

Ambatovy Scientific Consultative Committee (SCC)

Key Recommendations, 23–26 November, 2021

The Ambatovy Scientific Consultative Committee (SCC) held an on-line meeting over four days, from November 23 to 26, 2021, as an in-person meeting in Madagascar was not possible due to Covid-19 restrictions. As in previous meetings, our discussions with Ambatovy staff were open, frank, informative, and constructive, covering a wide range of topics. The members of the SCC noted the quality and relevance of the presentations, which reviewed key aspects of a wide range of important topics. The Committee also appreciated Ambatovy's efforts to address the recommendations formulated at the SCC's previous meeting in 2019. The company's continued commitment to meeting its environmental and social obligations and commitments has strengthened its position, importance, and relevance with respect to a wide range of regional and national issues and concerns, which will ultimately be of value to the company as well as to Madagascar and its people.

Based on the discussions held during the 2021 SCC meeting, the following key recommendations were formulated and presented to Ambatovy staff during the closing session:

Biodiversity

The low survival rates of F2 and F3 generations of *Mantella aurantiaca* from captive breeding is a matter of concern because it could compromise the success of Ambatovy's *Mantella* Action Plan and jeopardize an important and visible component of its biodiversity management activities. The company will need to investigate why survival rates are low. Success of the Action Plan will require harmonizing and optimizing activities, and will require close communication and collaboration with and among Ambatovy partners such as Mitsinjo, Madagasikara Voakajy, and others, with respect to captive breeding, translocations, monitoring etc., all in order to ensure that sufficient numbers of healthy, captive-bred animals are available from captive breeding when needed.

Long term follow up is needed as part of the monitoring activities for *Mantella* to assess the viability of new subpopulations being established in receptor ponds. This should involve a proper assessment of reproduction success (e.g., effective breeding, tadpole presence, number of metamorphosed *Mantella* froglets) as part of the procedure for evaluating the success of the Action Plan, rather than simply counting adult frogs.

With respect to the management and conservation of freshwater species in general, it would be valuable to establish a comprehensive protocol for all activities relating to sampling/monitoring (e.g. for trapping crayfish and exotic fish) that includes an anti-chytrid protocol. Likewise, an anti-chytrid protocol is needed for translocation activities of *Mantella aurantiaca* that draws on accepted practice available in chytrid manuals for researchers.

A Critically Endangered reptile species occurring at Ambatovy is currently being monitored but is not the subject of a dedicated Action Plan. Now that *Mantella aurantiaca* has been downgraded to Endangered status, it may be appropriate to develop and implement an Action Plan for this reptile species in the context of Ambatovy's No Net Loss (NNL) strategy.

Lemur survey work comprises an important component of Ambatovy's monitoring program. An effort is needed to ensure that the timing and procedures are standardized from year to year so as to ensure that the results obtained are comparable and to provide an objective basis for monitoring population trends.

The introduction to Madagascar of the invasive and potentially dangerous Asian toad, and its rapid spread outward from Toamasina, were identified as an issue of critical concern by the SCC both in 2017 and 2019. The SCC noted that Ambatovy has provided significant support for the establishment of a dedicated project being implemented by the Madagascar Fauna and Flora Group (MFG) to address this issue, and more broadly to promote awareness and develop policies with regard to invasive species. Ensuring the longer-term viability of funding for the Asian toad program will require a careful and coordinated effort between MFG and Ambatovy, in which Ambatovy will need to leverage its influence, visibility, and contacts, in particular among bi- and multi-lateral donors in a position to support a national effort.

The SCC was encouraged to see that a recent independent study has shown Ambatovy to be on track to achieve NNL of forest cover over the life of the project. It would be important to conduct a similar assessment with regard to the other key NNL parameters, in particular species and other ecosystems. Meeting the company's NNL commitments presumably assumes little or no reduction of these key biodiversity values in the avoidance and offset areas, which implies that community engagement and conservation measures will have to be on track to prevent any further degradation or exploitation at unsustainable levels. It will be necessary to confirm with the CRS team that the project is in fact on track to achieve this goal. If not, then this key assumption of the NNL calculation will need to be revised to include a discount in Habitat Hectares (HH) that factors in project impacts and losses in the avoidance and offset areas.

It will be important to establish clear metrics to assess impacts on priority animal and plant species in order to track progress toward achieving NNL on species. These calculations could be based on several complementary parameters, including number of individuals, number of subpopulations, and genetic diversity, among other possible parameters. Measures to achieve NNL for species should include: 1) protection of those subpopulations that will not be extirpated; 2) establishment of new subpopulations (as part of restoration activities, and possibly also through building new subpopulations in the Conservation Zone); and if needed, 3) *ex-situ* measures as insurance to maintain the total number of individuals and genetic diversity.

The SCC was pleased to note that significant progress continues to be made toward establishing a viable, science-based restoration protocol. Successful implementation of this challenging program throughout the entire mine area is critically important both for assuring compliance with IFC Performance Standard 6 and for meeting Ambatovy's NNL commitment. Continued guidance from the highly qualified expert who has served as the project's restoration coach will be necessary. It is also important to ensure that there is broad understanding among Ambatovy staff that ecological restoration is not equivalent to rehabilitation or re-vegetation, practices that are widely used in the mining sector, but do little to achieve NNL.

Community engagement

Ambatovy is funding tree planting activities in local communities to promote land tenure and fire management. This program would be significantly more impactful and beneficial for Ambatovy's environmental program, and in particular for meeting its offsetting commitments and obligations, if it were also regarded as a method to reduce pressure on nearby natural forests and ensure that exploitation for wood, charcoal, etc. does not exceed sustainable levels (as is probably the case today). This would need to involve engaging the community in a learning process that is intimately linked to the diversification of local economic activities, and should specifically be associated with the use of forest products other than wood for charcoal.

More generally, the support provided by Ambatovy through contracts with local community organizations (COBAs) needs to be explicitly linked to the management and reduction of unsustainable natural resource

use, which represents a threat to the company's conservation and offsetting efforts and therefore presents a risk for achieving the project's NNL goals. This could be structured as a Conservation Contract or Conservation Agreement, in which there is an explicit benefits package along with 1) commitments and obligations for each of the parties, associated with sanctions/penalties, and 2) a monitoring program.

The SCC recommends that Ambatovy should expand and strengthen its longer-term view of community relations, with an explicit goal of ensuring that communities are stronger, more resilient, and self-sustained once the mine is closed. The evaluation criteria should include a measure of whether residents have livelihoods that are demonstrably more diversified and more sustainable than they current are, while at the same time are consistent and aligned with the sustainable management of natural resources. Such an approach would need to take the following aspects into consideration:

Multi-sectorial development partnerships: The "Greenbelt initiative" is the local complement to a broader "landscape management" approach that focuses on an intervention area beyond the mine lease. There is a need to pursue the development of multi-sectorial partnerships with other actors to leverage resources as well as complementary projects and activities, in the broader context of regional sustainable development. The region may be the best level at which to address key issues related to land tenure, migration, livelihoods, education, etc. All of these concerns are connected to deforestation and the unsustainable use of natural resources, issues that cannot be solved by Ambatovy and actors in the environmental sector alone.

Land tenure: The lack of land tenure security is one of Madagascar's most significant and widespread problems (see below), and does not encourage or enable rural people to invest in activities such as sustainable agriculture and tree planting. Securing land ownership is an important precondition to build trust, stabilize livelihoods, and preventing unsustainable practices such as slash and burn agriculture). Strengthening investments to address issues relating to secure land tenure would provide incentives to promote sustainable agroforestry and diversified livelihoods.

Conservation Agreements: This approach empowers local communities to link their activities to conservation goals and objectives through a formal agreement that features explicit rights and obligations. Such agreements offer a valuable way to engage residents in activities that support the environmental such as forest conservation, restoration, and reforestation, as part of a negotiated benefits package. Ambatovy should explore this approach by putting it into practice at one of the offset sites.

To establish an objective baseline for assessing how local community members perceive changes in their own wellbeing, Ambatovy should obtain comparative data from local communities at other sites in the Ankeniheny-Zahamena Corridor (CAZ) situated totally outside the area of influence of the mine project.

Issues at risk for the Ambatovy's Sustainability Initiative

The context in Madagascar with respect to land tenure is complex in several important ways: 1) families and community groups have lost or are losing their centuries-old productive lands inherited from settlers and ancestors; 2) the Government of Madagascar currently favors private companies for land allocation; and 3) laws changing inheritance rights have been passed by the National Assembly and the Senate but promulgation by the President is being delayed at the request of civil society groups because of the significant risks these laws present to the loss of ancestral lands where people lack formal land title papers, a situation faced by most Malagasy living in rural areas. This situation will likely penalize families and local communities, and could therefore impact Ambatovy's efforts to achieve land tenure security as part of its sustainability initiative. The company may wish to consult with the SIF-Collectif Tany regarding the new context that would result from these inheritance laws (including some others that are in the

pipeline) to remain fully informed about resulting changes that could be integrated into Ambatovy's planning and activities.

For Ambatovy to meet its commitments and obligations over the course of the mining project, it will need to consider scenarios projected over the next 25 years (including a list of key assumptions) to model possible outcomes and to ensure stakeholder understanding of the magnitude of the challenge being faced by the company. This is directly related to the development and maintenance of the company's overall project vision, factoring in parameters such as demography, human migration, resource use, and climate change, all of which are beyond the control of Ambatovy but which may in the future effect the impact of the legacy left by the company.

There is a need for more clarity regarding what Ambatovy aims to achieve with regard to sustainability, particularly regarding the geographic delimitation of the company's responsibilities with respect to ecosystem services, as well as the limits of its commitments, obligations, and liabilities. While the presentations provided to the SCC were very interesting, sometimes the limits of responsibility only included the CZ while other times these limits covered the 9 LU within or outside COBAs, which led to some confusion. It will be important to clarify the limits for consideration of issues regarding ecosystem services.

As part of Ambatovy's effort to position itself as a preferred supplier in the context of Responsible Sourcing, the SCC suggests that the company should expand its efforts to take into consideration and minimize the impacts of its upstream supply chain (e.g. suppliers of coal and other materials).

Waste management

Ambatovy has requested that the SCC provide advice on industrial contamination, including waste and water (such as potential heavy metal accumulation from offshore release, possibly leading to ocean water pollution). The Committee does not currently have technical expertise on emissions issues, and we renew our recommendation that Ambatovy consider seeking guidance from a waste management coach.

Notwithstanding the Committee's lack of technical expertise on waste and contamination, however, it is clear that inadequate waste management is a significant potential risk to Ambatovy's local license to operate, in particular in the Toamasina area, and could jeopardize the company's responsible sourcing strategy. This situation is compounded by a lack of in-country waste management capacity. Given that mine closure is scheduled to take place in approximately 25 years, large quantities of additional waste will be generated by the project. It is urgent for Ambatovy to identify a more suitable procedure than continuing to use landfills to dispose of industrial and chemical waste. A possible option might involve the export of certain types of waste from Madagascar, and appropriate expertise should be sought to explore this possibility. Where guidelines for safe levels of contaminants are not provided by the Malagasy authorities, Ambatovy should consider using other appropriate guidelines. The company may also consider whether ADONIS might be able to help identify better options for in-country industrial waste management.

The SCC noted that community wells in the Toamasina area need to be monitored for the possible consequences of groundwater contamination. Ambatovy staff indicated that groundwater quality monitoring is not currently taking place. However, there is a risk that contamination, especially in the tailing and landfill areas, is likely to percolate and reach groundwater, flowing undersurface and eventually impacting the water used by communities. This requires implementing monitoring activities to ensure that water quality in community wells is ensured.

Internal operations

The SCC was pleased to see that communication and interactions between the Mine Operations and Environment teams have significantly improved, as we had recommended on previous occasions. This close relationship keeps the Environment team aware of the physical and chronological framework within which it implements its restoration activities.

To make better use of the information already being compiled in the AMES, the SCC suggests that trend analyses be systematically conducted using specific, carefully selected indicators to determine whether change is positive or negative. These analyses should lead to the identification of 'red flags' where action is needed. The SCC suggests that a sample of such red flags and the actions taken to address them be presented at the committee's next meeting

Comments

The SCC noted that the Ambatovy website did not yet have up-to-date information on the committee's members.

The SCC endorsed Ambatovy's strategy of focusing control efforts on invasive species that represent a significant risk to critical habitats and priority activities such as ecological restoration. Ambatovy's goals with regard to toad control at the plant site need to be clarified since eradication is impossible (removed toads are rapidly replaced by animals arriving from the surrounding area).

Impacts on water quality in rivers flowing from the mine site appears to remain a problem. Achieving adequate control will require more attention if Ambatovy hopes to achieve no net loss of water quality in these rivers.

Requests

Exotic tree species are being used in certain project interventions. The SCC would appreciate receiving more detailed information on: 1) how exotic species are chosen and for what purposes (for example in the Greenbelt activities); 2) whether native species could be used in some cases; and 3) whether or how potential negative impacts of the use of non-native species are being monitored.

The SCC requests that Ambatovy provide an update on the implementation of its recommendations one month prior to each SCC meeting. It would also be helpful if the SCC could be provided with PDFs of thematic presentations a week prior to each meeting.

The SCC would appreciate an update on the evolution of Ambatovy's community relations program and its alignment with the management of biodiversity issues. Likewise, the committee would welcome an update on contamination issues, as well as a summary of options to move toward green energy adoption to further Madagascar's commitment to reduce greenhouse gasses.