented both for actors in the value chain (for example, fuel control and establishing fiscal routes) as well as for the regional government agencies in charge of formalization tasks. For example, the Environmental Evaluation and Auditing Organism (OEFA) and the Office of the State Comptroller initiated control processes on regional governments, which served to highlight the performance of this level of government in the formalization process.
5. **An increasingly frequent use of law enforcement.** Carrying out police and military operations has become increasingly frequent, and it is the most visible face of the State intervention against illegal mining in Madre de Dios. Nevertheless, these actions have been unable to stop the advance of illegal mining in the Tambopata National Reserve and the increased insecurity (thefts, attacks) in the areas of direct influence of the exploitation locations. Moreover, some of these interventions (especially those carried out in the area allowed for mining) have increased the intensity of the social conflicts in Madre de Dios.

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15 The PCM is the ministry responsible for the coordination of national and sectorial policies of the Executive branch. It coordinates the relations with the other branches of the State, the constitutional organisms, the regional governments, and the civil society (Act #29158, Art. 17).

Altogether, these measures show a shift in the Peruvian Government towards a more coercive small-scale mining policy, in response to the pressures of the public opinion to address deforestation in Madre de Dios; but it did not incorporate other parallel, sustainable measures to differentiate agents in this sector and deliver distinct incentives (technical assistance) according to the different type of mining activities, nor the development of land management policies that would allow solving disputes due to the use of natural resources. For instance, the Territorial Zoning in Madre de Dios only reached the level of ecological-economic zoning, and beyond its use to establish a mining exclusion area, it has not worked as a tool that might have helped the very formalization process.

In summary, the 2010-2015 period clearly showed a small-scale mining policy that relaunched the formalization issue with greater effect on audit and monitoring actions in order to respond to the accelerated growth of mining activities in Guacamayo and La Pampa. The results in this period can be summarized as follows:

- › The progress on issues of technical assistance for small-scale mining and land management have been minimum, even when they were crucial to strengthen the very formalization process. Technical assistance was a fundamental cornerstone to facilitate the formalization process of those small-scale miners with better conditions to work formally and could have worked to show the effectiveness of this policy to those who criticized it based on its unfeasibility. Additionally, the theme of land management was fundamental to solve the problem of concessions and rights overlapping, and to delve into processes of micro-zoning within the areas allowed for mining.
- › The Energy and Mines sector strengthened its actions of giving mining concessions with no further efforts to coordinate with other State bodies responsible for giving other usage rights<sup>16</sup>.
- › The Peruvian Government was overtaken by a growing number of informal miners, and was unable to strengthen and monitor miners who were already on the path of formalization since the 1990s. This weakness is connected to deficiencies and delays in the modernization of public management to make it more efficient and clearer.
- › Since 2009, the national Government reacted in the face of the rapid advance of the miners into the Tambopata National Reserve prioritizing the use of the law enforcement and a vertical and centralized redesign of a small-scale mining policy which did not distinguish between types of mining nor favor the active participation of the regional governments in the redesign of these policies.
- › The degree of coordination between the national and regional governments worsened since 2012, with mutual accusations of inefficiency, which led to a climate of constant tension between both levels of government. This climate of tension has favored the regional pro-mining agendas at a local level, which from the regional government blocked the implementation of the formalization process<sup>17</sup> as a way to undermine the legitimacy of this process. This situation might have worsened with the election of Luis Otsuka for the 2015-2018 period as Regional Governor. Before this position, Mr. Otsuka was the President of the Federation of Small-Scale Miners in Madre de Dios (FEDEMIN), a leader with an active role opposing the measures formulated by the national Government since 2010.

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16 Perhaps the exception is the buffer zone of the Tambopata National Reserve, precisely where due to the restrictions for developing mining activities, the Ministry of Energy and Mines was forced to request opinions to the Peruvian National Service of Natural Protected Areas (SERNANP) in order to give mining claims.

17 According to the Office of the State Comptroller Report N° 060 2016-CG/MA-AC of 2016, the Regional Government of Madre de Dios failed to fulfill its duties as designated authority for the mining formalization within its jurisdiction, specifically those referred to evaluation and resolution of the Remedial Environmental Management Remedial Instruments.

- › With the aforementioned problems, the formalization process in Madre de Dios has not yet concluded any of the approximately 4 thousand formalization records presented.

Despite these complexities, since 2012, the Peruvian Government showed progress in:

- › The distinction between informal and illegal mining. Let alone application issues, this distinction has allowed the State to act faster in cases of flagrant environmental offenses, confirming the intangibility of natural protected areas.
- › The formation of an inter-institutional coordination structure, required to address a problem that was going beyond the powers of the Ministry of Energy and Mines, incorporating in this process the ministries of Agriculture, of the Environment, of Development and Social Inclusion, among others.
- › Improving the mechanisms to trace gold, even when these are still insufficient to prevent the illicit gold trade.
- › The creation of fiscal routes and control posts in Madre de Dios in order to control the entry of supplies for illegal mining (mercury, fuel, machinery).

The administration of President Ollanta Humala ended in July of 2016, with over 60 thousand informal miners throughout the country who have not concluded the formalization process. It is up to the next administration to process these requests and to mend those aspects of the process which have proved insufficient.

In the following two sections we will present an impact analysis of the small-scale mining policies in Madre de Dios and the policy recommendations needed to organize informal small-scale mining and to stop the advance of illegal mining.

## POLICIES ON SMALL-SCALE MINING AND

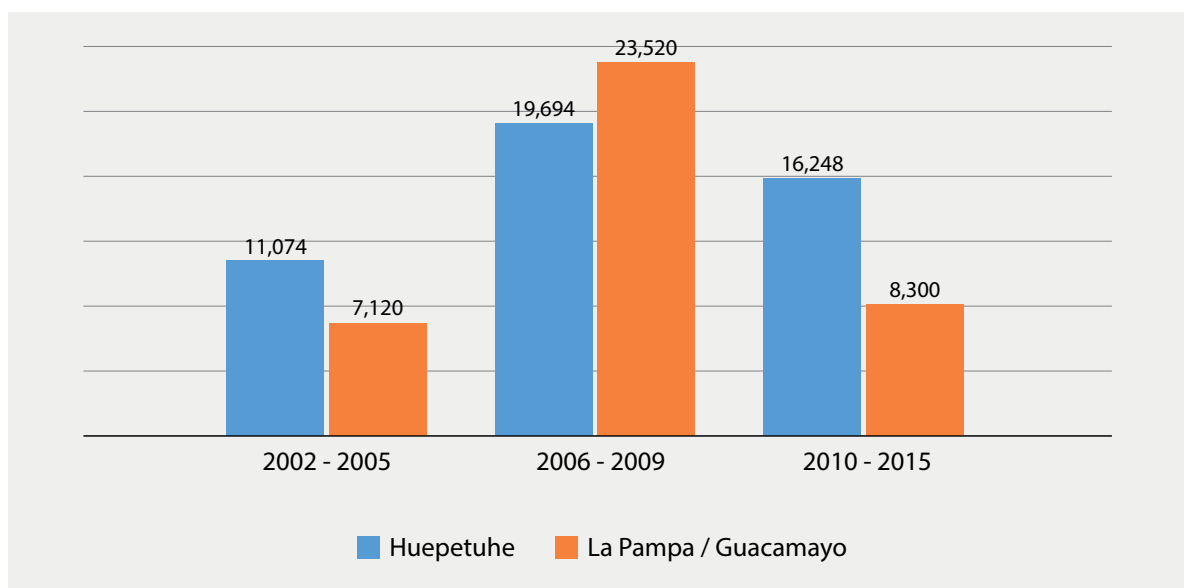
# PATTERNS OF DEFORESTATION

The small-scale mining policies, initiated in 2002, have had concrete impacts on the occupation of the land in Madre de Dios. A first aspect is associated with the level of fast occupation of the land between 2006 and 2009 with the active participation of the State through the accelerated granting of mining claims, both in old mining areas (Huepetuhe) and in new ones (Guacamayo).

As shown in Chart N° 3, the number of hectares granted in Guacamayo between 2006 and 2009 exceeded the number of hectares granted in traditional mining areas such as Huepetuhe, and also increased in this area 330% as compared with the period 2002-2005.

This accelerated grant of mining claims in Guacamayo came with a parallel granting of other types of concessions, with two clear consequences: the creation—on the part of the Government—of incentives for deforestation and the increase of conflicts between forest users, whose activity was inconsistent with that of the miners.

**Chart N° 3. Hectares concessioned to small-scale mining in Huepetuhe and Guacamayo-La Pampa**



Source: In-house compilation.

Analyzing the deforestation associated with mining in different types of concession (see Chart N° 4), we can see that the level of deforestation due to mining is higher in mining claims, but it is closely followed by

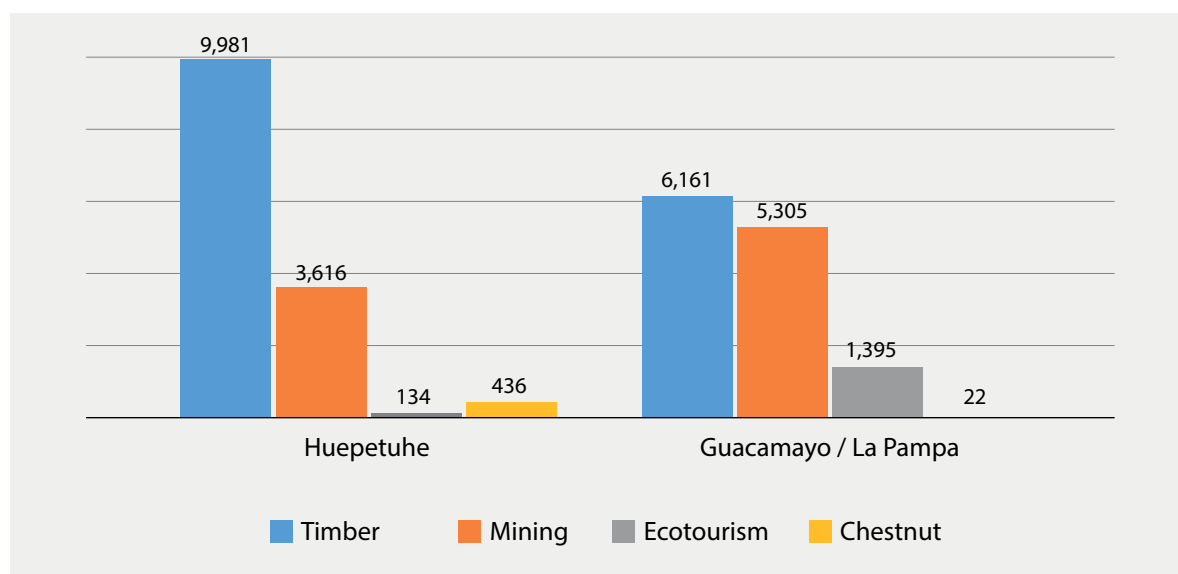
deforestation due to mining within timber claims. This situation is clearer in Guacamayo-La Pampa, an area which before 2006 had mainly forestry and agricultural activities of various kinds. In this area we can see:

- › Overlapping of mining and forest claims, and the development of illegal mining activities in reforestation concessions in La Pampa (Maps N° 3, 4, 5, and 6).
- › Deforestation due to mining in non-mining claims is increasing, not in the period when mining grew more (2006-2009), but rather in the 2010-2015 period, even when most mining concessions were granted during the 2006-2009 period.

This situation reveals three important aspects:

- › Deforestation due to mining in Guacamayo-La Pampa between 2006 and 2009 occurred mainly on concession-free areas, but at the same time the miners requested mining claims over areas already given on concession for other uses, but which were not yet operational. Even with the formalization process incomplete, the miners with small-scale mining concessions started working in these areas granted since 2010.
- › Between 2006 and 2015 the Peruvian Government had a small-scale mining policy that for practical purposes legitimized an important proportion of these invasions, granting mining concessions over other kinds of concessions previously given.
- › The interdiction actions were unable to stop the advance of these invasions, especially in the area of La Pampa.

**Chart N° 4. Hectares deforested by type of concession, until 2015<sup>18</sup>**

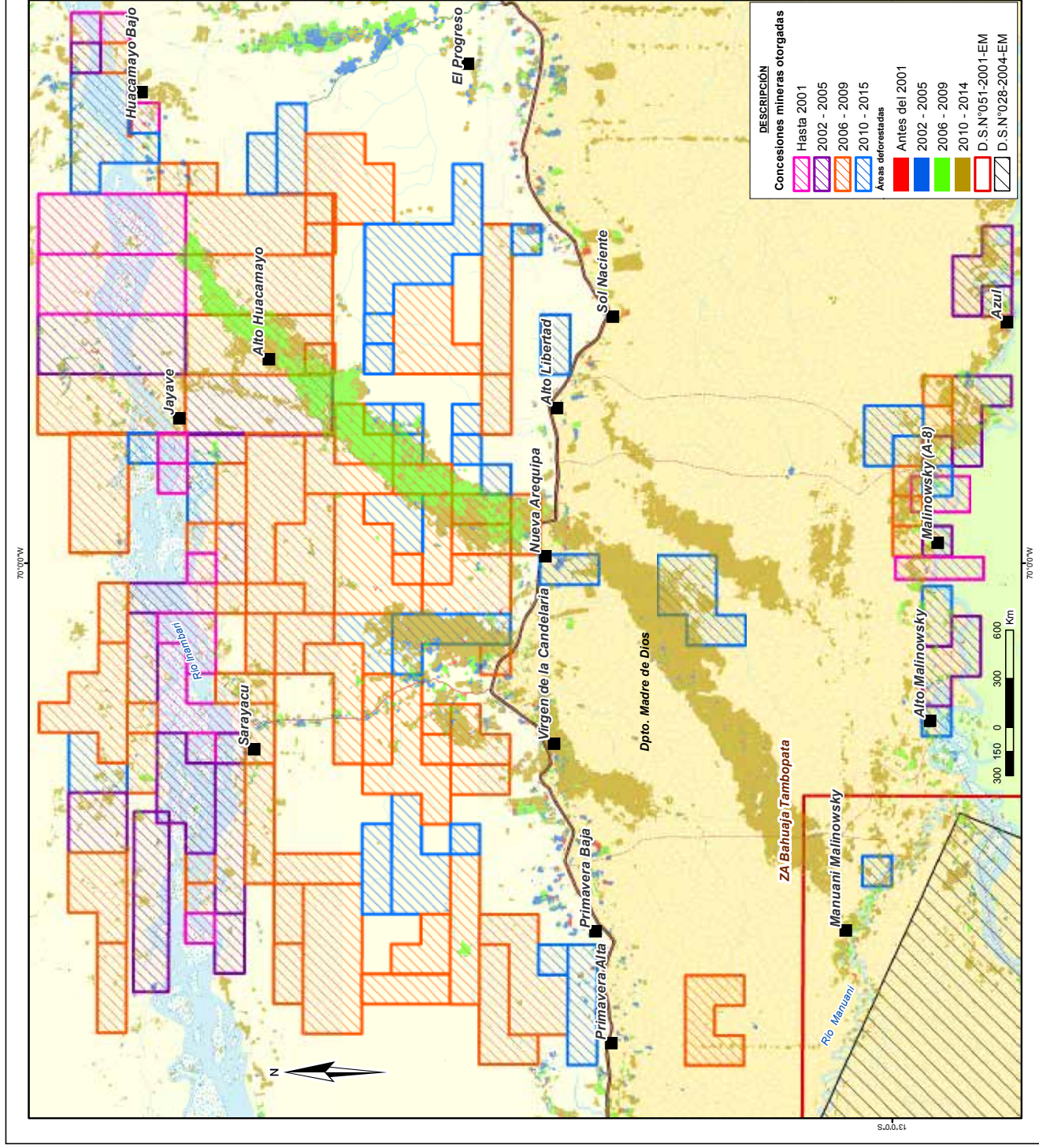


Source: In-house compilation.

18 This estimate is not considering the overlapping of concessions of various kinds; it only reflects the expansion of the deforestation in terms of kind of concession.



**Map N° 3. Guacamayo-La Pampa: Deforestation due to mining in mining claims**



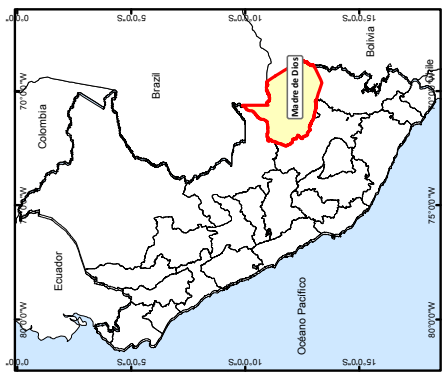
**DESCRIPCIÓN**

**Concesiones mineras otorgadas**

- Hasta 2001
- 2002 - 2005
- 2006 - 2009
- 2010 - 2015

**Áreas deforestadas**

- Antes del 2001
- 2002 - 2005
- 2006 - 2009
- 2010 - 2014
- D.S.N°051-2001-EM
- D.S.N°028-2004-EM



MAPA DE UBICACIÓN

**LEYENDA**

- Centros poblados
- Ríos
- Red vial**
  - Red Vial Principal (Interoceánica)
  - Red Vial Secundaria
  - Camino de Herradura
  - Red Vial de Extracción Forestal
- Limite Departamental
- Zonas de amortiguamiento de ANP
- Áreas Naturales Protegidas

**SOCIEDAD PERUANA DE DERECHO AMBIENTAL**  
PROGRAMA DE CONSERVACIÓN

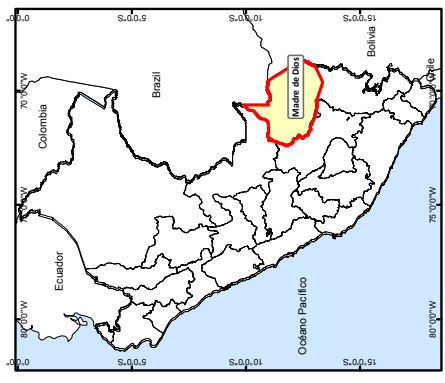
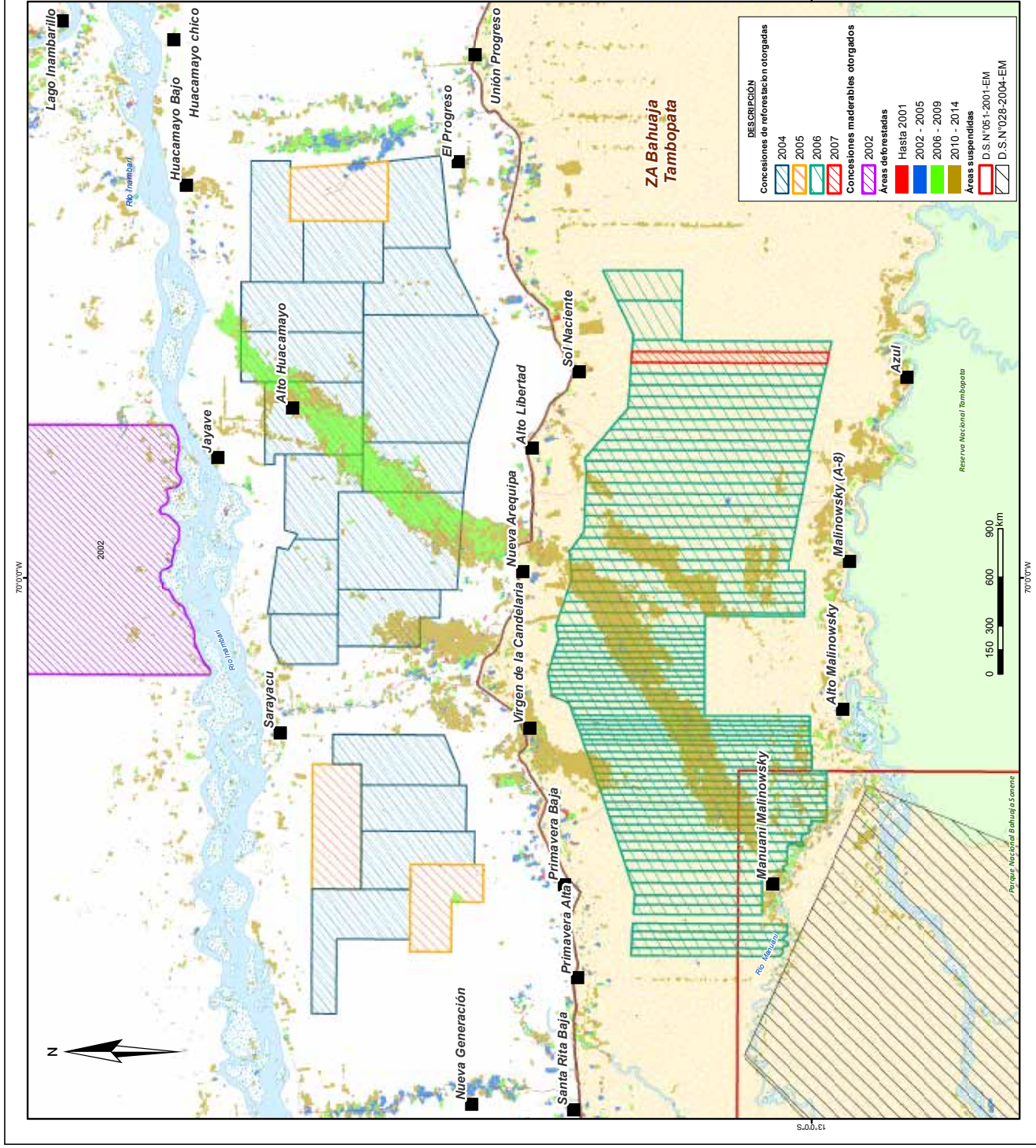
PROYECTO: "ANALIZANDO LAS TENDENCIAS TEMPORALES Y ESPACIALES DE DEFORESTACIÓN EN LA AMAZONIA PERUANA: EL CASO DE MADRE DE DIOS"

FECHA: OTORGAMIENTO DE CONCESIONES MINERAS EN LA ZONA DE GUACAMAYO-LA PAMPA EN LA REGIÓN MADRE DE DIOS AL 2015

FECHA:	ESTIMACIÓN DE CONSERVACIÓN:	COD. SIGES:	ESCALA:	PROYECTO:
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15/08/2015	15/08/2015	001	06P-01	06P-01

Source: SPDA.

**Map N° 4. Guacamayo-La Pampa: Deforestation in timber concessions**



**LEYENDA**

- Centros poblados
- Ríos
- Red vial
- Red Vial Principal (Interoceánica)
- Red Vial Secundaria
- Camino de Herradura
- Red Vial de Extracción Forestal
- Límite Departamental
- Zonas de amortiguamiento de ANP
- Áreas Naturales Protegidas

**SOCIEDAD PERUANA DE DERECHO AMBIENTAL**  
PROGRAMA DE CONSERVACIÓN

PROYECTO: "ANALIZANDO LAS TENDENCIAS TEMPORALES Y ESPACIALES DE DEFORESTACIÓN EN LA AMAZONIA PERUANA: EL CASO DE MADRE DE DIOS"

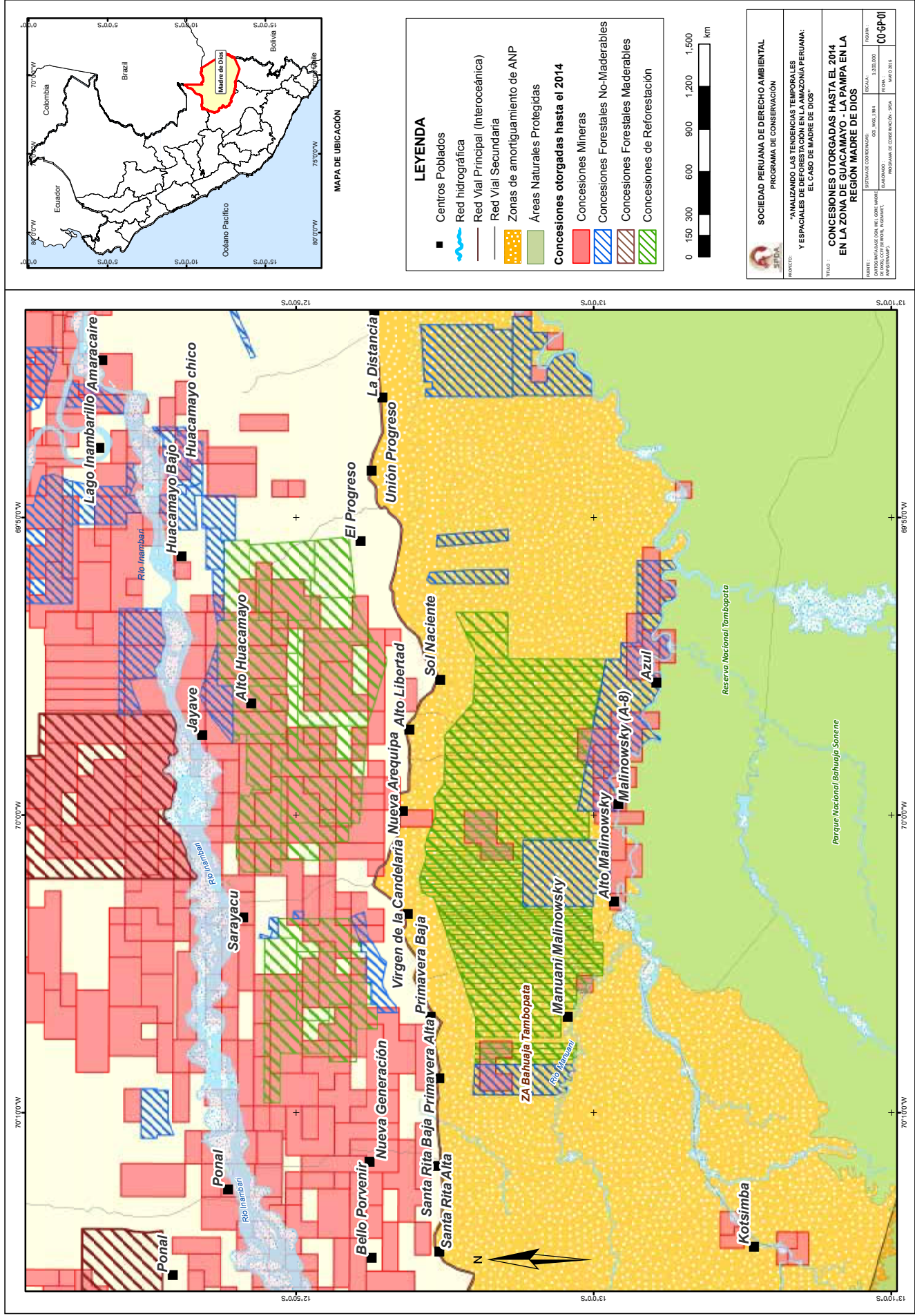
TÍTULO: OTORGAMIENTO DE CONCESIONES MADERABLES EN LA ZONA DE GUACAMAYO-LA PAMPA EN LA REGIÓN MADRE DE DIOS AL 2015

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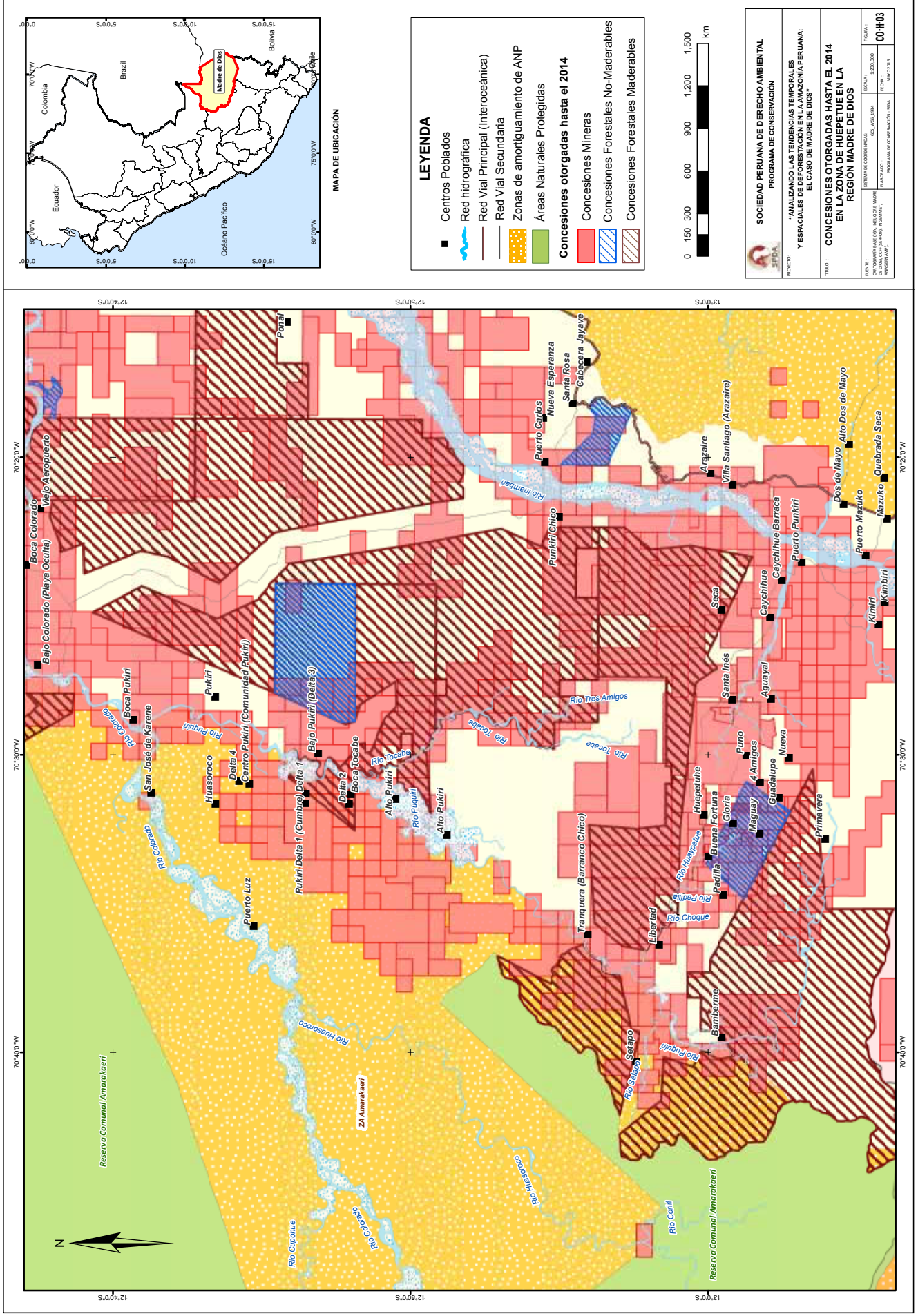
Source: SPDA.

**Map N° 5. Guacamayo-La Pampa: Overlapping of claims until 2014**

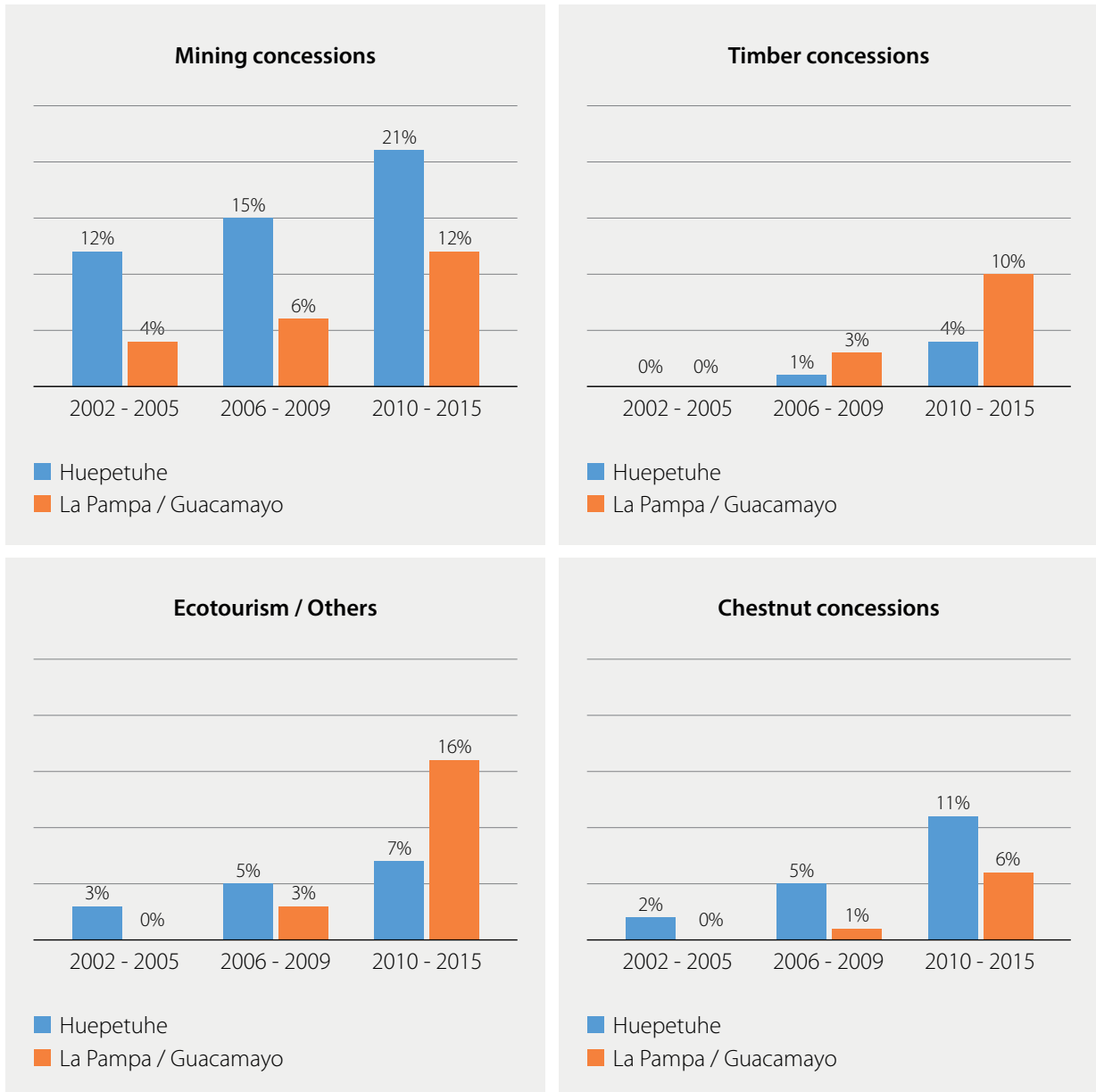


Source: SPDA.

Map N° 6. Huetpetuhe: Overlapping of claims until 2014



**Chart N° 5. Comparison of Deforestation Percentages in Areas Claimed in Huepetuhe and Guacamayo-La Pampa**

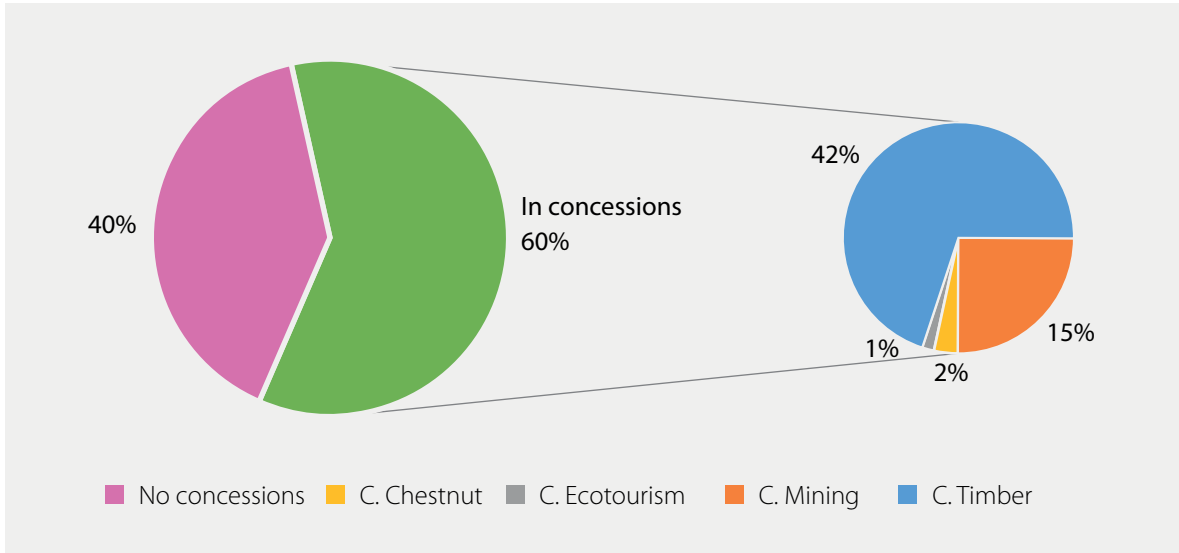


Source: In-house compilation.

Based on recent studies on deforestation due to mining in Madre de Dios (Asner et al. 2013, Álvarez & Aide 2015), an approximate estimate can be made of the percentage of deforestation in concession-free areas. Based on this, the comparison between Huepetuhe-Delta and Guacamayo-La Pampa confirms that Guacamayo-La Pampa had a greater percentage of deforestation in concession-free areas (51% of the deforestation due to mining occurs in this type of settings), as compared with Huepetuhe.<sup>19</sup>

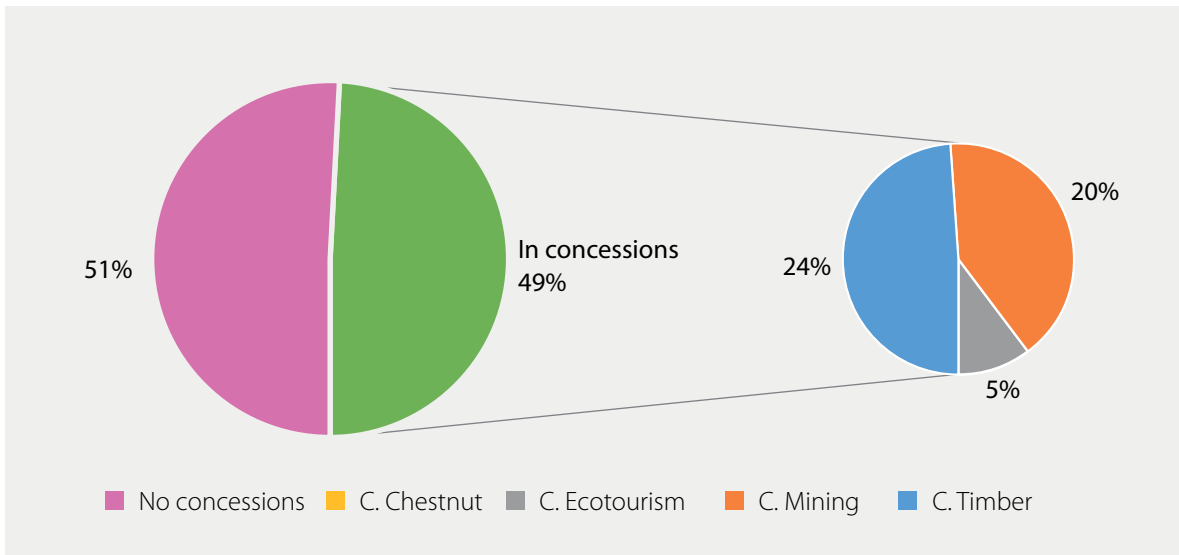
<sup>19</sup> This analysis does not include the claims for oil.

**Chart N° 6. Huepetuhe-Delta: Deforestation in areas with and without concessions<sup>20</sup>**



Source: In-house compilation.

**Chart N° 7. Guacamayo-La Pampa: Deforestation in areas with and without concessions**



Source: In-house compilation.

<sup>20</sup> This analysis does not include the Tambopata National Reserve. The presence of miners in the reserve has been minimum until 2015.

## POLICY

# RECOMMENDATIONS

The current formalization process, officially launched in 2012, ends in June of 2016, with limited results in terms of percentage of formalized miners (in Madre de Dios not a single miner has been formalized), with a very low level of legitimacy among the target population, and with profound conditions of unrest in regions like Madre de Dios, which complicates the task of policy operators to deal with the formalization demands in the field. This all adds up to the advance of illegal mining in the Tambopata National Reserve, which has not been controlled by the interdiction actions.

The next administration faces this challenge, and will have to continue and modify the actions of formalization for small-scale mining and the fight against illegal mining necessary to process more than 60 thousand formalization requests, and to stop the increase in illegal mining. In this section we outline some urgent lines of action which should be considered within this field.

We have divided these recommendations into two fields: one concerns actions within the mining sector, and the other goes beyond this sector and is linked with a series of actions needed to strengthen the institutions that determine the access and management of natural resources.

### Recommendations for the mining sector

- › **Differentiating the mining agents.** As the *Guide for Governments on Managing Small-Scale and Artisanal Mining* points out: “Dividing ASM<sup>21</sup> is important for governments, because the term ‘ASM’ includes a variety of mining and processing activities, each with different risks, different potential, and different characteristics. These operations need to be treated differently (...) If government adopts a uniform approach to ASM, its strategy will be well designed to manage some ASM operations, but not others” (Paget 2015, 56). This is a line of recommendation we had already suggested for informal mining in Madre de Dios in 2014, when we rehearsed a typology of mining actors (Valencia 2014).
- › **Going beyond the formalization approach.** The evaluation of the formalization period between 2002 and 2015 shows that the small-scale mining policy has to go beyond the formalization, and go towards a defined sectorial policy which establishes a line of technical assistance for small-scale mining, conditional on the achievement of clear goals in social and environmental management (like the conditional transfer programs, or the industrial promotion programs with conditions). This assistance should occur on the basis of a previous characterization of small-scale miners, the way it is suggested in the previous recommendation.

- › **Strengthening sectorial and trans-sectorial agencies associated with small-scale mining.** The National Direction for the Formalization of Small-Scale Mining and the Office of the High Commissioner—created in 2012 and 2013, respectively—have given the Peruvian Government a basic structure for inter-institutional coordination which is essential to avoid effort dissipation among the different agencies associated with the regulation of this sector or the prevalence of the miners' interests over the interests of other sectors<sup>22</sup>.
- › **Strengthening the political dimension of the formalization process.** A new political process needs to be established in order to re-design and coordinate the ASM policy allowing the participation of relevant actors. As Chaparro points out, “whatever the main theme of a public intervention in a program to promote and develop small-scale mining, it will always need a comprehensive approach considering very seriously those aspects which are the main concern of the miners” (Chaparro 2004, 26).

## Trans-sectorial recommendations

The implementation of a small-scale mining policy in Madre de Dios requires actions in other sectors. The new administration should consider the following elements:

- › **Land management.** Four lines of action are crucial:
  - The completion of land zoning processes in regions like Madre de Dios is a priority to solve disputes due to overlapping, and to strengthen the coordinated promotion of strategic economic activities. This process should be resumed in Madre de Dios and its legitimacy should be regained in order to make progress in the stages of meso- and micro-scale zoning, in order to use them as an essential input in the state decisions on the resolution of disputes due to overlapping of rights.
  - The implementation of a unified registry of claims that prevents future situations of overlapping rights wherever they are economically and ecologically unfeasible.
  - The implementation of authorities in charge of resolving conflicts due to overlapping rights, essential to make progress in conflict resolution management by the State.
  - Clearer sectorial policies for the forest, conservation, and mining sectors are required. Using land zoning processes, these policies should define more clearly fiscal policy instruments, necessary to boost local economies.
- › **Improvements in public management.** There cannot be any process of formalization without public officials duly qualified and paid. The experience of the formalization process initiated in 2012 shows this: only in the case of the regional governments, the high staff rotation (as a result of decisions made by elected officials in the regional governments), the little training, and the corruption of public servants have been some of the factors which made a negative impact on this process (Valencia 2014). Improvements for these processes depend on national agencies like SERVIR, leading state reforms to make the civil service more professional. Madre de Dios should be chosen as one of the pilot regions where the reforms proposed by this agency are implemented.

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<sup>22</sup> Currently there are legal initiatives such as the draft bill 5139, which proposes transferring all the formalization functions to the Geological, Mining, and Metallurgical Institute (INGEMMET) returning to the State management schemes prior to 2006, when the sector was promoted and regulated exclusively by the energy & mining sector.



- › **Strengthening the foreign policy against illegal mining.** Illegal mining is a transnational phenomenon in all its stages. In the case of the Amazon basin, the exploitation stage is carried out in the Peruvian borders with Bolivia, Colombia, and Ecuador. The trading networks of illegally mined gold involve agents in the United States and European countries. The next administration should strengthen the cooperation mechanisms already active in South America and have a clearer cooperation policy with the destination countries of these minerals (for instance, the US and Switzerland).

# REFERENCES

**ÁLVAREZ-BERRÍOS, Nora & Mitchell AIDE.**

(2015). "Global demand for gold is another threat for tropical forests." *Environ. Research Letters*. 10

**ASNER, G.P. et al.**

(2013). "Elevated rates of gold mining in the Amazon revealed through high resolution monitoring." *Proceedings of the National Academy of Sciences* 110:18454-18459.

**AZPUR, Javier et al.**

(2005). *La descentralización en el Perú. Un balance de lo avanzado y una propuesta de agenda para una reforma imprescindible*. Lima: CIES.

**BENAVIDES, Claudia.**

(2015). "Perú, el caso de Madre de Dios". En: *Las rutas del oro ilegal. Estudios de caso en cinco países amazónicos*. Lima: SPDA.

**HILL, Michael**

(2005). *The Public Policy Process*. London: Pearson Education Limited.

**MEDINA, Guillermo; NÚÑEZ, Victoria & HRUSCHKA, Felix.**

(2005). *La luz al final del túnel. La inclusión de los excluidos - Formalización de la minería artesanal peruana*. Lima: COSUDE.

**MIGDAL, Joel.**

(2001). *State in Society. Studying How States and Societies Transform and Constitute One Another*. Cambridge: Cambridge University Press.

**PAGET, Dan**

(2015). *Guidance for Governments on Managing Artisanal and Small-scale Mining*. RCS Global.

**SMITH, B. C.**

(1976). *Policy Making in British Government*. London: Martin Robertson.

**VALENCIA, Lenin**

(2014a). *Madre de Dios: ¿podemos evitar la tragedia? Políticas de ordenamiento de la minería aurífera*. Lima: SPDA.

(2014b). "Políticas ambientales, conflictos socio-ambientales y minería informal". In: Gerardo Damonte & Giselle Villa (editors). *Agenda de Investigación en Temas Socioambientales en el Perú: Una aproximación desde las ciencias sociales*. Lima: CISEPA.





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