

The QMM biodiversity programme, Madagascar

The QMM ilmenite project has identified a range of environmental factors (initially detailed in the Social and Environmental Impact Assessment) for which careful planning is required to ensure that certain impacts are avoided, minimised or compensated. These include deforestation, land use changes, impacts of the port, water resources for mining, impacts of human migration and the impacts of infrastructure development (roads, access to remote areas, etc).

From the perspective of terrestrial biodiversity, the most important of these are deforestation, human migration and infrastructural development. Deforestation includes the littoral forests themselves and also natural forest within the region which is used for slash-and-burn cultivation and charcoal production. These two latter activities are predicted to increase with in-migration and infrastructural developments. Therefore the indirect ('secondary') impacts of the QMM ilmenite project on biodiversity are likely to be significant, and merit equal consideration.

To pre-emptively tackle the environmental impacts of the project, QMM created a broad environmental programme in 1996 including research, monitoring and intervention in the areas of Fauna and Habitats, Flora Biodiversity, Aquatic Ecosystems and Habitat Restoration. Under the guidance of Manon Vincelette (head of Environmental Programmes), a team of 50 employees work within this environmental programme which include tree nurseries, seed storage and propagation facilities, non invasive fuelwood plantations, non timber forest products research, aquaculture research and monitoring and management of mammal, reptile, amphibian and bird populations. For example, fuelwood plantations have been prioritised to meet the growing charcoal fuel needs of the Anosy region, thereby also reducing the pressure on natural forest for charcoal production.

A biodiversity book detailing the environmental research initiated by QMM is due for publication later this year. Significantly, the QMM project is regarded as the nucleus of development of the whole Anosy region, and constitutes an essential part of the World Bank growth pole project for the Fort-Dauphin region. As such QMM is committed to underpinning the sustainable development of the Anosy region, which includes due attention to the environmental impacts (in particular natural habitats and their constituent biodiversity) of these regional developments.

An independent biodiversity committee was formed in 2001, composed of biodiversity experts in various fields of longstanding experience and globally renowned research credentials in Madagascar. This committee remains independent to QMM. The committee now meets on a bi-annual basis. Some of the early advice of the committee was, for example, the creation of conservation zones within each littoral forest patch to function as reservoirs of biodiversity that would otherwise be lost during the mine operation and which can be used as nuclei for the rehabilitation of indigenous littoral forest once mining has ceased.

The biodiversity committee, 2007

Chair: Jonathan Ekstrom	Independent consultant
Jörg Ganzhorn	Hamburg University
Rob Brett	Fauna & Flora International
Jack Tordoff	BirdLife International
Pete Lowry	Missouri Botanical Garden, President
Alison Jolly	Sussex University
Kay O'Regan	Earthwatch
Monica Harris	Fauna & Flora International
Paul Smith	Royal Botanic Garden, KEW
David Hillyard	Durrell Wildlife