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# Towards an Institutional and Historical Analysis of Environmental Policy in Madagascar

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Géraldine Froger<sup>1\*</sup> and Philippe Méral<sup>2</sup>

<sup>1</sup>Associate Professor in Economics, CEMOTEV, University of Versailles Saint Quentin-en-Yvelines, France

<sup>2</sup>Institut de Recherche pour le développement (IRD), UMR GRED, Montpellier, France

## ABSTRACT

This article explores the application of ideas from historical institutionalism about path dependence to the study of environmental policy in Madagascar. It first reviews the central components of the historical institutionalism explanation, including the concepts of critical juncture, institutional change and institutional reproduction. This explanation is then applied to an analysis of the “diverging” trajectories of environmental policy in Madagascar during the 20th and 21st centuries. We argue that several historical and institutional events, at the national and international levels, have been critical junctures after which Malagasy environmental policy has shifted to different paths. Copyright © 2012 John Wiley & Sons, Ltd and ERP Environment.

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## Introduction

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**M**ADAGASCAR IS KNOWN FOR ITS BIOLOGICAL DIVERSITY AND HIGH RATE OF ENDEMISM.<sup>1</sup> THE ISLAND IS A GLOBAL priority for conservation (Myers *et al.*, 2000), because its biodiversity faces a wide variety of threats, including deforestation, overexploitation of commercially valuable species of plants and animals, and habitat loss and fragmentation. It is estimated that although deforestation rates have fallen from 0.82 per cent per year between 1990 and 2000 to 0.55 per cent per year between 2000 and 2005 (Conservation International *et al.*, 2007), they remain high,<sup>2</sup> and still have negative impacts on biodiversity, hydrology and carbon cycles. Deforestation has been linked to a variety of direct and indirect factors, including local, national and global political and economic factors, such as the generalized impoverishment of the population, and the opening of the country to external markets (Kull, 2000; Hufty and Muttenter, 2002). In addition, major domestic threats to forest in Madagascar include clearing for subsistence agriculture (*tavy*), charcoal and timber extraction, and mining (Raik, 2007). *Tavy* is a low-input, labour-efficient agricultural technique, but it has some negative impacts such

<sup>1</sup>It is estimated that the island has a flora of 10 000–12 000 vascular plant species, 85 per cent of which are endemic.

<sup>2</sup>Moreover more than 80 per cent of the original forests have disappeared, mainly over the past 50 years. However, deforestation data differ according to source. They depend, for example, on the reference period and the interval over which they are calculated, and whether they refer to the total areas of forest coverage or only to the natural forests.

\*Correspondence to: Géraldine Froger, CEMOTEV, University of Versailles Saint Quentin-en-Yvelines, 47 Bd Vauban 78047 Guyancourt Cedex, France.  
E-mail: geraldine.froger@uvsq.fr

as increased soil compaction and erosion (Hufty and Muttenter, 2002). However, other factors such as political resistance to restrictive policies have also been identified as contributing to current rates of deforestation (Klein, 2002).

The problem of combating deforestation and managing natural resources is not new in Madagascar. In fact, the first conservation measures date back to the period of the Malagasy kingdoms. Measures were developed again under the post-colonial regime, and had become systematic as early as the 1980s under the impetus of international conservation and development aid organizations.

In 1990, the environmental policy<sup>3</sup> has been structured by a 15-year national environmental action plan supported by donors and creditors. Does this policy really mark a critical juncture with the paradigm of “fortress conservation”,<sup>4</sup> which had characterized forest and natural resource management in Madagascar prior to the 1990s? Can we discern any other new critical junctures that have occurred since the launch of this policy? What are the potential benefits and the risks of this environmental policy?

The aim of this paper is to analyse characteristics of the Malagasy environmental policy from an institutional perspective and in terms of the path-dependence that characterizes specifically historical sequences. In terms of methodology, this paper is based on studies conducted in two research projects.<sup>5</sup> It draws on data from 80 semi-structured interviews of key stakeholders at the international and national levels, as well as from several workshops and internal meetings with officials at the State level, other policy-makers, non-governmental organizations (NGOs) and donors (international organizations). Furthermore, we have analysed the relevant secondary literature relating to the institutional arrangements of biodiversity management in Madagascar and various official documents from Malagasy institutions, the World Bank and NGOs.

The paper is divided into five parts. The following section provides an overview of our conceptual framework, which is based on using historical institutionalism to study Malagasy environmental policy. We then investigate the characteristics of the policy of conservation and the fight against deforestation during the pre-colonial, colonial and decolonization periods with a critical juncture: the independence of Madagascar (1960). The next section analyses the Environmental Action Plan (EAP) during the 1990s and policy instruments, which aims to achieve “integrated conservation”,<sup>6</sup> as a deliberately new approach differing from the preceding “fortress conservation”. We then assess the ongoing phase (since 2003) characterized by the adoption of or reversion to policies based on more traditional forms of conservation, illustrating the “hybridization” of current environmental policy in Madagascar.

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## Theoretical and Analytical Framework: Historical Institutionalism and Path Dependence

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“New institutionalism” is a term that is now used with growing frequency in economics and political science. It aims to “structure the politics” (Steinmo *et al.*, 1992) by giving theoretical and analytical importance to institutions, including in the field of environmental issues (Swaney, 1987; Söderbaum, 1992; Vatn, 2010). At least three different analytical approaches, each calling itself a “new institutionalism”, have appeared over

<sup>3</sup>Here the term “environmental policy” refers to the various efforts to curb deforestation and to protect biodiversity. The problems linked to the management of waste or pollutions are not taken into account in this context.

<sup>4</sup>This paradigm corresponds to international narratives surrounding the introduction of protected natural areas, government control of these areas and resources, and the control and/or restriction of human activity within protected areas. This results in the exclusion of local populations, and the compartmentalization of the protectionist and developmentalist approaches (Rodary and Castellat, 2003).

<sup>5</sup>The ACI programme (2004–2007), which received funding from the French Ministry of Higher Education and Research, and SERENA programme (2009–2012), which now receives funding from the *Agence nationale de la recherche* under the SYSTERRA programme (ANR-08-STRA-13), <http://www.serena-anr.org>.

<sup>6</sup>The main characteristics of “integrated conservation” promoted by institutional organizations and NGOs are the participative and community management of natural resources, sustainable development and exploitation, the devolution to local communities of rights over resources, and the desire to bring conservation and development closer together.

the past 20 years. We designate these three schools of thought<sup>7</sup>: historical institutionalism, rational choice institutionalism<sup>8</sup> and sociological institutionalism<sup>9</sup> (Hall and Taylor, 1996). First, historical institutionalists tend to conceptualize the relationship between institutions and individual behaviour in relatively broad terms. Second, they emphasize the asymmetries of power associated with the operation and development of institutions. Third, mainly focused on the study of public policies (Collier and Collier, 1991; Skocpol, 1992), they tend to have views about institutional development that emphasize path dependence. Fourth, they are especially keen to integrate institutional analysis and the contributions that other kinds of factors, such as ideas, can make to political outcomes.

The analytical framework of this paper will share the normative orientation of historical institutionalism in emphasizing the views of path dependence, but in a new field, that of environmental policy in the developing countries. In this, it responds to one of the challenges of ecological economics, i.e. how to understand and examine the institutional design of environmental policies and governance issues.

Popularized by Mahoney (2000) and Pierson (2000), the path dependence approach divides the course of history into periods of continuity that are punctuated by “critical junctures”, i.e. moments when substantial institutional change takes place, thereby creating a “branching point” from which historical development shifts on to a new path, i.e. triggers events that set whole processes of institutional or policy change into motion. A critical juncture does not have to be an instantaneous event, but may be a ‘moment’ in a more metaphorical sense that actually lasts for a number of years.<sup>10</sup> This analytical approach shows that institutions or policies do not necessarily develop in a rational way determined solely by the search for maximum efficiency. On the contrary, the way they develop depends to a great extent on past choices and subsequent current political arrangements. There are several versions of path dependence theory, varying from a weak, intuitive description that simply states that “history matters”, to Mahoney’s strong version emphasizing the “lock-in” effects to explain the course of events. Other authors, such as Thelen (2003), adopt a more intermediate position. They highlight the fact that institutional change is usually incremental, with institutions and policies adapting to external contingencies and showing a high degree of inertia as they evolve. Practice shows that institutional innovations prompted by circumstances at a particular time do not take place in an institutional vacuum nor are they blocked by an irreversibly locked-in historical path. The result is institutional hybridization and layering, i.e. mechanisms where new institutional arrangements are “layered” over pre-existing ones.

Studies of path dependencies tend to focus on mechanisms that anchor and stabilize trajectories while paying less attention to transnational interactions and multilevel governance. However, some authors have stressed the trans-scalar dimension in their analyses of institutional change (Djelic and Quack, 2007).<sup>11</sup>

This paper illustrates the analytical method of an institutional path dependence approach taking Madagascar as an example, a country recognized as a biodiversity hotspot (Myers *et al.*, 2000), and where environmental or conservation policies have occupied a central place for over 25 years. Madagascar offers a highly pertinent case study for analysing path dependence by emphasizing critical junctures in environmental policy and by taking into account the influence of international donors and international narratives applied to a multitude of institutional and political arrangements.

<sup>7</sup>In principle, we might also identify a fourth school, the “new institutional economics”. However, this overlaps to a high degree with rational choice institutionalism.

<sup>8</sup>Rational choice institutionalism drew fruitful analytical tools from the “new economics of organization”, which emphasizes the importance of property rights, rent-seeking and transactions costs to the operation and development of institutions.

<sup>9</sup>Sociological institutionalism arose primarily within the subfield of organization theory. Institutions embody and reflect sustainable cultural symbols and practices, which shape the players’ perceptions and “inform” the institutional reproduction.

<sup>10</sup>Resort to the metaphor of ‘critical junctures’ is only significant in the context of path-dependent arguments, where normally the choices of political agents, even the key players, tend to be restricted by external circumstances (institutional constraints etc.). As such, the critical juncture (or ‘turning point’, ‘unsettled period’, etc.) constitutes a relatively different situation than the ‘normal’ historical development of the institutional setting which is the object of analysis (Capocchia and Kelemen, 2007).

<sup>11</sup>“The complexity of path generation increases considerably when we move our focus from technology and organizational fields to national institutional systems. It increases even further if we treat national institutional systems as potentially open systems in the double sense that they interact with each other while being embedded or nested within transnational institutional structures” (Djelic and Quack, 2007, p. 167).

## Environmental Practices and Natural Resource Management in Madagascar before 1990s: “Fortress Conservation”

Forest conservation and environmental management in Madagascar has a long history dating back to pre-colonial times (Hufty and Muttenter, 2002; Raik, 2007; Pollini, 2011). During the pre-colonial period,<sup>12</sup> successive monarchs adopted a series of rules to combat the degradation of natural and forest resources.<sup>13</sup> By forbidding forest clearance, burning and slash-and-burn agriculture, and by threatening offenders with prison, the rules laid down relied on a top-down and repressive approach (Montagne and Ramamonjisoa, 2006). These provisions were introduced with the aim of strengthening the security of the kingdom in the face of potential uprisings, which were usually hatched in the forests, and which were now Crown property. Even though these prohibitions were rarely enforced at the time, they later constituted the basis of the regulations governing the forests, which were enforced during the colonial period.

The colonial period (1896–1960) witnessed the combined and convergent development of the transfer of the forestry legislation in force in Metropolitan France to the French colonies and the use of scientific arguments by naturalists to call for a policy of conservation. The arguments of naturalists denounced the ecological consequences of deforestation combined with brush fires and clearance, and their disastrous economic effects (notably with regard to agricultural activity). These arguments were used as the basis for conservation policies, and for controlling the local populations by the colonial administration, which adopted and introduced the following arrangements: the idea of National Estates, and of zones where forest clearance was prohibited (1896); the transformation of the entire forest of Madagascar into a “National property” (1900); and the prohibition and repression of brush fires and *tavy* (slash-and-burn agriculture) (1913 Act).

Despite these legislative texts, the measures taken did not actually lead to any significant practical changes. In this context, French naturalists, such as Perrier de La Bâthie, proposed setting up “integral” reserves to preserve the endemic flora and fauna. The setting up in 1927 (by an order of the President of France) of the first integral reserves, theoretically completely protected from any non-scientific human use,<sup>14</sup> provides the perfect illustration of this policy of exclusion.

After independence, which was the first critical juncture, Madagascar was increasingly influenced by global environmental discourses and initiatives. The period extending from independence (June 1960) to the 1980s followed on from the previous period by increasingly placing the management of natural resources under the direct control of the State, notably by the nationalization of the forests of Madagascar (classed as “National Forests”) and the multiplication of restrictive and exclusion-based legislation (with three administrative orders published in 1960): the State alone had the power to decide about the granting of licences to exploit the forest, and the State alone defined the rights and duties of all the users of the forests.

This period was characterized by the exclusion of local populations from the management of natural resources and forests, and they were even prohibited from setting foot in certain National Forests.<sup>15</sup>

Finally, the environmental policy of this period (essentially relating to forests) was considered to be (Froger *et al.*, 2004):

<sup>12</sup>The political history of Madagascar began during the reign of Andrianampoinimerina (1787–1810), who extended his power to include all the small kingdoms that had existed previously. Subsequently, his son Radama I ruled from 1810 to 1828, and continued the unification process begun by his father. When he died, he was succeeded by his wife Ranaivalona I until 1861. Their son, Radama II, ruled for just 2 years, and was succeeded by the successive reigns of Queens Rasoherina, and Ranaivalona II and III, although history describes Prime Minister Rainilaiarivony, who married all three queens, as the true monarch. The colonial history of Madagascar began in 1895, when it became first a French Protectorate, and then a French Colony in August 1896.

<sup>13</sup>Two definitive pieces of legislation were passed in the mid-nineteenth century: the Code of 101 articles in 1868 and the Code of 305 articles in 1881. Articles 101–106 forbade the burning or settlement of forests. Article 105 forbade the practice of *tavy*: “one may not clear the forest by fire with the goal of cultivating rice fields, corn or other crops. One who clears by fire a new terrain or expands those which exist already, that person will be put in irons” (quoted by Raik, 2007, 6–7).

<sup>14</sup>No infrastructure or upkeep was planned, as the reserves were chosen precisely because they were remote, untouched areas, protected by their isolation.

<sup>15</sup>The only rights that remained were those corresponding to traditional uses: the gathering of firewood or dead branches by small-scale traditional charcoal makers.

- (1) “centralizing”, because the management of lands and natural resources was a monopoly of the State and the public services;
- (2) “interventionist”, in the sense that the public services, through their agents, supervised and controlled all the activities of communities and individuals connected with renewable natural resources;
- (3) “repressive”, because the legal and administrative framework set up to implement these policies introduced prohibitions, fines and imprisonment; and
- (4) “exclusive”, because local communities and individuals were excluded from any form of effective decision-making in the management of renewable natural resources.

Nevertheless, despite this policy, Madagascar’s forests continued to shrink, which has been attributed to corruption among forest service employees, to a lack of motivation to adhere to forest policies among poor rural people, and to the government’s inability to monitor the forest and enforce policies because of a lack of resources and infrastructures. The nationalization of the ownership of forests resulted in open access to resources, a situation in which the groups and individuals who were exploiting forest resources were both uncontrolled and uncontrollable by the government. There was a paradoxical conflict between the illegal local-level forest exploitation, which was regarded as legitimate by the local people, and the legally sanctioned forestry policies, which were regarded as illegitimate by the local people (Raik, 2007, 7).

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### Environmental Policy in Madagascar in the 1990s: Towards “Integrated Conservation”?

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In the mid-1980s, the political climate began to change in Madagascar as it moved from an insular, quasi-communist political system closely tied to the Soviet Union to a socialist democracy open to increased interaction with foreigners, which affected Madagascar’s development agenda. The early 1990s witnessed a flurry of conservation and development activity. Bilateral and multilateral donor agencies, such as the International Union for Conservation of Nature (IUCN), World Wide Fund for Nature (WWF), United States Agency for International Development (USAID) and World Bank, increased their involvement and funding levels. Alerted by the IUCN and WWF about the consequences of the environmental degradation, in 1984 the government adopted the National Strategy for Conservation and Development.<sup>16</sup> In 1985 it organized an international conference intended to help to prepare a national environmental programme (Falloux and Talbot, 1992). Supported by international organizations, these efforts led in 1988 to the drafting of the Environmental Action Plan, which was ratified in 1990 by parliament as the Malagasy Environmental Charter.<sup>17</sup> Two years before Rio, Madagascar became one of the first African States to establish an EAP. Furthermore, Madagascar adopted a programme of structural adjustment in 1988, a fresh departure that gave rise to a path-dependence phenomenon, calling into question the role of the State in the implementation of economic policies, prolonged by a decentralizing reform, defended by international economic and financial institutions. This led to a critique of the direct intervention of the Government in the management of the environment.

Programmed over 15 years, the EAP<sup>18</sup> has been divided into three “environmental programmes”. The objective of the first five-year phase, known as Environmental Programme 1 (EP 1) [1991–1997], was to establish an operational structure (by creating or strengthening specialized institutions) and to undertake the most urgent conservation actions. Despite millions of dollars of investment, EP 1 had mixed results (Barrett and Arcese, 1995; Peters, 1998).

Three specialized implementation agencies were created: the National Environmental Board (Office National de l’environnement, or ONE), which coordinates the implementation of the EAP; the National Association for the Management of Protected Areas (Association nationale de gestion des aires protégées, or ANGAP),<sup>19</sup> a para-state

<sup>16</sup>Order no. 84 445 dated 14/DEC/1984.

<sup>17</sup>Act 90.033 dated 21 December 1990 and amended by Act 97.012 of 6 June 1997.

<sup>18</sup>Eighty-five per cent financed by multilateral and bilateral donors [World Bank, USAID, WWF, French Cooperation, Conservation International, German Cooperation, Swiss Cooperation, Norwegian Cooperation, European Union, International Fund for Agricultural Development (IFAD) and Global Environment Facility (GEF) of the United Nations Development Program (GEF/UNDP)]. EP 1 has been assigned funds of \$US85.5 million, EP 2 and EP 3 \$US150 million.

<sup>19</sup>Called Madagascar National Parks (MNP) since 2008.

organization created to manage protected areas; and the National Association for Environmental Action (Association nationale d'actions environnementales, or ANAE), responsible for soil management. "In spite of significant financial and technical support from the funding agencies, they have suffered the problems common to many bureaucratic organizations in Madagascar: centralization of their resources at the head office in Antananarivo, lack of co-ordination among sections, absence of a communication strategy, bureaucratic red tape, and misappropriation of resources" (Hufty and Muttenter, 2002: 285). Furthermore, there has been a confusion of roles between the Ministry of the Environment and the ONE, and between the Directorate for Water and Forests (which depends on the Ministry of Water and Forests) and the ANGAP – the creation of the network of protected areas having been perceived as the transfer of prerogatives from the Forest Administration to ANGAP (Brinkerhoff, 1996).

EP 1 was fundamentally oriented toward the conservation of biodiversity-rich forest environments. This orientation corresponded to the priorities of the major donor to the EAP, the USAID, and involved the creation of a few dozen protected areas. The main management tool for protected areas was the Integrated Conservation and Development Projects (ICDPs). In contrast to the "Yellowstone model", which relied on defining a strict conservation area, similar to the parks created in the colonial period, or "fortress conservation" (where people are not allowed to live or to use the area's natural resources), the ICDPs added a buffer zone to the protected area, exploited under the control of the WWF and the Ministry of Forests, with the participation of adjacent populations (Wells *et al.*, 1992). The ICDPs tried to mobilize the population by offering them monetary income or small development projects in return for surrendering access rights to the protected area (Marcus and Kull, 1999). Despite being promising in theory, these ICDPs were in fact subject to problems associated with the manner in which they were conceived and implemented. The ICPD model was deemed to be too centralized and too standardized across sites to respond to local specificities. Furthermore, the economic alternatives proposed were limited. "In the beginning, these projects were directed by foreign biologists, who were progressively replaced by Malagasy nationals, also biologists and from the capital city. Both foreigners and nationals were not well acquainted with local customs, and did not speak the local dialects. Their inclination was to bind the 'development' aspect to conservation objectives, seen as a priority, and, because of their poor integration into local networks, to reinforce the principles of exclusion and subordination in which the ICPDs are ultimately based" (Hufty and Muttenter, 2002: 286). "Fortress conservation" was still dominant in the first half of the 1990s.

Nevertheless, some of the Malagasy stakeholders began to look for new legal structures and institutional arrangements for environmental governance (Froger *et al.*, 2004). This trend reflected a more global move toward more bottom-up and participatory methods for designing and implementing natural-resources policies and programmes in developing countries (Durbin and Ralambo, 1994; Peters, 1998).

The most significant period of "integrated conservation" began in Madagascar with the launch of the second phase of EPA, designated EP 2 and covering the period 1997–2002. The changes seen in Madagascar can be partly explained by "the switch in environmental approaches at the international level, from an essentially naturalistic vision to one taking the economy and societies into account, from a government-led and centralising vision to the recognition of the role of local populations and rehabilitation of the local level, and finally, from a purely 'conservation-centred' approach to a more dynamic and integrated vision stressing the need to manage and negotiate by involving all the stakeholders concerned" (Razafindrabe, 1996).

Faced with high rates of deforestation and inefficient forestry practices, the Malagasy government, with support from international conservation and development organizations, pushed for a new community-based, natural resources management policy (Kull, 2002; Froger *et al.*, 2004). This policy, known as GELOSE (Gestion locale sécurisée or Secured Local Management), is applicable to forests, pastures, wildlife and water. It aims to promote better resource management by delegating management, rule-setting and enforcement to a local level, thus leading to better stewardship of the environment. GELOSE was signed into law on 10 September 1996 (law No. 96–025), and in 1997 the law was incorporated into the new national forestry policy (Law 97–107 and Decree 97–1200). The GELOSE law allows for the creation of tripartite negotiated contracts involving the State (represented by the forestry service), the local authority (i.e. the Mayor's office) and a voluntary association of community residents created for the purpose of this contract (i.e. Communauté de Base, or COBA) (Raik, 2007). Under GELOSE contracts, communities regulate resource use through DINA, a locally developed social agreement, the form of which pre-dates state-sanctioned rules (Henkels, 2001). Contract negotiations are coordinated by an "environmental mediator" and the process for establishing a GELOSE contract, which is described in legislation, includes 22 steps

(Kull, 2002). The philosophy underlying the GELOSE contracts is therefore based on a mediation approach to inheritance and secure land tenure, and doing this properly will take time.

Because the implementation of GELOSE was viewed as complex, a piece of enabling legislation specific for forests was defined under order No. 2001-122. This Contractual Forest Management (*Gestion contractualisée des forêts*, or CGF) policy simplified the process for transferring forest management rights to communities by eliminating the need for an environmental mediator and secure land tenure and reducing the number of contract signatories to two: the State (represented by the regional office of the Ministry of Environment, Water and Forests) and COBA (Kull, 2002; Antona *et al.*, 2004).

This policy based on management transfer contracts (GELOSE or GCF) broke away from the traditional state monopoly in natural resources and forest management. According to its proponents, this shift to a contractual process goes far beyond “participatory” development, as it allows for the local negotiation of management rules, something that was not possible with the previous participatory approach (ICPDs) (Hufty and Muttenger, 2002). The goal of these contracts is to define local co-management between communities and the State. The various stakeholders involved in the management of renewable resources (the State, rural communities, local authorities, NGOs) suddenly became partners with reciprocal obligations (Bertrand, 1999).

Unfortunately, as a provision of the EAP at the national level, the community-based natural resources management was soon perceived, not as a learning experience through which a common vision could be arrived at, but as a target to be reached as part of the EAP. The number of contracts produced was seen to be more important than their effectiveness, i.e. gaining support from the population for this contractual approach.

There was an obvious conflict between the long timescale, corresponding to community management projects, and the shorter timescale of the donors and their national and local representatives (who had to be able to assess their work swiftly). Thus, during a first phase (1996–2001), fewer than 100 contracts were completed. Despite their success, this small number of contracts had a harmful impact on the national justification of a policy intended to promote community-based management. Towards the end of 2001, the national stakeholders involved in environmental policy, mainly in response to the World Bank, decided to set a target of 500 management-transfer contracts before the end of EP 2. Contracts concluded during this period were drawn up without any (real) mediation or secure land tenure (Resolve-PCP-IRD, 2005). Even though environmental mediators had spent several months on the land concerned in each contract during the first phase, this fell to only 1 or 2 weeks during the second phase (2002–2004). By the end of EP 2, the donors who had assessed the arrangements had obviously concluded that most of the contracts had been drawn up with little respect for common sense.

The stakeholders involved in environmental policy were operating on two different timescales. The fact that the EAP is financed by international organizations at the national level (i.e. not including the projects) means that it has a relatively short timescale (4–5 years, or even less if we take the mid-way assessments into consideration) and some degree of volatility. The international conservation and development organizations that provide funding for the partners in Madagascar are concerned about their proper use. The prevailing logic tends to be managerial and administrative in nature rather than operational, which reflects the importance given to the budgetary expenditures, and assessments by external service providers (consultancies, local NGOs, etc.). There are frequent assessments (mid-way, ex-post, internal, external, etc.), which often result in changes in the priorities and the main thrust of programmes. These short timescales obviously do not fit well with the incubation times required for sustainable-development projects.

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## Environmental Policy in Madagascar from 2003: What Practices, What Conservation?

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Environmental Programme 3 (EP 3) [2003–2008<sup>20</sup>], the last phase of the EAP, was intended to strengthen the environmental agenda and also included a major initiative to expand the protected area network. In 2003, following the 5th World Parks Congress held in Durban, the President of Madagascar, Mr Marc Ravalomana, pledged to

<sup>20</sup>Andriamahefazafy *et al.* (2007) note that EP 3 did not really get started until 2004, or even 2005 if we consider the slowness with which funds were disbursed (following the political crisis in Madagascar in 2002).

increase the protected areas from 1.7 to 6 million hectares, or from 3 to 10 per cent of the country's surface area (corresponding to the IUCN's recommended standard) by 2012. Conservation NGOs then formed a block within the "Durban vision group" to promote the concept of conservation sites. The protected area network, which will include both existing and new protected areas, is now known as the Malagasy Protected Areas System (Système des aires protégées de Madagascar, or SAPM), and had initially been missing in the documents setting up the EP 3. Under SAPM, the majority of new protected areas are likely to be co-managed, and one vision for this co-management is that local communities will be in partnership with the government through the COBA structures set up via the GELOSE and GCF contracts (Raik, 2007). Despite the rhetoric of local empowerment in making decisions about natural resources and forest management, conservation NGOs play a strong role in orienting management plans and zoning of the areas (Antona *et al.*, 2004).

The impetus provided by the Durban vision group also led to the re-emergence of the problem of how to finance these protected areas. Amongst the possible tools envisaged, a Foundation for Protected Areas and Biodiversity (Fondation pour les aires protégées et la biodiversité, or FAPB) soon attracted the most attention. This Foundation was set up in 2005, and was given a capital grant of \$US18 million, a considerable proportion of which took the form of debt/nature exchanges, the rest consisting of funding provided by the various investors. Placing this capital in a trust fund was intended to produce interest that would cover the recurrent management costs of the SAPM (Méral *et al.*, 2009). If the spirit of EP 2 had been maintained, this would have meant supporting the Fondation Tany Meva (created in 1996) whose "objectives are clearly focused on funding micro-projects for community purposes, which are noticeably different from those of the FAPB, which is concerned with environmental communication, ecotourism, scientific research, and the management of protected areas" (Andriamahefazafy *et al.*, 2007: 18).

Furthermore, by making a link between sustainable funding and conservation, the international agencies (World Bank) and conservation NGOs in Madagascar are applying the new international approach that was introduced in the early 2000s, and which have led to the introduction of "payments for environmental services" (PES) schemes (Pagiola *et al.*, 2002; Wunder, 2005; Engel *et al.*, 2008). PES are generating a lot of interest among conservationists and land-use managers, because they are increasingly regarded as promising tools to support biodiversity conservation and rural development in developed and developing countries, and to involve private actors in conservation finance. PES are generally understood as a transfer of resources between social actors, which aims to create incentives to align individual and/or collective land-use decisions with the social interest in the management of natural resources, and that should ideally involve some degree of "additionality" (i.e. activities should be beyond business as usual) and "conditionality" (i.e. payments are only made after provision) (Muradian *et al.*, 2010; Wunder *et al.*, 2008). Vatn (2010) points out that "PES systems are not created in an international vacuum". He puts forward an idea expressed by Engel *et al.* (2008: 668) that "PES mechanisms are not created in a vacuum by social planners or economic theorists. They develop in particular environmental, economic, social and political contexts, and are subject to the push and pull of many stakeholders (path dependence)."

The emergence of PES as an institutional innovation is found to have been incremental in nature rather than the result of a sudden rupture. It was part of a broader and deeper trend in environmental policy unfolding on the international stage that promoted ecosystem services and market-based instruments (Gómez-Baggethun *et al.*, 2010). Implementation of PES in Madagascar is mostly through specific projects at local or regional levels (Randimby and Razafintsalama, 2006; Bidaud *et al.*, 2012). They have been developed since the mid 2000s and have been initiated by international actors (mainly international conservation NGOs). They can be classified on the basis of the ecosystem services they support (Biodiversity, Carbon, Watershed).

The first group are the Biodiversity PES created through conservation agreements and participatory ecological monitoring. Conservation agreements were initiated by Conservation International (an international NGO) in the Centre-East of the country, to compensate the populations living alongside certain forests for the introduction of strict rules governing the use of resources (Karsenty *et al.*, 2010). They also take the form of participatory ecological monitoring, in the form of biodiversity competitions (Durbin *et al.*, 2001; Sommerville *et al.*, 2010, 2011). These initiatives, launched by the Durrel NGO in the West (2003) and Centre-East regions, are intended to remunerate local communities that preserve certain target species.

The Carbon PES are another type of scheme. They have been developed on a large scale in forests of the East and run by Conservation International (CI), WWF and Wildlife Conservation Society (WCS) and are part of the international climate change agenda (Randimby and Razafintsalama, 2006; Ferguson, 2009; Wendland *et al.*,



2010). The marketing of carbon-credits on the *Voluntary Carbon Markets* is the main source of funding. Some multinational companies (Dell, Mitsubishi, Air France, etc.) compensate for their CO<sub>2</sub> emissions by funding the protection of Madagascan forests via these NGOs (see also below).

The third kind of PES schemes concerns watersheds. For the moment there are no contractual PES in this field in Madagascar, but the most advanced projects are being run jointly by the WWF and the World Mountain People Association (WMPA), along with a project included in a hydroelectric power station construction project (Bidaud *et al.*, 2012). The common point of most of these PES schemes is that they seek the involvement of the national water and electricity distribution company (JIRAMA). In some cases, it is the population that is considered to be the service provider, whilst in others it is the manager of the protected forest area (upstream) who is the provider.

Despite efforts to design an innovative environmental policy combining conservation and development, EP 3, via the introduction of the SAPM under the impetus of the Durban vision and of PES schemes, reflects a swing back towards a more conservationist<sup>21</sup> policy.

EP 3 is also initially characterized by “more centralized” measures: a new coordinating structure for environmental policy was introduced, the coordinating cell (CELCO), and placed under the direct authority of the Ministry of the Environment, which has resulted in the calling into question of the role of ONE during the first two phases of the EAP: “This situation highlights not only a problem of institutional transparency with regard to the progress of the plan, but also the lack of permanence of the various institutions set up for this plan” (Andriamahefazafy *et al.*, 2007: 18). Furthermore, the status of ONE changed in 2008,<sup>22</sup> when it was put under the control of the Ministries of the Environment and of Finance. Again, the environmental policy in Madagascar was strongly influenced by the organizational culture of the World Bank and of the foreign aid regime: the country embarked on the entirely participative and local model just when the State had been discredited and development policies, following the adoption of the structural adjustment programme, were focusing on decentralization, non-governmental agents and local empowerment. There has been a switch towards more centralized forms of management of the environment and natural resources at a time when the global message about development was again recognizing that the State has a legitimate role in defining public policies.

In spite of the political crisis of 2009, the trend towards a stronger conservation policy has been confirmed. The new President, Mr Andry Rajoelina, was not recognized by foreign countries, which consequently withdrew their financial support. EP 3 has been on stand-by ever since. It was only in mid-2011 that the World Bank agreed to finance the completion of EP 3 by granting a 42 million dollar credit, which is to be used by Madagascar National Parks to support the management of these 33 protected areas, and by the main NGOs (WCS, WWF and IC) to support the creation and management of new protected areas.

*De facto*, the Durban vision has been maintained despite the political changes. In a context of political insecurity, financial aid has focused on support for the Foundation for Biodiversity, the MNP and for the three NGOs that act “on behalf of the Ministry of Environment and Forest”. This support concerns management of the protected areas as well as the promotion of policy instruments, such as PES (offering compensation to the local populations affected by these protected areas).

On the other hand, the development of carbon mechanisms, in particular within the framework of the negotiations concerning the Reduction of Emissions from Deforestation and Forest Degradation (REDD), has led Madagascar to highlight its conservation activities. By developing its REDD strategy from 2008, Madagascar has been trying to finance these new protected areas (the ideal tool to stop the deforestation and the degradation of land, and consequently to contribute to the sequestration and storage of carbon). Five experimental sites are currently being tested: (1) the Makira Project with funding from the Makira Carbon Company and WCS; (2 and 3) the Ankeniheny-Zahamena Corridor Project (CAZ) and the Fandriana-Vondrozo Corridor Project (COFAV) with funding from CI; (4) the Holistic Forest Conservation Programme (PHCF) with funding from WWF and Air France; and (5) the FORECA Project with funding from GTZ-Intercooperation-Swiss.

<sup>21</sup>It is important for the Malagasy government to increase the size of the protected areas, thus facilitating a common vision shared with the donors providing the funding implicated in the Durban vision.

<sup>22</sup>Order 2008-600. ONE became a public institution of an industrial and commercial nature (EPIC), placed under the Ministerial authority of the Ministry of the Environment and under the financial control of the Ministry of Finance.

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## Conclusions

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Institutional analysis of environmental and conservation policies is an important new field of investigation. This article has attempted to explore the path dependency approach, which is under-represented in the literature. Applying it to the Malagasy experience reinforces the applicability and pertinence of this analytical framework. The historical dimension has proven its usefulness, essentially in understanding the emergence and development of different institutional arrangements in order to curb deforestation and protect biodiversity.

Since it gained its independence in 1960, the Malagasy state has been unable to meet its developmental and environmental goals, even though it has enjoyed a steady inflow of foreign aid throughout this period (Horning, 2008).<sup>23</sup> Environmental and forest management in Madagascar has evolved over the last century from top-down, centralized legislation, intended to restrict access to natural and forest resources, to more decentralized forms of governance that attempt to put local people at the centre of decision-making. This critical juncture in environmental policy took place in the 1990s, and illustrates the switch from “fortress conservation” to “integrated conservation” in which local communities and institutions are central in the governance arrangements. The combination of several different tendencies, i.e. the limited success of the centralized management of natural resources, the weakening powers of the Government and administration in Madagascar, following the Washington consensus and structural adjustment policies, plus the increasing importance of questions of sustainable development on the international stage (as a result of various international meetings and symposia) supported by the funding agencies investing in this field, are amongst the main factors that account for this critical juncture.

Another critical juncture began in 2003, and reflects a swing back towards a more conservationist environmental policy in Madagascar. This inertia-like effect can be attributed to a great extent to the difficulties experienced in using integrated conservation experiments to develop public policy, which some authors attribute to factors including the weakness of the Government, and the increasing stress on payment for environmental services schemes that have led to the “trans-nationalisation” of environmental policies, and the creation of networks of international stakeholders (companies, aid agencies, international NGOs, the media, etc.), which now tend to finance conservation (via major conservation NGOs, which have become financial intermediaries in the field of conservation).

Finally, these critical junctures reflect the hybridization of environmental policy, as a result of a process of the layering of successive institutional arrangements. Environmental policy has now retained the marked-based tendency towards conservation, whilst continuing to apply arguments in favour of integration and participation.

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<sup>23</sup>Madagascar's biodiversity conservation has been the concern of the international community (represented by donors) and not just of a sovereign state. France has lost its monopoly of influence to other governments and international financial institutions (to the former communist block in the 1970s and early 1980s, to Bretton Woods Institutions since the mid 1980s, and to the US and US-based NGOs since the 1990s).

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