

INTERVIEW MADAGASCAR CONSERVATION & DEVELOPMENT

Independent Forest Monitoring Madagascar

Reiner Tegtmeier
 Andrea Johnson
 Etienne Rasarely
 Christian Burren
 Doreen Robinson
 Martin Bauert
 Jean-Pierre Sorg

Correspondence :
 Madagascar Wildlife Conservation / Journal MCD
 Anthropological Institute and Museum
 University of Zurich
 Winterthurerstrasse 190, 8057 Zurich, Switzerland
 E - mail: info@journalmcd.net

REINER TEGTMEYER

Please introduce yourself briefly – how are you related with Madagascar's forests? In your opinion, why are forests important?

I work with the London-based NGO Global Witness as their International Forest and Independent Forest Monitoring (IFM) Expert. I was responsible for the implementation of an Independent Forest Monitoring project in Cameroon, from 2002 to 2005; developed and initiated IFM projects in Honduras and Nicaragua; trained NGOs in IFM methodology and techniques in Indonesia, Liberia and DRC; and carry out investigations into illegal logging and industrial-scale logging, mainly in African countries.

Forests cover more than a tenth of our planet and play a significant role in providing ecosystem services such as global climate regulation and mitigation, and steady local and regional water supply. Not only are forests biodiversity hotspots but almost all are inhabited by people whose livelihoods, customs and cultures are forest-dependent. However, most states have adopted the appropriation of communal land during colonial times by declaring them state property or trust land centrally managed by the government on the people's behalf. Consequently, forests are being designated for a wide range of 'external uses': industrial-scale logging, conversion into agricultural plantations, clearing for minerals and oil exploitation and settlement for people that have been relocated (often those pushed out of other forests). Under the pretext of contributing to development, donors such as the World Bank promote the adoption of policies that support industrial land use in countries that are forest-rich but extremely poor. This has had detrimental impacts on forest peoples' livelihoods and economic prospects, often forcing them from their homes and traditional lands.

In July 2009, Global Witness was invited by Madagascar National Parks (MNP) to assist them in investigating the illegal harvest of precious wood in the SAVA Region, and the associated international trafficking of illegal timber. In August 2009, I carried out investigative work in Marojeje and Masaola National Parks, Antahala, Vohemar and Antananarivo together with a colleague from the Environmental Investigation Agency (EIA-US), Adam Khedouri. We are still doing more investigations into the traffickers and buyers of the illegal wood.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

I see the lack of technical competence and capacity of the relevant authorities as the major challenge in forest management and conservation in Madagascar, including the understaffing of local forest administrations. This is partly the result of a lack of political will at both the central and provincial level to implement the forest management principles and procedures that were developed with assistance of the United States Agency for International Development (USAID). Ensuring that forest and protected area management benefits the Malagasy population also poses a challenge. This means achieving revenue generation and protection of Madagascar's unique biodiversity through the development of a coherent land use policy, which coordinates agriculture, mining, forestry, plantation and conservation interests.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

Independent Forest Monitoring (IFM) is a monitoring approach through which an independent third party assists a government in making law enforcement efficient, effective and transparent. As such IFM is a governance tool providing oversight of forest sector activities and assuring the rights of peoples living in and dependent upon forests. It is not a special Technical Assistance project providing capacity building and other forest sector policy support. Under these premises IFM can play a powerful role in improving governance in the forest sector through identifying weaknesses in the forest management and control systems, exposing illegal activities and corruption and those responsible ('naming and shaming'), making relevant recommendations for remedial actions and publishing results of the various IFM activities.

However, IFM should not be used to criminalize forest-dependent people or small-scale farmers through the application of laws that don't take into account the needs of the poor to make a decent living, or respect their traditional and user rights.

Who would you like to see participating in such an IFM and how could it be funded?

IFM should ideally be carried out by representatives of local civil society (e.g., Alliance Voahary Gasy = AVG, FANAMBY). However, due to lack of relevant experience, knowledge and



Madagascar Conservation & Development is the journal of Madagascar Wildlife Conservation (MWC) and the Jane Goodall Institute (JGI Switzerland). It is produced under the responsibility of these institutions. The views expressed in contributions to MCD are solely those of the authors and not those of the journal editors or the publishers.

All the Issues and articles are freely available at <http://www.mwc-info.net/en/services/journal.htm>

Contact Journal MCD
 info@journalmcd.net for general inquiries MCD
 funding@journalmcd.net for supporting the journal

Journal Madagascar Conservation & Development
 Institute and Museum of Anthropology
 University of Zurich
 Winterthurerstrasse 190
 CH-8057 Zurich, Switzerland



contact@mwc-info.net for general inquiries

Postfach 2701
 CH-8021 Zürich, Switzerland

Logement 11, Cité Andohaniato
 Antananarivo 101, Madagascar



info@janegoodall.ch for general inquiries JGI

Jane Goodall Institute Schweiz
 Postfach 2807
 8033 Zürich
 Switzerland

skills, IFM might be initiated by an international NGO with expertise in IFM, working in official partnership with an official institution, for example the National Environment and Forest Sector Observatory (*Observatoire National de l'Environnement et du Secteur Forestier* = ONESF) and in close collaboration with Malagasy civil society. The IFM experts could carry out capacity building for selected civil society representatives and on-the-job training for the official partner in order to secure sustainability of IFM. Funding could initially be provided by the international development assistance partners of the Malagasy Government but eventually should come from the government budget. Studies show that the gains achieved through IFM in reducing illegal logging outweigh its costs.

ANDREA JOHNSON

Please introduce yourself briefly – how are you related with Madagascar's forests? In your opinion, why are forests important?

My name is Andrea Johnson. I'm currently the Director of Forest Campaigns for the U.S. office of the Environmental Investigation Agency (EIA). EIA is a non-profit advocacy organization based in London and Washington, DC, which for 25 years has worked to investigate and expose environmental crimes such as wildlife trafficking, chemicals smuggling and illegal logging, and campaign for solutions. We became involved with Madagascar's forests in 2009 when illegal logging surged in the wake of the political coup, and EIA (together with our longtime ally Global Witness) was invited in by Madagascar National Parks to conduct an investigation of the situation and provide recommendations on how to address it. Our initial report, "Investigation into the Illegal Felling, Transport and Export of Precious Wood in SAVA Region, Madagascar", was published in October 2009; we continue to conduct follow up research and advocacy.

The forests of Madagascar and elsewhere are particularly compelling to me and to EIA because of the way that complex economic, social, biological, and ultimately moral issues intersect within the trees. 'For what' and 'for who' are vital questions we constantly must ask in this struggle over how to protect and responsibly manage forest ecosystems – and answering them is so important to millions of species, to human health and livelihoods, to the global climate.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

One of Madagascar's principal challenges – by no means the only one, but one of the most pernicious – is illegal logging and the economic and political system that perpetuates it. At the time of our research last year, evidence suggested that hundreds of loggers were extracting 100-200 rosewood (*Dalbergia* spp.) trees *daily* from just the Mananara Biosphere Reserve and Masoala National Park; a previous wave of logging had invaded Marojeje National Park. This kind of logging, while selective, causes a variety of knock-on effects and has serious impacts on animal habitat, floral diversity and composition.

Logging for rosewood or ebony (*Diospyros* spp.) three days' walk into a national park is not something that local people do to build their own homes. This logging is financed by a select group of economic elite, 'timber barons'; our and others' research have shown that these men operate essentially with

legal impunity, contributing to a pervasive sense of collusion and cyclical legalization of illegal activity. And ultimately the timber barons' businesses are driven by demand from foreign markets – according to our research, principally Chinese furniture makers but also industries including musical instruments in the US and Europe. These markets are so disconnected from the forest that it's difficult for consumers to link their purchases to causing harm to lemurs or local livelihoods. New laws and policies such as the US Lacey Act, which establishes stiff penalties for trading in illegally-sourced wood products, are beginning to induce greater responsibility down the supply chain (for example, the company Gibson Guitars is currently being investigated in the US for importing illegal Madagascar precious woods). However, in Madagascar the combination of a poor populace eager for the kind of cash-wage work that illegal logging provides, systemic corruption among poorly-paid officials and the political leaders financed by timber barons, and finally a no-questions-asked foreign market, has proved to be a tough cycle to break.

Another complex challenge that Madagascar seems to face is how to integrate forests into economic development in a manner more sustainable than either pure extraction or pure tourism. To be clear, tourism can be an important motivation for protecting forests. But Madagascar is remote and politically unstable, and tourism is a notoriously fickle industry. Neither is foreign aid a long-term answer. To have forests around in the long term, the people living in and around the forests must believe there's value to keeping them there and to defending them.

These challenges have a unique Malagasy flavor from the island's particular geography and historical development, but there are other resource-rich, governance-poor nations with a similar confluence of problems. We can learn from other countries' experiences in approaching how to make things better in Madagascar.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

An Independent Forest Monitoring program, as pioneered in places like Cambodia, Honduras, Nicaragua or Cameroon, can be a valuable tool in increasing transparency and accountability. What IFM can introduce is an impartial and credible voice with the right to access and analyze official information and to make this information publicly available. In various countries where EIA has worked, everyone acknowledges illegal logging to be a serious problem, but actual evidence is scarce as local organizations or officials feel it's too risky or pointless to combat powerful economic forces or institutional corruption. EIA's going undercover and documenting clear evidence, bringing it to the light of day, creates new political space for change. IFM does the same but with official sanction, much like the GW/EIA report did last year. If there is government buy-in for IFM, it becomes very difficult to deny or refute the results of this monitoring.

Now obviously, acknowledging governance failures is not the same as doing anything about them. If the political will does not exist to tackle forest sector problems – because, for example, state revenues are dependent on 'fines' paid by exporters to allow illegal wood to leave the country – then IFM is going to be limited in its ability to transform governance. In the long term, however, I do think these programs lead to a gradual increase in the expectations of accountability. In Honduras the IFM program

has seen, over the four years it's been operating, increasing rates of follow-up on its recommendations by various government enforcement offices and the forest authority.

Who would you like to see participating in such an IFM and how could it be funded?

IFM requires a lot of legwork at the beginning if it's going to have a chance of success. There must be a host institution with enough trust in both the concept and the actual team of monitors. This institution might be the MEF (Ministry of Environment and Forests) itself, it might be ONESF, it might be MNP (Madagascar National Parks) depending on the scope of the IFM. Then, there must be at least some buy-in from other forest stakeholders, like logging companies, parks and tourism officials, customs or finance officials. And there must be a real funding commitment from an outside independent source. I would think that the search for funding would begin, in Madagascar's case, in the CCPFT Roundtable (*Cercle de Concertation des Partenaires Financiers et Technique du MEF*).

However, another recent development that needs to be explored is the forest-carbon funding streams under the rubric of Reducing Emissions from Deforestation and Degradation (REDD). REDD financing could go in part to independent monitoring; REDD also provides compelling new possibilities for placing value on Madagascar's forests. But effective REDD will depend on our achieving a new standard of monitoring and transparency in forest management, and on truly cutting down on the corruption in this sector. Is the Madagascar government looking to pocket REDD funds from the international community on the one hand, while continuing to authorize illegal timber exports? Are NGOs and donors watching this happen?

ETIENNE RASARELY

Please introduce yourself briefly – how are you related with Madagascar's forests? In your opinion, why are forests important?

Je suis Etienne Rasarely, forestier et manager de formation, ayant par ailleurs un intérêt marqué pour tous sujets en rapport avec l'économie et les relations internationales. Je travaille pour le compte de l'Observatoire National de l'Environnement et du Secteur Forestier (ONESF), et en assure depuis 2003 la Coordination nationale. Concernant l'ONESF, celui-ci a été mis en place, suite aux résultats mitigés de l'évaluation à mi-parcours du Programme Environnemental malgache dans les années 2000. Il a été chargé de suivre et rendre compte de l'avancement du processus d'amélioration de la Gouvernance du secteur, reconnue comme un des problèmes majeurs ayant réduit l'efficacité du programme.

Le champ d'observation de l'ONESF s'étend sur l'ensemble du pays, et couvre le fonctionnement et le respect des lois qui gouvernent le secteur, compris comme un système, incluant administration, opérateurs, organismes d'appui... Il s'intéresse, aussi bien au processus de création et d'évolution des forêts, qu'au maintien de l'intégralité de leurs différentes fonctions ; mais aussi à l'utilisation rationnelle et durable des ressources forestières, pour le bien être et la satisfaction des différents besoins économiques et sociaux de la population. Les objets d'observation de l'ONESF gravitent notamment autour de (i) l'exploitation forestière, (ii) la mise en œuvre de la conven-

tion CITES, ratifiée par Madagascar; (iii) le fonctionnement du système de transfert de gestion, orienté vers une gestion de proximité des forêts par les communautés de base.

A votre question sur l'importance des forêts, voici ma réponse de forestier! Un monde dénudé, où dominant béton, plastic et macadam, noyé sous les différentes pollutions de l'atmosphère, des eaux, des sols et inondé de bruits, reste-t-il agréable à vivre ? Le rôle vital des forêts et leur effet tampon dans le maintien de l'équilibre climatique global, ainsi que du cycle bio-géo-chimique de la planète, est démontré. La « santé globale » de la planète en dépend. Réserve de gènes et vaste champ ouvert à la recherche de molécules intéressant l'industrie pharmaceutique et la médecine, la capacité des forêts à absorber les gaz à effet de serre, contrecoups de la croissance démesurée des pays industrialisés, est aujourd'hui évaluée et échangée sur le marché, dans le but de stimuler le reboisement, ou d'éviter la déforestation dans les pays en développement. L'absence de forêts dans certaines parties du globe se fait déjà ressentir de manière cruciale. A Madagascar, particulièrement, la forêt est réserve de terres, de nourriture, de matériaux de construction, de médicaments, de loisirs... Le père de famille que je suis recommande à ses enfants d'aimer la forêt et d'en prendre bien soin.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

Je répondrai à cette question en passant en revue les différents enjeux auxquels le pays doit faire face. Je citerai la nécessité (i) en premier lieu et à très court terme de démanteler le réseau actuel de pillage organisé de nos ressources en bois précieux, protégé et entretenu par la corruption. (ii) Résoudre l'impasse de l'impunité, par une application stricte de la loi et des textes forestiers, à travers un traitement convenable des contentieux forestiers, les dossiers bien ficelés au niveau de l'administration forestière (élimination des différents motifs de rejet: manque de charges, vice de fond, vice de forme, vice de procédure), devant être instruits convenablement au niveau d'un Tribunal, doté d'une connaissance appropriée des textes forestiers ; (iii), Réinstaurer une administration forestière crédible, efficace et intègre, soutenue par un corps forestier réconcilié avec son éthique et sa déontologie, assumant sa responsabilité de gestionnaire de patrimoine (efficacité du contrôle, effectivité du système de traçabilité...) (iv) Consolider à la base les acquis de ce processus de réforme et d'assainissement, par la formation et la valorisation des différents corps de métiers liés à la gestion des forêts, au profit d'une amélioration obligatoire des structures de gestion et de leur fonctionnement. (v) Désamorcer le spectre de la crise du bois qui, dans un avenir proche, risque de se réaliser, sans augmentation, renouvellement et maintien d'un capital forestier suffisant, pour absorber les différents besoins actuels et futurs en bois (énergie, construction...). (vi) Promouvoir le partage de responsabilité et la synergie d'action entre une Société Civile structurée et les communautés riveraines, gestionnaires de proximité auxquels reviendra à terme la fonction d'observation, moyennant renforcement de leurs capacités de négociation et réhabilitation de leur dignité, à travers une solution radicale à la problématique de la pauvreté (nourriture, santé, éducation...). (vii) Cet environnement sain permettra aux opérateurs du secteur de développer leurs activités durablement avec efficacité.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

Pour corriger tout système dérégulé, un recul suffisant est indispensable et un regard sur l'ensemble, nécessaire pour détecter objectivement les défaillances. Menée de l'intérieur même du système, une telle entreprise s'avère plutôt aléatoire. Pour assainir et remettre en route la gestion forestière, l'intervention d'un tiers extérieur au système peut s'avérer pertinent. La mise en place de l'ONESF fut déjà un pas dans ce sens, dans la mesure où de façon indépendante, selon son statut et les normes qui lui sont propres, l'ONESF collecte des informations objectives, analyse le degré d'illégalité des faits et observe les failles du système de contrôle. Au constat des faits à tendance perverse, il interpelle les responsables concernés et s'implique jusqu'à mobiliser/dynamiser des actions concrètes et appropriées, pour corriger les anomalies décelées.

Conjointement avec d'autres entités du système national d'intégrité (BIANCO, forces de l'ordre, douanes, unité de contrôle de l'administration forestière), l'ONESF est également intervenu dans des missions de contrôle ou d'assainissement. Les rapports indépendants de l'ONESF n'ont cependant pas tous été rendus publics, mais étaient uniquement destinés aux hauts décideurs, ainsi qu'aux organismes de financement. L'opérationnalité et l'efficacité de la structure, dotée des ressources humaines, matérielles, techniques, financières suffisantes, doivent être consolidées, à travers l'amélioration du cadre juridique, qui doit lui garantir explicitement le principe d'indépendance, l'accès à l'information et la libre publication de ses résultats.

Dans le court terme, l'ONESF est favorable à l'ouverture au partenariat avec un observatoire indépendant international. Mais comme il s'agit d'une crise minant en profondeur les structures socioéconomiques du pays, il faut veiller à l'enracinement local du processus, les communautés locales devant à terme s'en approprier pour devenir la principale partie prenante de la gouvernance forestière. Aussi, le partenariat doit surtout permettre l'engagement réel des entités nationales et aboutir au renforcement des acquis pour assurer la pérennisation. Une volonté politique au plus haut niveau demeure toutefois à la base d'une implantation réelle, et cautionne la synergie des actions et la réussite même de tout le processus. Un réel équilibre entre les pouvoirs exécutif, législatif et judiciaire s'avère nécessaire, pour rendre effectif un mécanisme de contrôle mutuel efficace et profitable à tout le dispositif.

Who would you like to see participating in such an IFM and how could it be funded?

Ce partenariat, pour être efficace et pérenne, doit veiller à la constitution d'un véritable réseau, dans lequel la participation et la prise de responsabilité seront élargies progressivement, au fur et à mesure de l'acquisition du savoir faire nécessaire. Le rôle de starter-accompagnateur exercé initialement par le tandem ONESF-Observatoire indépendant international sera élargi aux organisations de la société civile. Une définition précise du rôle et des responsabilités revenant à chaque catégorie d'acteurs (CTD, Communes, Régions, Fokontany, VOI...) s'impose. Présents jusqu'au niveau local, les organismes d'appui vont relayer les informations. A terme, tous se verront intégrés dans le processus.

Au sujet du financement, l'intérêt mondial à pérenniser les forêts se traduit concrètement dans l'appui des bailleurs

de fonds à plusieurs initiatives connexes. Le mécanisme REDD peut entre autres être étendu au processus. Mais le profit généré par le système en faveur des différents bénéficiaires étatiques et du secteur privé doit à terme motiver les parties à contribuer à son financement.

CHRISTIAN BURREN

Please introduce yourself briefly – how are you related with Madagascar's forests? In your opinion, why are forests important?

I am a forest engineer from Switzerland and have been involved in forest management in Madagascar for about 20 years on different levels. For the last ten years I have been working in Madagascar with NGOs and for Development organisations supporting local communities, private operators and the forest administration to make forest management more sustainable and use of forest products more efficient. I am now working for the Wildlife Conservation Society in Brazzaville, Congo.

Like in many other tropical countries, rural people in Madagascar depend strongly on timber and non-timber forest products for their livelihoods. This is most apparent in the energy sector, with firewood and charcoal covering more than 80% of the national energy needs. This results in relatively high wood consumption on a national level (22 million m³ per year) that has to be covered by national timber production. In addition, forests provide important ecosystem services such as biodiversity conservation, watershed protection and others, and they are also considered by local populations as future agricultural land reserves.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

Conservation of forests must include forest protection, sustainable management and restoration (reforestation) of degraded forests. Since all natural and many artificial forests belong to the state, these activities theoretically have to be carried out by the forest administration entity. However, in practice, the forest administration has neither the means nor the capacity to do so.

Therefore, improving forest governance is essential. This could involve the integration of locals and other actors (e.g., private operators) into forest management, requiring the continuation of current efforts to transfer forest management to local communities as well as to private professional operators. On the other hand, a deep reform of the forest administration is needed in order for them to provide sufficient support to new forest managers. An important aspect in this context is increasing the productivity of the techniques used to transform forest products, especially charcoal.

Forests have to compete with other land uses like agriculture, mining and infrastructure development. We have to make sustainable use of forest resources more competitive compared to other land uses, especially agriculture. This could be achieved by maximizing benefits from sustainable forest management to local people, including the efficient harvesting and transformation of forest products, as well as payments from ecosystem services (carbon sequestration, biodiversity conservation, water, etc.) and ecotourism.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

There is no doubt that insufficient monitoring of forests and of forest management is a major issue in Madagascar. In order to manage forests in a sustainable and efficient way, managers need information regarding the impact of forest management and other activities on the forest ecosystem.

Currently, however, forests are managed and exploited in an inefficient and non-sustainable manner. A forest monitoring system might not be the most important thing and would be primarily limited to providing a general overview of the state and the extent of natural and artificial forests. An IFM could probably guide political decisions on forest management and conservation.

Besides this more national-level forest monitoring, more specific forest monitoring on sites with well established management systems, such as management transfers, could be important for demonstrating the potential of sustainable forest management and substantial income benefits to local communities. This might provide a case for the forest administration to improve support for such systems.

Who would you like to see participating in such an IFM and how could it be funded?

A forest and forest management monitoring system should be independent from forest managers themselves in order to reduce the risk for conflicts of interest. This is very difficult as almost everybody is currently involved in forest management in some way or another.

I firmly believe that the state should play a major role in monitoring forests and forest management activities. However, this can only be efficient and 'independent' if the forest administration retires from direct management of forests and transforms itself into a real forest 'service' providing support to the forest managers (reinforcing their technical, organisational and commercial capacities) and monitors their activities and impact on forest ecosystems in order to improve sustainability and efficiency of forest management.

DOREEN ROBINSON

Please introduce yourself briefly – how are you related with Madagascar's forests? In your opinion, why are forests important?

Since 2003, as an employee of the United States Agency for International Development, I have worked to support the sustainable management and conservation of Madagascar's rich forests. In 2008 I took over as the Director of the Office on Environment, Rural Development and Food Security for USAID in Madagascar. Working with my team, partners and the government of Madagascar, I was optimistic that gains in forest management and biodiversity protection that we made over two decades of partnership were helping to realize a vision of a healthy, sustainable environment that would benefit the Malagasy people. Unfortunately, the political events since 2009 have dampened my optimism. In early 2010, as a result of Madagascar's undemocratic and unconstitutional change of power, the US government suspended all but humanitarian programs, and I was relocated to South Africa as a Regional Advisor

for Biodiversity, Natural Resources Management and Climate Change. I monitor the situation in Madagascar closely, continue to engage in dialogues and anxiously await a time when the US government can relaunch its environmental support. But the time is short. What we have witnessed in Madagascar's forests over the past year has been devastating. Unscrupulous behavior and a general breakdown in systems and rule of law have led to an open access situation, where a select few seem to get the majority of the benefit. The greater good of the Malagasy people as a whole, the resiliency of the island's natural resource base and the ability to recover from the economic effects of this crisis have all been severely undermined by rampant environmental destruction. Some folks have said to me, "if they lose a few species of trees, what is the big deal?" But those trees are part of an ecological system that keeps the soil on steep hillsides, provides homes to wonderfully unique wildlife and plants, retains water and regulates local weather. Those trees are part of a social system, a cultural identity and way of life that Malagasy people have practiced for generations. Those trees are part of an economic system providing timber and non-timber forest products bringing income into the homes of Malagasy families and generating dollars and euros from tourists wanting to pay to see an important piece of the world's natural heritage. As these systems start to fall apart, more people will suffer.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

Personally, the largest problem I see right now is the lack of political will within the Government of Madagascar. A courageous vision is needed to put in place a system where a majority, not a minority, benefits from Madagascar's forests and their biodiversity. Policies and decrees are important, but only if they are backed up with committed action. Otherwise they are not worth much more than the price of the paper that they are printed on. While I believe there are capacity issues in Madagascar, many of the tools for sustainable forest management and conservation are available in Madagascar. The US government, other donors, international organizations and most importantly, Malagasy civil servants, communities and civil society organizations have helped to develop them. Chain of custody, enforcement, human resources management, forest monitoring, and sustainable harvesting plans have been developed, tested and employed. While we need to improve and expand these tools, the foundations are there. Another great challenge is having the right systems in place to ensure that the communities most dependent on the forests receive the benefits from the forests in transparent and equitable ways. I recently saw men heading into the forests near Masoala National Park to cut down some rosewood so they could get money to buy rice. They thought they would get enough money to cover their needs for about a month. I know what those trees are worth on the international market, and it is really sad that all they will get is a month's worth of rice. What will they do when the rosewoods are gone? That time may not be far off. And these three men don't have as many options as other people further up the value chain who are certainly getting more than a sack of rice. The deterioration of Madagascar's forests is unfortunately not a new problem; it is just that it has gotten worse. We need to change the system to create the right incentives to promote behavior that is sustainable for Madagascar's forests.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

I think independent, third party monitoring has value. There is certainly a need for better data regarding exactly what is going on in Madagascar's forests. The data is not so easily verifiable, particularly since the political crisis began. IFM can also help bridge the capacity gap for forest monitoring. IFM also offers a way to root out and exposure corruption in the system. But in the end, IFM can only do so much. The state is still responsible for enforcement. The state is still responsible for ensuring money obtained from fines collected will be invested back into the forestry sector in a wise way. Otherwise, the collection of fines can become an appealing way to make money in a cash-strapped government. In the end we come full circle to my initial point about political will. Any proposal for IFM needs to be considered in this broader context.

Who would you like to see participating in such an IFM and how could it be funded?

There is a lot of international expertise on tropical forest monitoring out there – it is important to tap into that expertise and bring it to Madagascar to nurture in-country skills. I think it is possible to maintain the independence of IFM while also transferring local skill and capacity within Madagascar. I personally know some amazingly committed, bright and capable forest experts in Madagascar working in civil society, I would want to see such individuals at the core of any initiative. I also think some creative partnerships could be developed with local communities to build their awareness, but also to empower them in their own stewardship of their forests. My model of a functioning, thriving society is one that is both willing and capable to demand accountability from its state. If civil society is not built in from the beginning, we will not see the kind of changes we need to see in the Malagasy forestry sector. Funding could come from a variety of international sources to initiate. The private sector has a stake in securing a healthy forest future for Madagascar, and they should also be tapped for support.

The views or opinions of the author do not necessarily represent the views of the US Agency for International Development or the US Government.

MARTIN BAUERT

Please introduce yourself briefly – how are you related with Madagascar's forests? In your opinion, why are forests important?

I am a biologist and focused my doctoral and postdoctoral research on the population biology and genetics of relict arctic and alpine plant species in the Alps and the Scandinavian Arctic. I am a curator at the Zurich Zoo and responsible for the Masoala Rainforest Ecosystem exhibit as well as the follow up of the in-situ conservation projects, which are supported by the Zurich Zoo.

The Masoala Rainforest Ecosystem is a giant 11,000m² greenhouse acting as a microcosm to promote the conservation of rainforests in general and specifically of the Masoala National Park which is located on the east coast of Madagascar. In 1996, the Zurich Zoo established a Memorandum of Understanding (MOU) with the Malagasy Ministry of Environments and Forests

to raise awareness of rainforest conservation in Madagascar as well as in Switzerland. The MOU regulates access and benefit sharing between the Masoala National Park and Zurich Zoo according to the Convention on Biological Diversity (CBD) and facilitates research collaborations. The Zurich Zoo provides about 25% of the running cost of the Masoala National Park and finances multiple bottom-up micro development projects in its surroundings.

Forests are crucial for the long-term stability of almost any human society. The ecosystem services that forests provide, such as soil erosion control, watershed security, net primary production, water transpiration, and the sustainable production of timber as well as non timber forest products are so essential that the loss of forest is very often linked to the disappearance of the human society that eradicated them. Jared Diamond describes many such examples in his book COLLAPSE, covering more than 3,000 years of development and disappearance of distinct human societies.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

The forests in Madagascar are dwindling because charcoal still is the primary source of energy for cooking for the majority of the population and because of slash and burn agriculture which destroys once productive soils at an alarming rate. The often illegal harvesting of precious woods like ebony and rosewood is, to a lesser extent, also triggering forest degradation. The systematic felling of the most valuable hardwood timber not only depletes the forests of the most storm resistant trees but also requires significant amounts of less-dense tree species for flotation assistance during river transport. Often the extraction of precious woods also opens trails and access routes to once pristine forest and reduces mammal abundance through the associated hunting of bush meat.

The present challenges for improving forest conservation in Madagascar are the provision of affordable cooking energy to the population, independent of primary forests; the advancement of sustainable agricultural practices and methods of soil protection; and better forest governance in the timber sector.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

An Independent Forest Monitoring system, which is agreed on by the relevant governmental authorities and covers all remaining forests would in my view be crucial to assess legal compliance of local timber production and to enforce the forest law that is basically well developed in Madagascar.

Who would you like to see participating in such an IFM and how could it be funded?

The organisation commissioned with the IFM must be carefully evaluated for its independence, credibility and objectivity. The implementation of IFM could be facilitated by international donors and organisations, which are involved in setting up good governance and trustworthy administrative systems. In the long run, IFM, a tool to produce legal and sustainable timber, should be regarded as part of the normal production cost of timber, and its expenses should be reimbursed by the timber sector. If such a refund by the timber industry is to establish, the genuine independence of the IFM provider must be very carefully observed.

JEAN-PIERRE SORG

Please introduce yourself briefly - how are you related with Madagascar's forests? In your opinion, why are forests important?

I graduated in Forest Sciences at the Swiss Federal Institute of Technology Zurich (ETH Zurich) and obtained my doctorate with a thesis on subalpine spruce forests in 1977. From 1977 to 1986 I worked for the Swiss Agency for Development and Cooperation (SDC) and for Intercooperation as a scientist and project manager in projects in Rwanda (ecology and management of mountain forests, afforestation, agroforestry) and Madagascar (ecology and management including reduced impact logging in dense dry forests, silviculture and related research). Since 1986, I have been a lecturer in international forestry and agroforestry at the Department of Forest Sciences at the ETH (now Department of Environmental Sciences). I am the head of the Groupe de foresterie pour le développement (GFD). I spent five years in Madagascar as a project manager at the Centre de Formation Professionnelle Forestière Morondava (CFPF, today CNFEREF). My particular interests were the ecology of dry forests as well as silvicultural questions. Since then I have taken part in and led various research projects in the region. At the department Eaux et Forêts of the Ecole Supérieure des Sciences Agronomiques (ESSA), I was significantly involved in educating students.

Forests are one of the most important hosts of biodiversity worldwide. Furthermore, forests provide habitat and basic food resources for tribal communities and provide goods and services for a wide range of populations living near in close proximity to or far from forests. Forests also help regulate the global climate.

Where do you see current and future challenges in managing and conserving Madagascar's forests?

Due to the immense poverty on the island, the overexploitation of natural resources and the traditional 'slash-and-burn' farming, where forests are cut down and set ablaze to clear land for planting subsistence crops and for animal husbandry, is the most urgent challenge.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

An IFM could certainly provide good services and is worth of support. However, this leads to a second question, is it more appropriate to assist the Forest Services in the field and provide them with the means to better fulfil their functions? Moreover, it would be vital to improve agricultural yields to tackle poverty, in order to get down the root of the problem. Under no circumstances should an IFM become a repressive tool as this would only cause harm.

Who would you like to see participating in such an IFM and how could it be funded?

In my opinion, neither foresters nor conservationists should have the majority of members in an IFM program, and it is also important that indigenous people have the leading role. I imagine that farmers could play a positive role in this body as well. The Center of International Forestry Research (CIFOR) could also be a potential participant.

MADAGASCAR FAUNA GROUP

Please introduce yourself briefly -- how are you related with Madagascar's forests? In your opinion, why are forests important?

Madagascar Fauna Group (MFG) is an NGO that has been working in Madagascar for 22 years. Based out of Toamasina on the east coast, MFG manages Parc Ivoloïna: An eco-tourism site that originally began as a simple zoo set within a forestry station but has evolved into a multi-disciplinary conservation and training centre focusing on key issues ranging from improving agricultural sustainability to environmental education and professional training initiatives. MFG is also Madagascar National Parks' (MNP) formally recognized research partner for Betampona Natural Reserve, 40 km northwest of Toamasina for 20 years. Betampona represents one of the last remaining eastern lowland rainforests in Madagascar and is of vital conservation importance in terms of its faunal and floral biodiversity, including a number of site-specific endemics. We carry out research of direct conservation-management significance such as for example research on invasive plants, primary forest cover changes, and bushmeat consumption. MFG works closely with MNP and the local people to help protect Betampona's forest directly through the organisation of regular surveillance patrols, environmental education initiatives and providing eco-agriculture training to demonstrate practical alternatives to traditional *tavy* ('slash and burn') practices. MFG has also established a forest restoration project in association with MNP by installing plant nurseries around Betampona, and provide the tree seedlings of native plant species free of charge to local farmers to reforest areas within Betampona's 'Zone of Protection' and surrounding areas. The aim is to create a buffer zone to protect the Reserve from forest degradation.

Multiple publications and studies have highlighted forests' importance and the ecosystem services they provide as in stabilizing soils, regulating climates, protecting watersheds, functioning as carbon sinks, filtering water and air and harbouring many pollinators and seed dispersers of key fruit species and crops, and so on...

Where do you see current and future challenges in managing and conserving Madagascar's forests?

As E.O. Wilson wrote "Destroying rainforest for economic gain is like burning a Renaissance painting to cook a meal." In Madagascar much of the forest is cut literally with the intention of "cooking a meal". The majority of the population relies on locally collected wood for cooking and construction purposes. However, the leading cause of forest-loss is the practice of *tavy* which is why one of the biggest challenges facing conservationists and land managers in Madagascar today is the need to respectfully modify traditional farming practices that have been revered for centuries and, indeed, millennia. A new paradigm holds great promise that, through a high level of collaboration and communication by specialists in different disciplines, it is not only possible but beneficial to develop land management practices in which agriculture and biodiversity co-exist. Referred to as eco-agriculture to accentuate its core belief, this new approach recognizes that both increasing agricultural production for human consumption and income generation and conserving biodiversity and ecosystem services are equally important and vital objectives to maintain the health of our planet. Within

this holistic landscape natural resource management system, logging would also be subject to best-practice principles. To prevent the current uncontrolled and massive illegal felling of precious woods, logging operations would need to be effectively monitored while existing or new legislation would need to be enforced in a systematic and transparent manner.

What do you think of an Independent Forest Monitoring (IFM) system to help forest governance in Madagascar to deal with the challenges you mentioned?

First of all, such a body would be invaluable as long as it had sufficient funds and power to carry out its specified objectives. Much of Madagascar's remaining forest is in highly inaccessible areas so a substantial budget and work force would be necessary to effectively monitor the real situation on the ground. We believe that in large part current protection efforts fail due to the lack of sufficient well-trained and motivated personnel in the field. Transparency, objectivity and independence from both government bodies and logging operators would be vital prerequisites for the success of an IFM. Secondly, an IFM can only realise its objectives in a climate where there is actually the political will to recognize the current deforestation problems, the commitment to react accordingly and enforce longstanding existing laws and follow independent recommendations as put forward by an IFM. Finally, we feel that an IFM needs to be one component of a diversified approach in order to ensure a successful programme to control the rate of deforestation in Madagascar. Efforts to promote sustainable forestry and improved eco-agricultural practices must be redoubled as only through providing realistic alternatives to *tavy*, firewood, charcoal and unsustainable logging can the current rate of deforestation be slowed.

Who would you like to see participating in such an IFM and how could it be funded?

To be truly independent the IFM should consist of an international body or consortium that work at the invitation of the Malagasy government but, critically, remain independent of them. Some of the international and national NGOs, which already operate and have a strong conservation commitment in Madagascar, would be ideal candidates to act as a committee of advisors as well as 'watchdogs'. A balanced mix of international and Malagasy groups would be ideal to ensure objectivity and vitally important local knowledge. Support for setting up an IFM could be sought from sources such as the GEF, FAO, UNDP, EU as well as World Bank which all have ongoing international programs addressing deforestation or REDD issues. In the long run, a reasonable 'conservation tax' could be levied from tourists, which directly funds IFM activities. Through REDD, carbon markets could provide funding as well as part of the monitoring and evaluation of projects at local and national level.