

**Report of the International Advisory Panel**

**Integrated Growth Poles Project (IGP2)**

**Projet Pôles Intégrés de Croissance (PIC)**

**August 2011**

**Revised December 2011**

## **ACKNOWLEDGEMENTS/REMERCIEMENTS**

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The Panel conducted its work in close collaboration with the PIC team. Nevertheless, the Panel takes responsibility for any errors of fact in the report and notes that the views expressed herein represent the independent conclusions of the Panel members.

## **EXECUTIVE SUMMARY**

### **1. The Project and the International Advisory Panel**

#### ***The Project***

The Integrated Growth Poles Project [hereafter referred to as PIC – Projet Pôles Intégrés de Croissance] is an initiative of the Malagasy Government (GoM), which aims to create a favorable environment to investors in order (i) to stimulate and achieve sustainable economic growth in three regional Poles in the areas of Antananarivo-Antsirabe, Nosy be and Taolagnaro (Fort Dauphin) and (ii) to ensure equitable and sustainable economic growth through construction and rehabilitation of critical infrastructures, regulatory reform and strengthening capacity of national and local institutions. The Project was approved by the World Bank in the amount of US\$129.8 million in July 2005 and became effective that same year. The closing date for Credit 4101 is now December 31, 2011. A supplemental credit (Credit 4399) provided an additional US\$40 million in 2008. The closing date for that credit is December 31, 2012. The Project's five components are:

- A. Strengthening the Business Environment
- B. Export-led growth in Antananarivo-Antsirabe
- C. Tourism-led growth in Nosy be
- D. Mining and Tourism-led growth in Fort Dauphin
- E. Program and Project Implementation, Monitoring and Evaluation (including safeguards).

In March 2009, the Bank suspended disbursements for both credits in the context of OP 7.30 because of the political situation (accession to power by a *de facto* government that has not been recognized or regularized). Subsequent to the suspension, the ability of PIC to disburse and commit funds was greatly constrained. In August 2009 and October-November 2010, the Bank authorized exception measures as well as priority activities (financed under designated accounts). As of June 30, 2011, nearly all (96.6 percent) of Credit 4101 had been committed. In contrast, about 18.3 percent of Credit 4399 had been committed. Thus, the Project had available approximately US\$36.8 million that could be re-prioritized and re-allocated. There were expectations that resumption of disbursements would be permitted and the PIC was examining the options for re-prioritization and re-allocation of monies to various Project activities.

#### ***The International Advisory Panel***

A first advisory Panel was appointed in 2004. That Panel completed its third and final mission focusing on issues of project design and the early phases of implementation in December 2007. The August 2009 World Bank Supervision Mission expressed the need for a new "International Advisory Panel," because the Project was shifting toward the operational phase and the focus was to be on operation, maintenance and sustainability of the Project Investments. PIC contacted members of a new International Advisory Panel (IAP) in 2010 and, subsequent to Bank approvals, entered into contracts with Panel members in the first half of 2011.

The Terms of Reference (TORs) stated these objectives for the Panel:

- (i) provide oversight on the Project implementation, periodically review and assess the effectiveness of the activities implemented and their outcomes and impacts as well as compliance with national and international standards and guidelines; and
- (ii) make recommendations and advise the Project team and the GoM on measures to enhance the effectiveness of the Project implementation and achievement of the Project development objectives.

The IAP was asked to focus on Tourism-Led Growth in Nosy be and Mining and Tourism-Led Growth in Fort Dauphin. As pertinent, the Panel did consider aspects of Component A and Component E, specifically environmental and social safeguard issues. Export-led growth in Antananarivo-Antsirabe was not part of the Panel's TORs. The Panel formulated a set of principles to guide its work, based on the challenges and issues confronting PIC, subsequent to the political crisis. These principles (outlined in detail in Chapter 1) focused on securing the viability of PIC investments and making these investments sustainable.

The Panel conducted its work in Madagascar from June 26 through July 17, 2011. A draft report was reviewed and discussed with PIC on July 15. Based on comments received from PIC on August 2, 2011, the Panel prepared a final report, which was submitted on August 16, 2011.

## **2. Recommendations for Closure Dates**

The Panel emphasizes that Credit 4101 and Credit 4399 are linked closely, because of the history of the Project. Indeed, they are so intimately linked that both credits support different aspects of the same activities. This is not surprising since the purpose of Credit 4399 was to fund components and activities that had been underfunded by Credit 4101. After additional financing for the Project became effective in late 2008, the PIC had little time to use the monies for the underfunded activities, when work was interrupted in early 2009 by suspension for nearly two and half years (to date). The Project has lost more than half of the time, 31 months out of about 56 months, during which disbursement under Credit 4399 had been planned, but could not occur.

The Panel recommends strongly that the closure dates of both Credit 4399 and Credit 4101 be extended, at least, to December 2013, with the assumption that, during calendar year 2013, preparations for a PIC 2 are underway. Should preparations for a PIC 2 be delayed such that no new credit would be possible in early 2014, the Panel recommends that the two credits be extended through December 2014.

## **3. Nosy be Growth Pole**

### ***Key Findings and Observations***

The Panel visited Nosy be from June 28 to July 1, 2011 and, in addition to visiting project sites, held discussions with project beneficiaries, affected communities and stakeholders from government and the private sector, in particular the tourism and agriculture sectors. The most visible and lasting

achievements have been the completion of the ring road; establishment of the *Aire Protégée de Conservation Marine* (APCM) of Nosy Tanihely; the municipal *Guichet Unique* established as an effort to improve governance and reduce lengthy times to process ordinary actions; the water supply and other sanitary improvements; and the success of the EDBM antenna in Nosy be to attract and support Small and Medium Size Enterprises (SMSE).

The Panel did hear critical views concerning the Project's lack of attention to the "human factor" of development, but did not endorse those blanket critiques. Nevertheless, the Panel does recommend that an important and continued part of PIC efforts be directed to vocational training and communications and to livelihood enhancement.

At the time of suspension of disbursements in 2009, performance indicators in the Nosy be pole had reached or exceeded targets; PIC was attaining the ambition of Nosy be as a growth pole with tourism as its leading economic force. The region appeared to be sheltered from the international economic crisis, a situation considered typical for a high-end tourist destination, which is the market that Nosy Be is targeting. After the political crisis of March 2009, annual indicators of tourism development plunged and growth momentum slowed. The annual indicators for numbers of tourists rebounded in 2010, but were reportedly slowing again by mid 2011. Currently, growth in Nosy be, as reported to the Panel by the population and NGOs, has several external constraints. An important constraint, as of mid 2011, was compromised access to the island because of the lack of reliable air transport by Air Madagascar. The limited availability of land is a constraint to comprehensive land use planning and restricts agricultural or tourism development (such as golf courses) that requires large land areas. Additional setbacks have resulted from increased unemployment as a result of the closing of sugar cane-production by SIRAMA in late 2007 and the collapse of the industrial fisheries and the Pêcheries de Nosy be, at about the same time in late 2007 to early 2008.

The Panel determined that requirements of both the Malagasy environmental assessment procedures and the Bank's safeguard policies have been respected. The EIAs were done in conformance with international standards; however, a number of consequences did not unfold as anticipated, new issues emerged or mitigation and/or support measures were met with unanticipated difficulties. One issue that still requires management is the Marodokany site (also known as the Pont Cassé) where the inhabitants have clearly and consistently reiterated their desire not to be resettled. The current road design with tidal gates that will protect the dwellers appropriately addresses a human and social impact, but will permanently compromise a mangrove (albeit deteriorated) habitat. The Panel has recommended that the understandings with the inhabitants be documented and formalized; the Panel also recommends, in support of the safeguards findings of the World Bank environmental specialist, that an offset mangrove habitat be sought. At Lake Amparihibe, management and protection of the watershed requires increased attention. With respect to the Resettlement Action Plans (RAPs) PIC needs to provide summaries to document closure of resettlement implementation, prior to preparation of the Bank's Implementation Completion Report (ICR).

The Panel identified several emerging and pending issues demanding attention in the current PIC or a future PIC 2. Proposed actions would: (i) investigate promising geothermal sources of energy that could

provide 5 to 10MW of power; (ii) conduct a natural hazards, climate change and risk assessment, with particular reference to coastal and reef resources; (iii) keep abreast of and monitor ongoing offshore oil and gas exploration, about which tourist operators have raised major concerns; (iv) support environmental monitoring and follow-up of Environmental and Social Management Plans (ESMPs) and RAPs; and (v) address planning in the context of the DIANA region with attention to rural development, specifically, agriculture and fisheries.

### ***Recommendations***

The Panel has recommended that amounts previously foreseen for improved ports in Hellville and Ankify be deferred until a PIC 2, largely because the port plans funded under the current PIC are inadequate to meet the needs for upgraded facilities to serve regional tourism and commerce, e.g., deeper draft and more dredging to handle larger vessels such as cruise ships and to incorporate marina facilities. In addition, it seems unlikely that the conditions for a port authority company can be accomplished in time or that there will be sufficient time to reformulate feasibility studies and designs, undertake tendering and contracting and complete construction.

The Panel has proposed 16 priorities for the use of remaining PIC funds in Nosy be. Chapter 3 provides additional detail on the rationale and suggested amounts.

### ***Infrastructure***

1. Sanitary landfill. Completion of the landfill is important to sanitation and Nosy be's appeal to tourists – the principal clients of its principal growth industry.
2. Infrastructure upgrading and maintenance at Marodokany (Pont Cassé/tidal gate), including delimitation of the wetlands, improvement of sanitation, communication with the community and a mangrove system offset elsewhere on Nosy be.
3. Additional road repairs and maintenance.
  - a. Road maintenance is critical to the continued viability of the investments, e.g., the northern belt (ceinture) route must be secured and maintained either as a municipal or a national route.
  - b. The viability of Mont Passot as a tourism site requires improving the road to it.
  - c. Collaboration with the Fonds d'Intervention pour le Développement (FID) and the NGO LALANA to secure community-based maintenance.
4. Extension of community water/sanitary activities.
5. Making the new JIRAMA power plant operational. PIC should address sunk investment now threatened by inability to transfer equipment because the ground between the road and the new building will not support the weight of the equipment. Extension of the network is also considered desirable by the Nosy be PIC antenna.
6. Updating of geothermal power studies, conduct of geophysical surveys and decision re geothermal power support under PIC 2.
7. Additional use of HIMO for road maintenance and upgrading.

*Private Sector*

8. Training and technical assistance in emergency medical care; modest firefighting equipment; and pursuit of potential partnership with La Reunion in firefighting technical assistance. The type of tourist clientele expects such services and the resident population is exposed to considerable risk without them.
9. Training to support tourism:
  - a. Training of trainers to sustain the Centre de Formation en Tourisme et Hôtellerie (CTFH).
  - b. Training for sailors operating tour boats.
  - c. Training for guides focused on certification to guide within national parks.
10. Re-examination of the market possibilities for new airlines/charters, strengthening the regional (Nosy be and the larger region) tourist circuit; and marketing the regional circuit.

*Governance*

11. Strengthened capacity of Nosy be municipality for urban planning; support Plan d'urbanisme de détails (PUDé) and improve tax collection and fiscal management.
12. Assistance for a Regional Development Plan (PRD), coupled with a Schéma Régional d'Aménagement du Territoire (SRAT) at the scale of the DIANA region.

*Environmental and Social Safeguards and Support Measures (Accompagnement)*

13. Continued implementation of the management plan for Nosy Tanihely, specifically, re-do unsafe and deteriorating steps, construct an artificial reef and work with NGOs with interest in protecting the seascape.
14. Enhanced implementation of the management plan for Lake Amparihibe and for Mont Passot as an ecosystem and watershed protecting the water supply and offering tourism benefits.
15. Implementation of a management plan for Lokobe (to be declassified from an integral natural reserve to a National Park) to make it part of the tourist circuit.
16. See also recommendation for mangrove offset under Infrastructure.
17. Allowance of funds to address unexpected social and environmental impacts at the time of Project closure.
18. PIC is encouraged to work with World Bank EP3 to encourage activities in the Diana Region.

**4. Fort Dauphin Growth Pole**

***Key Findings and Observations***

The Panel visited Fort Dauphin from July 6 to July 9th 2011 and, in addition to visiting project sites, held discussions with project beneficiaries, affected communities and various stakeholders, including Rio Tinto/QMM [hereafter QMM], the major player in economic growth. The most visible and lasting achievements have been PIC's participation in the construction of the Ehoala Port, the completion of the rehabilitation of Provincial Road (RIP) 118, the paving or rehabilitation of rural and urban roads, and the contributions to water distribution, waste management and power supply in the urban area. Constructed primarily for mineral shipping, the Ehoala Port has grown as a success story in non-mining transport of goods, containers, and attraction of cruise ships, and as a hub port for the southern Indian Ocean.

After the suspension or limitation of activities in 2009, PIC entered what one of the Panel's interlocutors called a "discreet" mode. The allowed, exceptional and priority activities related to environmental and social safeguards and measures of "accompagnement," which constrained the ability of PIC to continue infrastructure development. Furthermore, there is a large contrast between conditions of infrastructure and the livelihood of the general population versus superior conditions associated with QMM. In a context of reduced economic growth and political uncertainty, these contrasting socio-economic conditions appeared to be a source of social tension and potential unrest. The PIC presence formerly acted as a buffer in this asymmetric situation, which PIC, with its less visible and more "discreet" presence, no longer serves. This situation has exposed QMM, who, despite its involvement in regional and local development, is often viewed as the cause of Fort Dauphin's economic and social problems. Of special concern is the failure to complete the portion of the RN 13 through the central part of the town. The unsafe and unsanitary conditions on this central portion of the road have gained inflated significance as a visible reminder to the population that it is a "victim" of QMM, the government and even PIC.

The demobilization of QMM construction workers in early 2009 had a larger than anticipated effect. The region did not escape the boom-and-bust phenomenon nor did QMM avoid being subject to the "syndrome du seigneur," i.e., being viewed as a lord and provider who cannot live up to perpetual and escalating expectations. While the negative effects could be viewed as temporary setbacks in the longer-term perspective of economic growth in the region, the population does not have the luxury of the longer-term view. They see themselves as poor now and their expectations have not been met.

Direct and indirect spin-offs of revenue from QMM have been delayed because of technical problems in the mining operations that prevented the company from reaching its production targets. Since the "rente minière" is directly linked to the level of production, the economic return to the region has suffered commensurately. Furthermore, despite planned measures for assuring transparency, how revenues are allocated to locations and apportioned was not clear to many of those with whom the Panel spoke. The perceived absence of significant visible outcomes combined with relatively inefficient dissemination of information, not only about the spending of the revenues but the process overall, leads to speculation about inequity and perceptions that benefits are lacking or not shared. Tourism in the growth pole has been affected both by the international economic slowdown and the political crisis. Slowdown in tourism occurred at a time when the number of rooms and hotels, including three and four star establishments, had been considerably increased as a result of the 2005-2007 boom.

The Panel believes that the combination of (i) the political crisis of March 2009, (ii) the withdrawal of many donor's activities (not just PIC), (iii) the bust phase of the boom-bust construction cycle of QMM and (iv) overall depressed economic conditions as a result of the worldwide economic crisis have acted together to undermine growth momentum.

The Panel understands that QMM had prepared and implemented a limited demobilization plan, but this plan has not been sufficient to alleviate the negative effects. The PIC should immediately and intensively address this issue and proceed in priority with activities as part of a package of *mesures d'accompagnement* to alleviate current socio-economic difficulties. The Panel believes that no new



activities *per se* are required, but that priorities should be given to all infrastructures measures that directly affect the population, such as water, power, sanitation and waste management as well as activities targeted at training and capacity building.

With respect to environmental and social safeguards, considerable attention has been paid to assessment and to management of impacts. In addition to the original 22-volume Environmental and Social Impact Assessment (ESIA) produced by QMM in 2001 for mining operations, safeguards documentation consists of additional ESIAs, 13 ESMPs produced by QMM for the components of its installations, a recent ESMP (Addenda II, 2011) concerning changes in the mining technology, two series of ESMPs related to the Quarry and Ehoala Port (prepared jointly for QMM and PIC), and five ESMPs or equivalent produced by PIC as part of the EIAs for RIP 118, RN 13, urban roads, HIMO projects and conservation sites. Six RAPs have been prepared. The Panel notes that QMM has provided a high standard of environmental and social performance. The Panel was informed about some new biophysical impacts directly related to the mine operation in the Mandena zone and some unpredicted impacts on the reproduction cycle of amphibians and reptiles, which are being addressed by QMM.

Concerning resettlement, the Panel believes that PIC has implemented its three RAPs satisfactorily. There is need to consolidate the documentation and provide a summary to prepare for the future ICR. Lack of closure on the PAPs affected by the quarry (QMM RAP and amendment), however, represents a point of vulnerability and a reputational risk. If the quarry land issue is resolved, space will be gained to address other issues, e.g., restriction of access by fishermen, which is open to amicable resolution. The Panel recommends an intensive and time-bound plan to resolve the quarry resettlement issue and to open the way to a final closure of the QMM RAP. These recommendations are provided in detail in Chapter 4 of this report.

The Panel identified these emerging issues requiring attention in the context of the current PIC or a future PIC 2: (i) soil erosion and accelerated deforestation, which suggest that PIC work more closely with NGOs to train people in alternative sources of energy and agro-forestry schemes; (ii) shoreline recession and beach erosion, including review of shoreline profiles and monitoring of results and ongoing problems; (iii) renewable energy, in particular attention to aeolian energy potential; (iv) importance of conducting a natural hazards, climate change and risk assessment, with particular reference to coastal and reef resources; and (iv) assistance to environmental monitoring by the Office National pour l'Environnement (ONE) of the QMM activities.

### ***Recommendations***

The Panel has proposed 18 priorities for the use of remaining PIC funds in Fort Dauphin. Chapter 4 provides additional detail along with proposed funding allocations.

#### ***Infrastructure***

1. Completion of the portion of RN 13 (2.3-2.5km) within the town of Fort Dauphin, as the highest priority from a psychological and reputational point of view.
2. Support to additional upgrading of the road network, with particular attention to maintenance of non-national routes.

3. Identification of agricultural areas that would benefit from rehabilitation of rural access roads (similar to the RIP 118) in order to open up remote zones to commercialization of agriculture.
4. Additional labor intensive road maintenance and upgrading (HIMO).
5. Extension of community water/sanitary infrastructures in Fort Dauphin. Analysis of water supply from Lake Lanirano to determine if perceptions that the water supply causes typhoid have any foundation and long-term measures to place a moratorium on additional building around the lake shores and protect the watershed.
6. Support to waste management in Fort Dauphin to secure and protect the investment in the joint QMM-Fort Dauphin landfill site.
7. Extension of water and electricity to the 11<sup>th</sup> *quartier* of Fort Dauphin to provide important health and social benefits to the remaining “have-nots.”
8. Updating of the feasibility study for harnessing wind power energy and consideration of reactivating a joint project with other donors, or private investors.

#### *Governance*

9. Updating of the Anosy Regional Plan including assessment of the free port zone in Ehoala, landscape analysis of natural resource constraints and opportunities; restoration of the missing data base and GIS of the 2005 plan; analysis of economic opportunities and constraints to prioritize development opportunities; intensive process of consultations; attention to ecosystem services and making Anosy a green growth pole); and supporting outreach and assistance of the Comité Régional du Développement (CRD) with provision of a technical secretariat for the PRD.
10. Work with the Programme de Gestion des Ressources Minières (PGRM) and the Programme de Gouvernance et de Développement Institutionnel (PGDI) to support communities who receive mining revenues and to enhance their understanding of these.

#### *Private Sector*

11. Collaborate with Programme de Soutien au Développement Rural (PSDR) and FID to enhance the value chains of producers along the RP 118 or other roads and those engaged in maritime fishing. Consider providing an *abattoir* for safe butchering of meat (which would also allow QMM to purchase its meat locally), conducting a review of the status and ownership of forested or formerly forested areas, particularly along the RN 118 and supporting revenue generating activities for local populations to diminish deforestation and slash and burn agriculture.
12. Replacement building (current building is undermined by shoreline erosion) for the Centre Régional de Formation Professionnel Technique de l’Anosy (CRFPTA), which has benefited the population through a Public-Private-Partnership among PIC, QMM, Ministry of Education and UNDP.
13. Provision of modest support to improve tourism, such as assisting the Chamber of Commerce and the Office du Tourisme in making the old port a tourist destination.

#### *Environmental and Social Safeguards and Accompagnement*

14. Action plan for an administrative resolution of the QMM amended RAP with request for World Bank endorsement, with particular attention to (i) replacement agricultural lands; (ii) socio-economic impact of the freshwater dam on fishing and agricultural lands; (iii) continuation of the QMM

livelihoods support program to ensure sustainable and sufficient results; and (iv) robust, final evaluation of assets and livelihoods' restoration.

15. Reinforcement for monitoring and follow-up of environmental and social safeguards regarding QMM investments and PIC investments. Given the long-term QMM mining investment, this function is critical -- specifically, access of ONE to a pool of experts, specialized equipment to conduct monitoring and the strengthening of capacity.
16. Incorporation of climate change resilience and overall natural hazards risk assessment as a component of PIC infrastructure and planning. PIC is encouraged to explore opportunities to work with a GEF project under consideration by the Bank for climate change adaptation in southern Madagascar, assuming the project goes forward.
17. Concerns related to the water supply from Lake Lanirano and solid waste management should also be considered as safeguard measures.
18. Allowance of funds to address unexpected social and/or environmental impacts at the time of Project closure.
19. PIC is encouraged to work with World Bank EP3 to encourage activities in the Anosy Region.

## **5. Recommendation for a PIC 2**

The Panel highly recommends pursuit of a PIC 2. A PIC 2 will (i) allow for follow-up on aspects of growth that were not foreseen under PIC 1; (ii) extend the gains acquired; and (iii) accelerate the momentum of growth already achieved. The Anosy Region (expanding upon the Fort Dauphin growth pole) and the Nosy be growth pole (linked to the larger Diana Region) should be targeted to enhance and strengthen *sustainable growth*. The Panel makes this recommendation because the achievements and accomplishments to date in PIC 1 demonstrate good gains and value to the respective growth poles, despite the difficulties of the political crisis. The Panel recommends that, in preparation for a PIC 2, the Bank and PIC:

- Do upstream work within the Bank, with other multilateral and bi-lateral donors, NGOs and the private sector to identify areas of synergy and collaboration, overlap and/or divergence.
- Explicitly encourage and incorporate in the design of PIC 2 synergy and collaboration with other Bank projects, such as PSDR, PGRM and PGDI.
- If additional growth poles are chosen, consider poles with potential for substantial private sector investment, e.g., mining, so that the lessons learned from PIC 1 can be transferred.
- Most importantly, strongly consider adopting the concept of Green Growth Poles, where green connotes explicit recognition of ecosystem services in a green economy, environmentally and socially sustainable management of resources and endorsement of compensation for resource restrictions through provision of pro-poor development benefits and opportunities.
- Consider these areas of intervention: (i) agriculture and fishing with emphasis on employment creation and income enhancement; (ii) energy; (iii) institutionalization of Operations and Maintenance of already built infrastructure; and (iv) partnerships with the private sector.

## **6. Next Steps**

In accord with the Panel's TORs, this report will be shared with the Bank Project Manager and the Bank will disclose it on the Infoshop website. In addition, the Panel recommends that the recommended resettlement actions be discussed with the Africa Region. The Panel's report must be made accessible to the target population and stakeholders; the Panel recommends that the report (or its Executive Summary) be provided to agencies, NGOs and local authorities in Nosy Be and Diana and in Fort Dauphin and Anosy and that PIC hold informational public meetings in each pole.

Based on the Panel's findings and recommendations and review with the Bank Project Team, the Panel expects that the PIC will take actions to resume activities, taking into account the priorities stated in this report.



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## **ABBREVIATIONS and ACRONYMS**

AfDB	African Development Bank
APCM	Aire Protégée de Conservation Marine
APD	Avant Projet Détaillé v. Feasibility Study
APS	Avant Projet Sommaire v. Pre-feasibility study
CFTH	Centre de Formation en Tourisme et Hôtellerie
CGES	Cadre de gestion environnemental et social
CRD	Comité Régional du Développement
CNE	Comité National de l'Évaluation Environnemental
CNRO	Centre National de Recherches Océanographiques
CSER	Comité(s) de Suivi Environnemental Régionaux
CRFTPA	Centre Régional de Formation Professionnel Technique de l'Anosy
DAO	Dossier d'Appel d'Offres (Bid/solicitation document)
DCA	Development Credit Agreement
DIANA	N. region of Madagascar comprising Diego, Ambanja, Nosy be, Ambilobe
EDBM	Economic Development Board of Madagascar
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FID	Fonds d'Intervention pour le Développement
GHG	Greenhouse Gases
GoM	Government of Madagascar
HIMO	Haut Intensité de Main-d'œuvre (Labor-Intensive Works)
IAP	International Advisory Panel
ICMM	International Council of Mines and Metals
IGP2	Integrated Growth Poles Project
Jirama	Madagascar national electricity supply corporation
MAP	Madagascar Action Plan
MECIE	Madagascar Environmental Assessment rules and regulations
MNP	National Parks of Madagascar
MOU	Memorandum of Understanding
NAP	Nouvelle Aire Protégée
NGO	Non-Governmental Organization

ONE	Office National de l'Environnement
OP ou PO	Operational Policy (of the World Bank)/Politique opérationnelle (de la BM)
PAD	Project Appraisal Document (of the World Bank)
PAPs	Populations Affectées par le Projet/Project Affected Persons
PARC	Programme d'Appui au Renforcement des Capacités
PDS	Président de la Délégation Spéciale (mayor)
PGDI	Programme de Gouvernance et de Développement Institutionnel
PGRM	Programme de Gestion des Ressources Minières
PIC	Projet Pôles Intégrés de Croissance
PO	Politique opérationnelle de la Banque
PRD	Plan Régional de Développement
PSDR	Programme de Soutien au Développement Rurale
PUDé	Plan d'urbanisme de détails
QMM	QIT Madagascar Minerals
RAP (PAR)	Resettlement Action Plan (v. PAR)
RFT	Réserves foncières touristiques
RIP	Route d'Intérêt Provinciale
RN	Route Nationale
SRAT	Schéma Régional d'Aménagement du Territoire
SIRAMA S.A	Société anonyme Siramamy Malagasy
SMSE	Small and Medium Size Enterprises
SPGAAN	Société du Port à Gestion Autonome d'Antsiranana-Nosy be
UNEP	United Nations Environment Program
WCS	World Conservation Society
WWF	World Wildlife Fund





## **1. Introduction**

### **1.1 Integrated Growth Poles Project (IGP2) – Projet Pôles Intégrés de Croissance (PIC)**

The Integrated Growth Poles Project (IGP2) is an initiative of the Malagasy Government (GoM), which aims (i) to create a favorable environment to investors in order (i) to stimulate and achieve sustainable economic growth in three regional Poles in the areas of Antananarivo-Antsirabe, Nosy be and Taolagnaro (Fort Dauphin) and (ii) to ensure equitable and sustainable economic growth through construction and rehabilitation of critical infrastructures, regulatory reform and strengthening capacity of national and local institutions. The Secretariat National designated for PIC is implementing the project on behalf of the GoM.

As stated in the PAD and in the Development Credit Agreement (DCA) for the project restructuring in December 2007:

*“The overall objective of the Project is to help provide an adequate business environment to stimulate and lead economic growth in three regional poles in the areas of Antananarivo-Antsirabe, Nosy be and Taolagnaro (Fort Dauphin). The specific objectives are to assist the GoM to (i) construct and rehabilitate critical infrastructure essential for sustained economic activity in the tourism, manufacturing, agribusiness and mining sectors; (ii) put in place appropriate incentive measures to achieve rapid growth; (iii) develop the instruments to ensure equitable, sustainable growth; and (iv) strengthen the capacity of local authorities to formulate, prepare, implement, and manage medium- and long-term integrated regional development projects in the future.”*

The Project was categorized as Category A under OP 4.01(Environmental Assessment) and this categorization remains unchanged. The original Project (Credit 4101 MAG) was for US\$129.8 million (IDA) with another US\$16 million committed by IFC. The Project was approved on July 12, 2005 and became effective on September 28 of that year. The Project’s five components are:

- A. Strengthening the Business Environment
- B. Export-led growth in Antananarivo-Antsirabe
- C. Tourism-led growth in Nosy be
- D. Mining and Tourism-led growth in Fort Dauphin
- E. Program and Project Implementation, Monitoring and Evaluation (including safeguards)

The Project was scheduled to close on December 31, 2010. The closing date for Credit 4101 was subsequently extended in 2009 to close on December 31, 2011.

The Project was formally restructured on December 14, 2007, to align it better with the Madagascar poverty reduction strategy for 2007-2012, the Madagascar Action Plan (MAP) and the Bank’s Africa Action Plan. The Project Development Objective was not changed. The restructuring focused on strengthening implementation arrangements, specifically supporting the Economic Development Board of Madagascar (EDBM), reallocation between categories to provide for 100 percent of the financing of all eligible expenditures in each component and to support some new activities under existing sub-components.

The Project's Mid-Term Review, launched in December 2007 (ahead of schedule) and completed after the June 2008 World Bank supervision mission, confirmed satisfactory progress in implementation and also the presence of major financing gaps. Filling these gaps was necessary to enable the Project to meet its development objectives. As of January 2008, total disbursement of Credit 4101 was 43 percent with another 45 percent already committed.

The Bank had expected that the difference between the estimated total cost (US\$304 million) of the Project in 2005 and the credit amount would be filled by GoM, other donors and the private sector. The estimated total cost (especially infrastructure) and private sector financing had both increased, but the anticipated funding by others was lagging. (Further details about the financing gap can be found in the Memorandum and Recommendation of the President of IDA for the proposed additional credit.) Thus, the Bank agreed to put in place additional financing of US\$40 million (Credit 4399 MAG) to complete the originally-planned activities that were not funded. The additional financing focused on three areas: Strengthening the business environment, infrastructure upgrading in Nosy be/Diana Region and in Fort Dauphin, and project implementation and strengthening of local institutions. Credit 4399 was approved in April 2008, was signed in May 2008 and became effective in August 2008.

In March 2009, the Bank suspended disbursements for both credits in the context of OP 7.30 because of the political situation (accession to power by a *de facto* government that has not been recognized or regularized). The National Project Secretariat staff decreased in numbers from about 100 total (including support and financial staff from LBI) to somewhat over 50 of which only 18 are full-time professional staff. Subsequent to the suspension, the ability of PIC to disburse and commit funds has been greatly constrained. In November 2009 and again in late 2010, subsequent to supervision missions by the World Bank in August 2009 and October-November 2010, exception measures as well as priority activities (financed under designated accounts) were authorized. In late 2010, these totaled about US\$10.5.<sup>1</sup>

The current financial situation, as of June 30, 2011, is that nearly all (96.6 percent) of Credit 4101 has been committed with about US\$4.1 million remaining to be committed. In contrast, about 18.3 percent of Credit 4399 has been committed with approximately \$US32.7 million remaining to be committed. Thus, the Project has available approximately US\$36.8 million that could be re-prioritized and re-allocated. (Approximately another US\$1.9 million is close to being committed for activities whose bids have been or are soon to be launched.) The PIC has expectations that resumption of disbursements will be permitted in the near future and is examining the options for re-prioritization and re-allocation.

## **1.2 Context for the International Advisory Panel (IAP)**

### **1.2.1 First Panel**

A first advisory Panel (also referenced in Bank and PIC documents as the Environmental and Social Advisory Panel) was appointed in 2004 to fulfill a requirement under OP 4.01 related to the Project's

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<sup>1</sup> The amounts were approximately US\$3.7 million in the two credits and; direct payments in August 2009 and US\$10.5 million in 2010. Note that these amounts are not additive as some but not all of the exception or priority amounts in 2010 were not additional but were cumulative of the 2009 numbers.

complexity. It carried out its first mission in December 2004. That Panel whose term expired in 2008 (Aide-Memoire, August 2009) completed its third mission focusing on issues of project design and the early phases of implementation in December 2007.

### **1.2.2 Second Panel**

The World Bank Supervision Mission of August 2009 explicitly expressed the need for a new “International Advisory Panel,” because the Project was shifting toward the operational phase and the focus was to be on operation, maintenance and sustainability of the Project Investments. That mission indicated the need for the new Panel to include experts in mining and regional development (Aide Memoire August 2009). In various other documents, the panel has been referred to as an Environmental Social and Advisory Panel and/or an Independent Advisory Panel. The Panel has adopted the term International Advisory Panel [hereafter the Panel] referencing the terms used in the Aide Memoires of August 2009 and October-November 2011.

Members of the second Panel were identified and contacted in 2010 for work later that year, but eventual contracts were not initiated until April 2011 for a mission that was to occur in October 2011. In late May, the Panel was asked to mobilize for a mission in June-July 2011. Panel members made special efforts to juggle schedules to accommodate the PIC’s request. The Panel wishes to acknowledge that in order to mobilize quickly some compromises had to be made with respect to the amount of preparation possible for the Mission.

### **1.2.3 Members of the IAP**

Three members comprise the Panel:

- Charlotte Bingham, Team Leader and Regional Development Planner with expertise in environmental and social safeguards;
- Michel A. Bouchard, Mining Expert with expertise in environmental assessment and environmental capacity building; and
- J. Keith Rennie, Social Development and Institutional Expert with expertise in social safeguards, including resettlement.

## **1.3 Mandate and Scope of the IAP**

### **1.3.1 Objectives**

The specific objectives of the Panel as stated in its Terms of Reference (TORs) are to:

- (i) provide oversight on the Project implementation, periodically review and assess the effectiveness of the activities implemented and their outcomes and impacts as well as compliance with national and international standards and guidelines; and
- (ii) make recommendations and advise the Project team and the GoM on measures to enhance the effectiveness of the Project implementation and achievement of the Project development objectives.

The Panel held initial meetings with the National Secretary, Eric Rakoto Andriantsilavo and the Environmental & Social Responsible, Harizo Rasolomanana, of the National Project Secretariat (NPS). Based on the PIC presentations and group discussions, the Panel took into account the current circumstances of the Project's suspension, expectations of the PIC for the Project's resumption and the possibilities of a PIC 2 (as had been alluded to in Bank missions prior to the political crisis of March 2009). As a consequence of working with the PIC, the Panel refined its objectives.

The IAP agreed that its overarching objectives would be:

- Examination of the Project in order to recommend the re-allocation and/or re-prioritization of funds among PIC components and activities
- Recommendations for new activities or continued activities with a different scope of investment – all within the overall PDO of the current PIC;
- Overall review of the attainment of safeguards requirements;
- Recommendations on closure of the projects and ending dates; and
- Consideration of the rationale, justification and orientations of a PIC 2.

### **1.3.2 Scope**

The scope of the IAP, according to the TORs for the Panel, is to focus on Component C (Tourism-Led Growth in Nosy be) and Component D (Mining and Tourism- Led Growth in Fort Dauphin). As pertinent, the Panel did consider aspects of Component A (Strengthening the Business Environment, particularly the PARC – *Programme d'Appui au Renforcement de Capacité des Entreprises* and Component E (Project Implementation, Evaluation and Monitoring). Environmental and social safeguard issues received attention in the context of Components C and D.

The Panel did not address Component B (Export-led growth in Antananarivo-Antsirabe). The Panel made no visits to the sites for that component and had no interaction with any pertinent stakeholders. Therefore, the Panel has no conclusions or recommendations regarding Component B.

### **1.4 IAP Guiding Principles**

The Panel formulated a set of principles to guide its work, based on the challenges and issues confronting PIC. These principles are:

- Secure and protect the value of an investment such that it does not deteriorate prematurely or disappear with little to no continued, future value;
- Make the investment environmentally, socially and economically sustainable and capable of being economically sustainable, i.e., self-supporting without continued Project support;
- Target the livelihoods of people so that the benefits of infrastructure investments are enhanced (i.e., do not underestimate the significance of the human factor in order to make infrastructure investments viable);
- Identify external factors and disabling circumstances that the Project cannot control, but put the attainment of Project objectives at risk;

- Keep building the momentum of PIC and position it well for future work and for a future PIC 2;
- Maintain an active follow-up on safeguards, in order to do no harm to the world-recognized biodiversity of the growth poles that is critical to their tourism growth potential and to protect the interests of project-affected persons (PAPs); and
- Recognize the potential for and try to avert social conflict, whether based on actual issues affecting communities or perceived neglect or exploitation.

### **1.5 IAP Work Program**

The Panel received and reviewed a variety of historical documents relating to the two Bank credits, a suite of Aide-memoires, previous Panel reports, various PIC and World Bank reports and sets of Environmental Impact Assessments (EIAs)/*Etudes d'Impact sur l'Environnement* (EIEs), Environmental and Social Management Plans (ESMPs)/*Plans de Gestion Environnementale et Sociale* (PGES), Resettlement Action Plans (RAPs)/*Plans d'Action de Reinstallation* (PARs) for the growth poles of Nosy be and Fort Dauphin.

The Panel arrived in Antananarivo on June 26, 2011. After one day of orientation by PIC in the headquarters office, the Panel conducted site reconnaissance and met with various PIC stakeholders, project beneficiaries and public and private sector representatives in Nosy be from June 28 through July 1. The Panel was able to review and consolidate its findings as well as meet with the Rio Tinto/QIT Madagascar Minerals (QMM) Advisory Panel during the period July 4-5, 2011. The Panel conducted the same type of work in Fort Dauphin as in Nosy be during the period July 6 through July 9. During the week of July 11 through 16, the Panel interviewed additional stakeholders and debriefed both the PIC and World Bank Private Sector and Safeguards representatives in Antananarivo. A full itinerary and list of persons contacted and interviewed is presented in Annex A.

### **1.6 PIC Resilience**

The Panel has drawn lessons from Project experience during the period 2005 to mid-2011. The Panel notes the resilience and adaptability of the Project to a variety of changing circumstances that are not typical. During the past six years, the PIC has experienced Project restructuring, a high percentage of disbursement and commitment of funds leading to an early mid-term review, additional financing of \$US40 million that it could not spend because seven months later the Project was affected by the Madagascar political crisis resulting in the suspension of all activities other than those designated as excepted measures. The Project lost a high percentage of its technical staff responsible for implementation. Despite the current situation, the Project has attained satisfactory ratings on the accomplishment of the PDO and, depending on the rating period, satisfactory to moderately satisfactory ratings on implementation.

### **1.7 Panel Report Distribution and Disclosure**

A draft Panel report was presented to PIC on July 17, 2011. Based on comments provided by PIC on August 2, 2011, the Panel revised the report and submitted its Final Report on August 16, 2011. The

Panel's report will be made accessible to the affected populations and stakeholders. The World Bank will disclose the Report on its Infoshop Website.

### **1.8 Organization of Report**

Chapter 2 discusses the closure dates for the two credits and makes recommendations related to these dates and the Implementation Completion Report (ICR). Chapter 3 focuses on the Nosy be growth pole and is divided into three sections: (i) the Panel's observations and findings, (ii) a review of how safeguards are being implemented; and (iii) the Panel's recommendations for re-allocation of the remaining funds (from both credits) and re-prioritization of activities. Chapter 4 focuses on Fort Dauphin, following the structure of Chapter 3, while Chapter 5 outlines the Panel's suggestions for the design of a possible PIC 2. A concluding Chapter 6 outlines next steps. There are four annexes, providing a list of the persons met, illustrative photos, maps of the Nosy be and Fort Dauphin areas and the list of references cited.

## **2. Project Timeline and Recommendations for Closure Dates**

The Panel emphasizes that Credit 4101 (current closure date of December 31, 2011) and Credit 4399 are linked closely, because of the history of the Project (see section 1.1); they are so intimately linked that both credits support different aspects of the same activities. This is not surprising since the purpose of Credit 4399 was to fund components and activities that had been underfunded by Credit 4101. From a technical point of view, it is extremely difficult to decouple achievements under the first credit from those of the second. The Project had been disbursing well on Credit 4101, based on the percentage of disbursements prior to the additional financing through Credit 4399, and the initial credit had largely been exhausted. After the additional financing became effective, the PIC had little time to use the monies for the underfunded activities associated with the new credit before work was interrupted by suspension during nearly two and half years (to date). These events severely limited disbursements. Thus, the case can be made that the Project has lost more than half of the time, 31 months out of about 56 months during which disbursement under Credit 4399 (closure date of December 31, 2012) had been planned, but could not occur.

- The Panel recommends strongly that the closure dates of both Credit 4399 and Credit 4101 be extended to at least December 2013, with the assumption that during calendar year 2013 preparations for a PIC 2 are underway. Should preparations for a PIC 2 be delayed such that no new credit would be possible in early 2014, the Panel recommends that the two credits be extended to December 2014.



### **3. Tourism-Led Growth in Nosy be**

#### **3.1 Observations and Key Findings**

##### **3.1.1 Panel's Approach**

The Panel visited Nosy be from June 28 to July 1, 2011. In addition to visiting project sites, Panel members held discussions with project beneficiaries, affected communities and stakeholders from government and the private sector, in particular the tourism and agriculture sectors. The list of site visits and persons met is given in Annex A. See Annexes B and C for an overview map and a selection of photos. Particular attention was paid to the potential need for shifts in priorities in Project components and actions, as a result of the suspension of some activities and the evolving social and economic conditions in the region. For this purpose, the Panel was led by its Guiding Principles (see Section 1.4).

While the Panel addressed the biophysical and social impacts of the Nosy be component and other principal economic factors affecting this pole, the Panel's work did not involve intensive technical verification or in-depth validation of the numerous aspects of the environmental and social safeguards.

##### **3.1.2 Overview of PIC Activities prior to March 2009**

PIC's actions in Nosy be (Component C) were primarily targeted at infrastructure development, assistance to the private sector, and improvement of governance through strengthening the capacity of the authorities and of the municipality; through Component E, PIC aimed to achieve rigorous application and implementation of environmental and social safeguards measures.

Accomplishments of PIC in Nosy be for the period 2005-2008 have been numerous. Their value and efficacy have been noted previously both by the previous Advisory Panel and by Bank supervision missions. The most visible and lasting achievements have been the completion of the various segments of the ring road (V1, V2, V3, etc); the establishment of APCM (*Aire Protégée de Conservation Marine*) of Nosy Tanihely, which is considered a success story; the establishment of the *Guichet Unique* that was established in the municipality as an effort to improve governance and reduce lengthy times to process ordinary actions (such as filing marriage or land papers); the water supply and other sanitary equipment in Hellville; and finally, the success of the EDBM antenna in Nosy be to attract and accompany SMSE (Small and Medium Size Enterprises).

Despite the remarkable achievements of PIC Nosy be, the Panel did hear critical views of the program from some interlocutors in the pole region. Essentially, their view was that PIC was all about infrastructure with little interest or money for the "human factor" of development. Based on this view, enhanced parts of the program would be devoted to training and education. The Panel, having taken into full account the PIC's integrated development approach, does not endorse those critiques. Nevertheless, the Panel does concur with the view that an important and continued part of PIC efforts must be directed to vocational training, communications and livelihood enhancement. Those needs are re-emphasized here.

At the time of suspension of disbursements in the context of OP 7.30 in 2009, development performance indicators in the Nosy be pole were increasing and had reached or exceeded targets; PIC was attaining the ambition of Nosy be as a growth pole with tourism as its leading economic force in the

development of the region. In fact, the region was sheltered from the international economic crisis: according to various hotel owners, there were almost no cancellations of reservations in late 2008 or early 2009 with figures on tourist arrivals (including government staff and international donor consultants) showing an increasing number of visitors each January since 2006 through 2009 (Appleby, 2010, pers. comm. to PIC). The situation is considered typical for high-end tourist destination, which is the market that Nosy Be is targeting.

### ***Tourist Arrivals to Nosy Be, January, 2006 - 2010***

JANUARY	2006	2007	2008	2009	2010
Visitors	2 979	3 390	4 552	5 884	3 665

However, after the political crisis of March 2009, the number of tourists plunged and growth momentum was slowed. The indicators for numbers of tourists on an annual basis as reported by PIC (statistics provided by EDBM Nosy be) showed that yearly tourist arrivals had risen to over 55,000 in 2008, then dropped to around 41,500 in 2009, but rebounded to nearly 63,000 for the year 2010. The tourist numbers were reportedly slowing again in 2011. In recognition of the fragility of the tourism sector and the lingering problems of 2009, re-prioritization of PIC's activities in the pole is recommended.

### **3.1.3 Post 2009 Observations and Issues**

Nowadays, growth in Nosy be, as perceived by the Panel and reported by the population and NGOs, appears to be faced with a number of external constraints (external negative factors) to the resumption of growth. In addition to the still unreliable electricity supply, none of the three main factors is dependent upon or controlled by PIC. They are (i) the suspension *sine die* of the rehabilitation of the port; (ii) limited and compromised access to the island by foreigners and mainland visitors because of poor harbor access but mostly because of the blacklisting of Air Madagascar by the EU (see below); and (iii) limited availability of land, which constrains comprehensive land use planning as well as the implementation of any major agricultural or tourism development (such as golf courses) that requires large land areas. An additional setback has resulted from increased unemployment in other sectors as a result of the closing of the major sugar cane producing activities by SIRAMA in late 2007 and the collapse of the industrial fisheries and the Pêcheries de Nosy be at about the same time in late 2007-early 2008. Nevertheless, Nosy be municipal revenues have shown a net growth, going from a baseline of 541 million AR in 2007 to 1224.5 million AR in 2008, dropping in 2009, but recovering in 2010 to 962.3 million AR.

**The Port.** The Nosy be harbor was scheduled to be upgraded as part of the original 4101 Credit and a special provision in the 4399 Credit included as a condition the constitution of the *Société du Port à Gestion Autonome d'Antsirana-Nosy be* (SPGAAN), and the opening of SPGAAN to private sector partnership through availability of shares. The condition has not been met to date. PIC itself has come to the conclusion that the work necessary to do so at the national levels of government will not be feasible and thus wishes to re-allocate the funds to other achievable work in the Nosy be pole. The Panel shares

this view (see Section 3.3.1). Furthermore, the Panel suggests that this activity become part of an eventual PIC 2 (see Chapter 5), with the objective of scaling up the port to international standards.

**Access.** Numerous tourist operators and organizations reported the problems encountered by Air Madagascar as the most important constraint to their activities. This is a factor outside of the Panel's purview and the Panel can only report what it heard. Seemingly, European and other foreign tour operators are presently avoiding Madagascar as a destination (fearing responsibility for mishaps and customer complaints) because of the unreliability both of the aircraft and of the flight schedules of Air Madagascar. In addition, slack security controls at Nosy be airport appear to deter foreign airlines from using the facility. The flow of tourists is dwindling to a trickle, consisting mostly of direct charter flights operated from Milan.

**Unavailability of land.** Local authorities, various organizations and individuals emphasized to the Panel that a long-term constraint to development is the relative unavailability of land. A significant part of the interior part of the island (around 6500 ha) is legally held by the SIRAMA, the national sugar cane operator. SIRAMA formerly had over 2500 ha in exploitation. Although SIRAMA no longer produces sugar cane and despite approximately 550 ha that were allocated to former employees after the cessation of activities by the company, much of the land still remains unavailable to the market. While some see this situation as an opportunity to lease the land to foreign operators for the resumption of sugar cane production (apparently 2500 ha have been offered to international bid), others see the unavailability of land as a major impediment to integrated regional planning or re-thinking of the options for agricultural production on the island. Tourism by itself can have limited direct spin-offs on the local economy when most of the money is funneled to tour operators, airline companies and hotel owners, unless the tourism functions within an economic system that can provide goods and services locally to hotels and tourists.

While PIC, through support to EDBM, had secured some land as *Réserves foncières touristiques* (RFT) to promote investment in tourism facilities, it seems that practical land allocation difficulties with SIRAMA and others (mainly the Government Paper, dated July 2009, which suspended RFTs land allocation by EDBM) have led to the abandonment of this component of the project. The Panel believes that lessons learned from this effort should lead PIC management to set as a priority the development of a modern, integrated Regional Development Plan (PRD), coupled with a well thought *Schéma Régional d'Aménagement du Territoire* (SRAT) at the scale of the DIANA region. Finally, abandonment of the harbor rehabilitation and RFT components leave space for a substantial reallocation of funds in the Nosy be pole.

**Other.** Waste management has been listed as a major need by the hotel operators and by the municipal authorities. The Panel notes that PIC is making good progress on this activity already and encourages the Project to move on to install and implement an adequate landfill site and a fully functional waste management and collection system. Liquid waste management might be an issue to consider for a possible PIC 2, although some preliminary costing should already be established.

Road maintenance requires special attention and several recommendations of the Panel bear directly on this important issue, which the Panel believes is an essential condition for sustainability of the infrastructures already in place.

There are numerous other activities carried out by PIC that the Panel recognizes a need to pursue or to complement. These are not discussed here but are incorporated in the list of recommendations (see Section 3.3).

## **3.2 Safeguards Review**

### **3.2.1 Safeguards Documentation**

In accord with the objective “to provide oversight on Project implementation and assess the effectiveness of the activities implemented and their outcomes” (TOR of the Panel), the Panel has paid particular attention to the environmental and social safeguard Issues and impacts as well as to compliance with national and international standards and guidelines. Abundant documentation on EIAs, ESMPs and RAPs, in various forms, in addition to the original Framework Environmental and Social Management Plans (CGES, 2005) were provided to the Panel. While every document was not read in detail, all were examined to some degree for what were believed to be critical implementation issues.

In the Nosy be pole, seven EIAs were prepared, respectively for the ring road, the urban roads, the Nosy Tanihely APMC, the Lake Amparihibe water pumping station, the Amparaha RFT, the sanitary landfill site, and, even though it is no longer to be funded, the Hellville Harbor. Most of these EIAs include an Environmental and Social Management Plans (ESMP) as a chapter. Two separate ESMPs were produced for the APMC and Haut Intensité de Main-d'Oeuvre (HIMO) projects (classified by the Bank as Category B and, therefore, not requiring a full EIA). Finally five RAPs or equivalent, prepared by PIC, were examined.

As stated in the CGES (2005), all PIC activities are subject to both the Bank's Safeguard and Disclosure policies, and to Madagascar Environmental Assessment rules and regulations (Décret MECIE). Originally, it was anticipated that the following policies would be triggered, namely PO/OP 4.01 on Environmental Assessment, PO/OP 4.04 on Natural Habitats, PO/OP 4.09 on Pesticide Management, PO/OP 4.12 on Resettlement, PO/OP 4.36 on Forests, PO/OP 4.11 (then OPN 11.03) on management of cultural property and finally PB/BP 17.50 on public disclosure. In the end, PO/OP 4.09 and PO/OP 4.36 were not triggered but all others were. For the purpose of the assessment, in the following paragraphs, all policies are discussed together, except for OP 4.12 on resettlement, which is discussed in a separate section.

In general, all activities in the Nosy be pole have followed strictly the requirements of both the Malagasy environmental assessment regulation and the Bank's various policies. The Panel accepts the assessment by the previous Panel and by successive Bank supervision missions that the application of the safeguard policies during project implementation is satisfactory. The Panel has added particular comments on resettlement, as discussed below.

### **3.2.2 Environmental and Social Impacts Requiring Special Attention**

While the EIAs were done in conformance with international standards, a number of consequences did not unfold as anticipated, new aspects have emerged or mitigation or accompanying measures were

met with unanticipated difficulties. Three cases were brought to the attention of the Panel, namely the "Pont Cassé," the water pumping at Lake Amparihibe, and the Centre de Formation en Tourisme et Hôtellerie (CFTH).

A good illustration of a special case of a complex environmental impact, which still requires management, is related to the Marodokany site (otherwise known as the Pont Cassé). The road design included a re-establishment of the open links between the sea and the mangrove occupying the lagoon system upstream from the bridge, a connection that had been closed partly by makeshift tidal-controlled hydraulic flaps, closing the connection at high tide, and opening it at low tide. While correctly addressing a biophysical impact, that is assuring a fully functioning tidal-mangrove ecosystem, the impact study neglected the social-human impact. Part of the area below tidal range had already been occupied by permanent dwellers, who expressed their wish to remain in the area and wanted the tidal-controlled system to be fully and permanently re-established. The Panel believes that the earlier EIA and design studies of the road should have taken this complex human habitation—wetland conflict into account, but recognizes that PIC has subsequently taken the issues into account in light of the changed circumstances and made the appropriate decision to accommodate the local dwellers. This time, while correctly addressing a human and social impact, the chosen solution has, however, the consequence that the mangrove will be more or less permanently degraded, which represents an irreversible biophysical impact. This issue requires immediate attention; the Panel has made a specific recommendation about this matter (see Section 3.2.5).

The water pumping station at Lake Amparihibe is set in a remarkable landscape of an ancient volcanic crater. While the surrounding slopes to the lakes are relatively uninhabited, there are traces of accrued deforestation, with concomitant soil erosion after rainfalls. In addition to the deforestation which is a concern in itself, the entrained sediments end up in the lake, progressively increasing its turbidity with eventual effects on water quality. The management of the immediate watershed of Lake Amparihibe requires special and increased protection. Beyond the immediate surroundings of Lake Amparihibe, there are other lakes, all being part of the Mont Passot watershed. The Panel was told by representatives of the World Conservation Society (WCS) that these lakes have vestiges of rare/endemic, freshwater ichthyologic species of Madagascar. The Panel considers that in addition to the management of Lake Amparihibe, the headwaters of the Mont Passot watershed should be considered for classification as a NAP (Nouvelle Aire Protégée) and its management be developed and executed in collaboration with a local or regional NGO.

Vocational training, directly for the hospitality Industry, was thought to be an essential component of tourism development. To this end, the CFTH was funded by PIC and other partners, including the Swiss Foundation. One of the main problems encountered by this initiative, which the Panel was told to be a severe limiting factor, is the difficulty in recruiting high quality training personnel. PIC might consider bringing its support to a "Training of Trainers" program in the region.

### **3.2.3 Emerging Issues**

**Renewable Energy Issues.** Energy available at Nosy be as supplied by the JIRAMA is entirely produced from fossil fuel through thermal power plants with high levels of greenhouses gas emissions (GHG). In addition to, and independently from, the fact that the electricity supply is presently unreliable, and

despite the prior contribution of PIC by purchasing an additional generator for the existing power plant,<sup>2</sup> the Panel sought to determine if potential alternative sources have been or could be considered in the short term, or as part of an eventual PIC 2 and a Green Growth Pole approach.

Since Nosy be is located in the volcanic terrains of Madagascar, geothermal energy sources were considered a potential alternative. The Panel was informed that the geothermal energy potential of Madagascar, as a whole, was studied almost thirty years ago, under funding by the UN, and apparently the World Bank.<sup>3</sup> The Panel met with specialists from the *École Supérieure Polytechnique* of the University of Antananarivo for an update to that reconnaissance study and to learn more about the potential for geothermal energy production in Nosy be. According to Prof. Andrianaivo, there are two thermal sources on Nosy be which together could provide a potential of 5 and up to 10MW of power, with a lead time of as few as five years to establish a geothermal power plant with presently available technology.<sup>4</sup> Such a supply would amply meet the local power demand (around 3.8MW) and its anticipated growth for several years.

- The Panel recommends that pre-feasibility and updated and improved, background geophysical studies be conducted under the present Project with a view toward considering a geothermal power plant as part of a PIC 2.

**Natural Hazards, Climate Change and Risk Assessment.** Madagascar is generally recognized to be one of the African countries most exposed to natural hazards, such as cyclones, droughts and floods. It is also vulnerable to climate change that could affect the intensity and distribution of these weather-related hazards.<sup>5</sup> In addition to terrestrial vulnerability, marine, near shore and littoral ecosystems, such as reefs, mangrove and littoral forests, could be (and already seem to be) threatened by climate and temperature changes in addition to direct human interferences. Nosy Tanihely reefs are particularly vulnerable.

- The Panel strongly recommends that PIC incorporate consideration of climate change resilience and conduct overall natural hazards risk assessment as part of a sustainability assessment of all PIC's actions and as a measure of resilience of PIC-supported infrastructure and regional development schemes. The development of a risk assessment tool and the compilation and analysis of the most advanced or important on-going climate change-related studies and actions in

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<sup>2</sup> The present power generation station is located within the urban and populated area, creating noise and emission nuisances. A new power station location has been selected and the station built, awaiting the transfer of the generators, including the additional unit provided by PIC. However, geotechnical problems to allow access to the new site have prevented the transfer of the units to be accomplished so far.

<sup>3</sup> Gunnlaugsson, E., Arnórsson, S., and Matthíasson, M., (1981): Étude de reconnaissance des ressources géothermiques de Madagascar, Projet MAG/77/104, Contract 141/79 VIRKIR, Traduction française, 1, 1- 101.; see also Gunnlaugsson, E., Arnórsson, S., and Matthíasson, M., 1981: Madagascar: Reconnaissance survey for geothermal resources. *U.N. Report: Virkir*, Consulting Group Ltd. Reykjavik, Iceland. Vol. 1 of 2, 4.2-6.

<sup>4</sup> Andrianaivo, L., 2011, Caractéristiques générales des systèmes et des régions géothermiques de Madagascar; Madamines, vol 2., p.11-21.

<sup>5</sup> Ratsimamanga, A. et Bettencourt, S., 2010, La gestion des risques naturels; vers une prévention renforcée et coordonnée; in Madagascar: vers un Agenda de Relance Économique, Banque Mondiale, Juin 2010, pp.351-364.

Madagascar could be outsourced to an expert consultancy or be developed as an in-house expertise for PIC staff.

**Offshore Oil and Gas Exploration.** Oil and gas exploration is presently on-going in the Mozambique Channel, offshore of the northwest part of Madagascar. Various constituencies in the Nosy be pole, including the *Groupeement Hôtelier*, have raised concerns. The Groupeement reported to the Panel that they see this exploration, and possible exploitation, as a direct threat to tourism development, and possibly to reef ecosystems, should accidental spills occur in the Channel.

The Panel did not have the opportunity or the time to gather the required documentation and advice to develop a well-structured recommendation regarding this issue. Nevertheless, the Panel suggests that PIC monitor the progress of the oil and gas sector offshore of Nosy be, conduct a risk assessment for growth pole ecosystems, infrastructure and enterprises. The Panel recommends that PIC, stay abreast of and voice to the appropriate authorities, the concerns of the economic and social players in the region.

**Environmental Monitoring.** All of the ESMPs have been exhaustive and very carefully prepared, but they are not an end in themselves. To the contrary, they mark the beginning of a lengthy process, of follow-up and monitoring. Under Malagasy law, this role is mainly the responsibility of the Office National pour l'Environnement (ONE), to act as recipient and valuers of monitoring and follow-up programs, leading, in most circumstances, to a final "Quitus environnemental." The Bank also has obligations to review monitoring programs. In Madagascar, the ONE, as per the Décret MECIE, has established the "*Comités de Suivi Environnemental Régionaux*" (CSER) in addition to the "*Comité National de l'Évaluation Environnementale*" (CNE). These Comités are composed of permanent staff from ONE, various delegates from different ministries at the national or regional level, and local stakeholders representing civil society. The Panel views the capacity to evaluate, validate and assess the various environmental monitoring reports, in particular by the CSER, as being a critical and essential part of the environmental and social sustainability of the growth in Nosy be. While this issue is more critical in the Fort Dauphin pole, where the CSER is handling the environmental monitoring of a mining megaproject, the function of competently assuring the validation of the environmental monitoring program is nonetheless essential in Nosy be as well.

- The Panel recommends that additional support be given to the environmental monitoring and follow ups function in the pole.

### 3.2.4 Pending Issues

While the major and leading component of economic growth is assumed to come from the tourism industry, traditional economic activities in Nosy be have been agriculture and fisheries. Agricultural activities have been largely based on sugar cane cultivated as a cash crop by the national company SIRAMA. Fisheries have at times been successful and a significant component of income has come from large scale-shrimp fisheries or culture. For different reasons, but all tied to external factors, both the cash crop agricultural sector and shrimp fisheries have collapsed, almost at the same time, leading to degraded socio-economic conditions with negative effects on natural resources. For instance, many of

the fishermen turned to agriculture and former employees of SIRAMA turned to artisanal or inappropriate and destructive fisheries activities. Furthermore, the rate of deforestation, which was already high as a result of the fuel needs of the SIRAMA, went even higher, as a result of the increased needs of the population for an inexpensive and nearby domestic energy source.

Growth in the pole, while led by tourism, should, however, be integrated with new agricultural development and, potentially, a rebirth or restructuring of fisheries, as the concept of "integrated" growth implies. Now is an appropriate time to reflect on the future development of agriculture, particularly for poverty reduction, including an assessment of opportunities, such as specialized fruits, vegetables, rice or cereals, with or without local transformation, for export or the local (tourism-driven) market, niche production (essential oils, e.g., extension of Ylang Ylang production) for the export market, or medium to large agro-business investment, such as restarting sugar cane. The stranglehold on land titles by SIRAMA on two thirds of the island, however, appears to prevent such planning to occur. The recent bids for restart of sugar cane production seem to indicate that the region will not take the opportunity to re-think strategically its rural and agricultural development. The Panel hopes that PIC will be able to encourage planning for sustainable agricultural and rural development, in conjunction with the Bank's Programme de Soutien au Développement Rural (PSDR) program, in the context of the larger DIANA region, and also provide a strategic view on the use Nosy be land, should it become available. In particular, PIC should advocate strongly against any land leases for agribusiness that could be seen as "land grabbing" or land appropriation by foreign interest to the detriment of local economic development.

Similarly, the fishery "crisis" might also be an opportunity to encourage strategic restructuring. The Panel was informed that shrimp fisheries are declining and as practiced are risking the destruction of the resource (inappropriate time, inappropriate location, inappropriate size); at the same time, a new form of aquaculture is being developed based on local crab species. PIC should consider and include in regional planning studies, whether this is promising or whether other forms of shrimp culture (crevetticulture) should be aimed either at the local market or at export are appropriate. The Panel is aware of a recent UN sponsored study on the "crevetticulture" in Madagascar,<sup>6</sup> which recommends semi-intensive, environmentally controlled shrimp culture, aimed at high-end and niche markets, based on eco-certification or AOC (*Appellation d'Origine Contrôlée*) as a viable and sustainable industry. Adaptation of such a strategy might be appropriate for Nosy be and the DIANA region and should be considered as part of the ongoing regional development and planning. The panel was also informed of the potential for crab aquaculture, which might be a suitable opportunity for low income small entrepreneurs aiming at a local market.

### **3.2.5 Resettlement Issues**

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<sup>6</sup> UNEP, 2008, Integrated Assessment of Trade-Related Policies and Biological Diversity in the Agricultural Sector in Madagascar; Transition strategies for the shrimp farming industry in the context of the EU-ACP Economic Partnership Agreement. Reported to the Panel by Prof. Patrick Ranjaton (pranjanton@yahoo.fr), from the *École Supérieure des Sciences Agronomiques (ESSA)*, who conducted the study for and with the *Ministère de l'Agriculture de l'Élevage et de la Pêche*.



**Scope and activities.** For Nosy be, the panel reviewed the four resettlement action plans (i) Lac Amparihibe (April 2008); (ii) Tanihely; (iii) Hellville: *voiries urbaines* (Dzamandzar, Ambatoloaka, Voie 3); and (iv) *ceinture nord*. The panel visited all the sites and, in most, was able to meet with PAPs.

The panel did not review a fifth RAP, prepared for the RFT, which has been dropped and will not be implemented under this project except for the single Amporaha site. The Panel noted the intention to assist the development of the Lokobe protected area.

**Findings. Generally satisfactory.** The Panel found that the RAPs had been professionally and competently prepared and implemented, and that no major issues in respect of resettlement had arisen. The Panel compliments the PIC on the detailed attention given to ensuring observance of the letter and the spirit of OP 4.12.

**The need for closure.** The implementation of social safeguards has required intensive efforts by all parties and has generated a quantity of documentation. Much of this documentation is of a partial or interim nature and is not definitive. A great deal of institutional memory still resides with individuals. Now that the project is entering its final stages, there is a pressing need to bring final closure through the preparation of formal summative evaluations and assessments that will be incorporated in the ICR. The Panel draws the attention of PIC to paragraph 16 of BP 4.12,<sup>7</sup> which indicates that in the absence of such action, the project will not close and Bank supervision, at least for social safeguards measures, will continue.

This finalization and documentation process has already begun.

- The Panel finds that the evaluation report on Nosy be for the northern ring road (ceinture nord, PIC: 2011a) is a good model. It provides a clear account of the RAP implementation together with a brief and clear list of actions that would be necessary to bring the RAP to final closure. Once these actions are completed and documented, the revised report should be forwarded to the Bank for formal clearance. Subject to Bank comments it could stand as a model example to be followed for the other RAPs for incorporation into the ICR.

**Lokobe.** Lokobe was included in the list of priority actions to be undertaken after July 2009. Current recommendations are discussed in Section 3.3. Concerning resettlement, the Panel believes that OP4.12 might not be applicable, since the protected area and exclusion from access to natural resources was done over two generations ago. The expected national park status would permit additional employment and activities for the communities surrounding the park and this opportunity would enhance their livelihood opportunities. In no sense does the project contribute to restricting access. PIC should ask the

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<sup>7</sup> BP 4.12 Para 16 states: A project is not considered complete --and Bank supervision continues-- until the resettlement measures set out in the relevant resettlement instrument have been implemented. Upon completion of the project, the Implementation Completion Report (ICR) 11 values the achievement of the objectives of the resettlement instrument and lessons for future operations and summarizes the findings of the borrower's assessment referred to in OP 4.12, para. 24. 12 If the evaluation suggests that the objectives of the resettlement instrument may not be realized, the ICR assesses the appropriateness of the resettlement measures and may propose a future course of action, including, as appropriate, continued supervision by the Bank.

Bank for clear formal guidance. If a Process Framework were required, it would not be difficult to prepare or implement.

The mission noted that the Hassan soap factory situated near the Protected Area, could, in principle, be converted to uses consistent with the Park management plan. However, in view of opposition by the owners, this procedure is not urgent and could possibly be deferred to a possible PIC 2.

**Pont Cassé.** There will be no RAP for Pont Cassé at Hellville, where the inhabitants have clearly and consistently reiterated their desire not to be resettled, despite the risks of flooding in their present site. Therefore, an in situ upgrading plan is being prepared. See also Section 3.3.

- From the resettlement perspective, the Panel recommends the following actions for Nosy be:
  1. Accelerate the works, with a time-bound action plan, to bring closure to all RAPs that have been substantially completed in preparation for the ICR.
  2. Confirm with the Bank whether a PF is required for Lokobe and follow up as required.
  3. Formalize and document the wish of the inhabitants of Pont Cassé not to be moved and file this document with the Bank.

### **3.3 Recommendations for Re-Allocation and Revised Priorities**

Based on its observations and key findings, the Panel recommends the following list of priority actions in the Nosy be growth pole. For convenience, these recommended actions are grouped along the four main axes of the PIC program, namely, Infrastructure, governance, private sector and environmental and social safeguards.

This list of recommended actions and priorities assumes that funds already committed for activities will remain committed. The Panel is **not** recommending that funding commitments already made be withdrawn or any contracts annulled or changed. The Panel does recommend that two activities (the port and Hellville Hospital) not be pursued.

- The Panel recommends that the amounts foreseen for improved ports in Hellville and Ankify be dropped. The Panel strongly recommends that the port improvements, while important and necessary in the long-term, be deferred to a PIC 2 for several reasons.
  - First, the Panel doubts that the conditions for a port authority company (SPGAAN) can be accomplished without working with the national government, which is not currently appropriate.
  - Second, the Panel believes that the current port plans are inadequate and rather than doing a modest improvement that is insufficient, in the longer term, it is preferable to re- think the objectives and develop an improved port concept. A new Hellville port should meet the needs for upgraded facilities to serve regional tourism and commerce, i.e., deeper draft (and thus more dredging) to handle larger vessels and to improve access for cruise ships, improved facilities to offload, unload and store goods, upscale marina berthing (not now included), and consequent improvement as needed of selected roads linking to the port. The Panel has the impression that the port was conceived in the additional financing credit

(4399) to meet an available budget amount rather than to meet a range of important needs that should be met.

- Third, even with a Project extension, there is likely not enough time to re-formulate an Avant Projet Sommaire (APS), Avant Projet Détaillé (APD), Dossier d'Appel d'Offres (DAO), launch an *appel d'offres*, do the works, and have the year's guarantee for the works.

- The Panel also recommends that no further investments or technical assistance be provided to the Hellville hospital, as various Aide-Memoires in and subsequent to 2008 have also concluded.

The Panel emphasizes that all specific amounts cited below are merely indicative (and potentially on the high side) of a possible envelope of costs, for several reasons. First, the PIC will need to exercise judgment in juggling among committed costs and the re-allocation to priority actions. Second, a more refined allocation of costs will need to be informed by more specific information and, in some cases, updated feasibility (APD- level) and design studies. In some cases, the costs indicated are potential totals and not additional to costs in the DCA for Credits 4101 and 4399; in some specified cases, the costs are additional to what has been spent already, e.g., training.

### **3.3.1 Infrastructure**

- 1. Sanitary landfill facility. Completion of a new landfill is important to the sanitation of Nosy be and its appeal for tourists – the principal clients of its principal industry.

Consider total of US\$700,000 including funds for an international consulting firm to review the design and appel d'offres documents.

- 2. Infrastructure upgrading and maintenance at Marodokany (Pont Cassé/tidal gate). The Panel is apprised of the current decision to demarcate the sensitive habitat (currently degraded mangrove lagoon) and contact residents to have them acknowledge the risks of remaining in the area and their wish to remain anyway. The Panel wishes that the earlier EIA and design studies of the road had taken this complex human habitation—wetland conflict into account. The Panel also recommends that some funds be used to identify a healthy mangrove system offset elsewhere on Nosy be that can be preserved or conserved with appropriate local resource management for sustainable fishing. Should some residents change their position on wanting to remain in the area, then the PIC would be obliged to find these affected residents secure land elsewhere.

Consider bringing the total amount to resolve this situation to US\$1 million so as to include sufficient funds to establish limits of the wetlands (*zone humide*), contact residents with formal papers for signature, improve sanitation/*assainissement*, assist in community *sensibilisation* and establish a mangrove offset.

- 3. Additional road repairs and maintenance in Nosy be.
  - a. Road maintenance is critical to the continued viability of the investments, e.g., the northern belt (ceinture) route must be secured and maintained either as a municipal or a national route.
  - b. The viability of Mont Passot as a tourism site requires improving the road to it.

c. As noted in the Aide-Memoire of October-November 2010, the Panel endorses the concept of working with the Fonds d'Intervention pour le Développement (FID) and the NGO LALANA to secure community-based maintenance.

Consider US\$1,500,000 for technical assistance and repairs related to maintenance as well as designs and works (the bulk of the dollars to be re-allocated) to improve the route to Mont Passot and working with commune and local communities to put in place mechanism to ensure commitment for road maintenance.

- 4. Extension of community water/sanitary activities. Investigations within fokontany have identified needs for additional works.

Consider US\$200,000 to \$400,000 in all to cover current and additional needs for works.

- 5. The new power plant of JIRAMA must be put into operation. JIRAMA is seemingly not able to resolve the problems of transferring existing equipments into it, because the entry/access to the power plant will not support the weight of such equipment. In order to secure the already sunk investments and make the new plant operational, the Panel recommends that PIC solve this problem. Furthermore, extension of the network is also considered desirable by the Nosy be PIC antenna.

Consider US re-allocation of US\$400,000 to secure the entrance to the power plant and allow for some extension of the current electricity network.

- 6. Based on the discussion in Section 3.1 concerning geothermal energy potential in Nosy be, the Panel strongly recommends updating the studies to date and conducting geophysical surveys and reconnaissance studies.

Consider re-allocating US\$400,000 to studies and explorations related to potential for geothermal energy.

- 7. Labor intensive road maintenance and upgrading of \$600,000 is already programmed under Credit 4399. The Panel believes that there may be more opportunities to use HIMO approaches, which appear to have worked well. The Panel notes that this need is perceived to be less important relatively speaking for Nosy be than for Fort Dauphin.

### **3.3.2 Private Sector**

- 8. This recommendation concerns both the private sector and the governance axes of PIC activities and will entail collaboration with private sector operators and citizens and with the municipality. It is described here for convenience. Emergency medical treatment and fire protection and fire-fighting services are lacking in Nosy be. Tourists and the resident population are exposed to considerable risk because of these deficiencies particularly in view of the extensive use of thatching. Tourists, especially the up-market older tourists, expect to have the benefit of emergency health care and a reasonable level of safety. Tourists will feel more secure and more likely to visit or re-visit the island, if they believe that their health and safety is assured to some degree. Providing for this aspect of

health and security seems to be within the spirit of the planned Hellville hospital activity that, in the end, was not needed.

The Panel recommends that PIC (i) offer assistance to the private sector (hotels and restaurant staff, chauffeurs, guides, tourist site operators and interested others in to obtain training in emergency medical care; (ii) provide organizational assistance to structure a volunteer emergency medical and fire department; (iii) provide training and equipment for fire fighting to protect health and security of residents and tourist visitors; and (iv) provide support to the *Délégation de Tourisme (DELTO)* for safety audits of hotels.

Consider re-allocating US\$300,000 to \$500,000 for technical assistance and one fire truck with water tank trailer (*citerne*). Concerning fire-fighting, determine if potential partnership with La Reunion, who had offered to partner with Nosy be, is still viable.

- 9. Provide training that will help develop more sustainable and safer tourism:
  - a. Training of trainers to make the *CTFH* more viable.  
Consider providing an additional US\$150,000 over what has already been provided.
  - b. Training for sailors operating tour boats.  
Consider US\$200,000.
  - c. Training for guides focused on certification to guide within national parks (Nosy Tanihely and future Lokobe).  
Consider providing an additional US\$100,000 over what has been provided for guide training.
- 10. Re-launch and re-activate tourism by re-examining the market possibilities for new airlines/charters and strengthening the options for a regional tourist circuit; develop and market regional tourism circuits. Strengthen the Diana Region and the Nosy be tourism offices.  
Consider making US\$500,000 available for this activity.

### **3.3.3 Governance**

- 11. Strengthen capacity of Nosy be municipality for urban planning and delivery of services. Develop the Plan d'urbanisme de détails (PUDé). This activity should also include support for the municipality to have improved tax collection and fiscal management.  
Consider making US\$500,000 available for this activity.
- 12. Provide assistance for a Regional Development Plan (PRD), coupled with a SRAT at the scale of the DIANA region.

### **3.3.4 Environment and Social Safeguards and Support Measures (Accompagnement)**

- 13. Implement management plan for Nosy Tanihely. The steps to the interpretative center must be re-done as currently they are not safe and are deteriorating. It is apparently too late to go back to the contractor (and indeed the steps were paid for not by PIC but by WWF). The Panel agrees that it will be desirable to enhance fishing, diving and snorkeling nearby by constructing a low-cost artificial

reef. The Panel also notes that WCS has a particular interest in protecting the seascape in and around Nosy Tanihely.

In addition to the Memorandum of understanding signed with the Centre National de Recherches Océanographiques (CNRO), explore with WCS and/or with other NGOs (Reef Check) the possibilities for collaboration in protecting the seascape including options for monitoring coral reefs and water quality.

Consider re-allocating US\$100,000 to this activity to secure and enhance this investment at Nosy Tanihely.

- 14. Enhance the implementation of the management plan for Lake Amparihibe and for Mont Passot. These two areas should be viewed as a related ecosystem with the ability to provide benefits to the watershed and protection of water supply as well as tourism benefits, including nature walks and hiking. The Panel recommends additional measures to secure watershed protection, ensure stability and functioning of the lake's small dam and enhance the two locations as tourist destinations.

Consider re-allocation of an additional US\$50,000 to plant additional trees for watershed protection.

PIC should collaborate with PSDR in the recommended study of the small dam's safety and operation.

Consider re-allocation of an additional US\$100,000 to improve Mont Passot, e.g., entryway stairs, esplanade, additional tree planting in the watershed, some hiking paths, picnic areas and signage. PIC is encouraged to consider this area as well as Lokobe for an integrated scheme of conservation and community employment.

- 15. Implement management plan for Lokobe. In order to make Lokobe, which is to be declassified from an integral natural reserve to a National Park, a useful part of the tourist circuit on Nosy be, a modest level of facilities is appropriate and necessary. There are also advantages of linking this area via boat with Nosy Tanihely in a sea-based tourism circuit. Collaboration with an NGO would also greatly enhance the impact of PIC expenditures. The Panel recognizes that Madagascar National Parks (MNP) is responsible for protected areas and, through PE-3, has renewed funding. Thus, MNP and NGOs as appropriate should be responsible for the conservation aspects of developing Lokobe, while PIC takes on provision of small and basic tourist infrastructure.

Facilities recommended are an entry kiosk, parking area, signs and explanations, and some improved nature paths with signage. As for the Lake and Mont Passot, Lokobe should be considered for an integrated scheme of conservation and community employment. Once the area is re-classified and demarcated, PIC is advised to work with MNP and the PE-3 to provide professional training and certification of local guides; and information, including basic "dos and don'ts" in Malagasy, French, German, Italian and English as well as explanations of the ecological significance of the area.

Consider re-allocation of an additional US\$200,000 for Lokobe.

- 16. Allow for potential to need to address unexpected social and/or environmental impacts at the time of Project closure.

Consider allocating US\$100,000 as a contingency.

- 17. PIC is encouraged to work with World Bank EP3 to encourage activities in the Diana Region.

#### **4. Mining and Tourism-Led Growth in Fort Dauphin**

##### **4.1 Observations and Key Findings**

###### **4.1.1 Panel's Approach**

The Panel visited Fort Dauphin from July 6 to July 9th 2011. In addition to visiting project sites, Panel members held discussions with project beneficiaries, affected communities and various stakeholders including Rio Tinto/QMM [hereafter QMM]. The list of site visits and persons met is given in Annex A. See Annexes B and C for an overview map and a selection of photos. Particular attention was paid to the potential need for shifts in priorities in Project components and actions, as a result of the suspension of some activities and the evolving social and economic conditions in the region. For this purpose, the Panel was led by its Guiding Principles (see Section 1.4).

While the Panel addressed the biophysical and social impacts of the Fort Dauphin component and other principal economic factors affecting this pole, the Panel's work did not involve intensive technical verification or in-depth validation of the numerous aspects of the environmental and social safeguards.

###### **4.1.2 Overview of PIC Activities prior to March 2009**

PIC's actions in Fort Dauphin (Component D) were primarily targeted, as in Nosy Be, at infrastructure development, assistance to the private sector, improvement of governance through strengthening the capacity of Anosy regional and Taolagnaro municipal authorities; through Component E, PIC aimed to achieve rigorous application and implementation of environmental and social safeguards measures. PIC's work was focused not only on its own actions but on the major investments of QMM in the ilmenite mining operation and port construction. PIC as an actor in this situation was dwarfed by the giant presence of QMM.

Accomplishments of PIC in Fort Dauphin for the period 2005-2008 have been numerous and have been noted previously both by the previous Advisory Panel and by successive Bank supervision missions. The most visible and lasting achievements have been PIC participation in the construction of the Ehoala Port, the completion of the rehabilitation of Provincial Road (RIP) 118, the paving or rehabilitation of rural and urban roads, and the contribution to water distribution, waste management and power supply in the urban area.

Constructed primarily for mineral shipping, the Ehoala Port is now also a success story in the transport of non-mining goods, containers and materials; it has become an attraction of cruise ships and is gaining interest as a hub port for the southern Indian Ocean. Six cruise ships are scheduled to harbor at Fort Dauphin in the fall of 2011 and the early months of 2012. While not contributing to hotel occupancy, cruise ships are significant sources of tourism revenue in artisanal products and various other tourist services.

The Ehoala Port is now the entry point for importation of food supplies, mostly rice (roughly 30% of the volume of imported goods) and medication and has led to growing exportation of goods such as sisal (roughly 60 to 70% of the volume of non-mining exported goods), fish and sea food, and specialty vegetables. Relative to 2009, volumes of imports and exports respectively increased by 102% and 117%



in 2010.<sup>8</sup> Clearly, the port and its associated industrial park area provide a strategic entry point for future development of the region.<sup>9</sup>

After the suspension or limitation of many activities (as a consequence of the restrictions under the Bank's OP 7.30) in 2009, PIC, entered what one of the Panel's interlocutors called a "discreet" mode. The permitted exceptional and priority measures were targeted at activities related to environmental and social safeguards and measures of "accompagnement," which constrained the ability of PIC to continue much of its infrastructure development.

#### **4.1.3 Post 2009 Observations and Issues**

Despite the post 2009 measures that aimed at keeping some momentum, the Panel noted that the general conditions in Fort Dauphin appear to have deteriorated since then, based on perceptions reported by the population and NGOs. The Panel noted the wide and highly visible disparities in physical infrastructure, services and living conditions affecting the population of Fort Dauphin compared to the quality of the same factors pertaining to the mining operation of QMM, the largest economic player in the region. QMM enjoyed superior conditions or was perceived to have such; these are (i) the quality of dwellings and other buildings compared between the company's offices and residential enclaves versus the town, (ii) the quality of the water, perceived by the town population, rightly or wrongly, as being of much worse quality than that supplied to QMM; (iii) the power supply, which is affected by numerous load shedding events (*délestage*) in the town versus a Port that is brightly lit all night; (iv) the quality of the roads built by QMM to serve its facilities (which actually carry heavier traffic and need a higher road standard) versus those serving the town.

Altogether, there is a wide contrast that is frequently noticed and reported by the population and the NGOs in the region. Such disparities are not surprising. Nevertheless, it was an intention of the Project that the effects of the mining operation would spread and more generally provide benefits, economic stimulus and livelihood improvement. This has not yet happened to any significant extent, particularly in relation to expectations. Therefore, in a context of reduced economic growth and political uncertainty, these contrasting socio-economic conditions appear to the Panel to be an important source of social tension and potential unrest at the present time. The PIC presence in Fort Dauphin (from 2005-2008) appears to have been a visible and efficient buffer in this asymmetric situation. After the political crisis, with its less visible and more "discreet" presence, PIC is no longer able to act as a buffer. This situation has exposed QMM considerably and, despite its commendable involvement in regional and local development, it is viewed by some as the cause of Fort Dauphin's economic and social problems (even if it is not).

While the Panel has no hard indicators, it was told about and could observe the effects of numerous negative factors that have constrained expected growth in the region and led to social tensions. These include the political crisis and its fall-out effects on limiting development investments from the World

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<sup>8</sup> Source: Services Statistiques des Douanes, Ministère des Finances et du Budget Antananarivo.

<sup>9</sup> Port Authority and APMF (Agence Portuaire Maritime et Fluviale) have recently announced the approval of a Schéma Directeur of the Ehoala Port, as designed and approved by a Joint Committee of Government ministries, regional stakeholders, PIC and QMM (Ehoala Port newsletter, no 9, October 2011).

Bank and other donors; in addition, there were technical delays in the development of the mine operation, the amount of product being mined and consequent delay in the full deployment of the *rente minière*. This problem is exacerbated by insufficient public knowledge as to how this "rente" is distributed and used and what community investments might result or which the community might wish to see. The RN 13 was left unfinished in Fort Dauphin as a result of the suspension in 2009. Failure to complete the portion of the route through the central part of the town has gained a permanent, visible and symbolic status as an indicator of what is wrong. The current situation of the road is unsafe and contributes to unsanitary conditions in the center of the town and adjacent to the market, as a result of poor drainage and major potholes. Failure to complete this rehabilitation work has gained an inflated significance, reminding the population every day that their expectations have not been fulfilled. The state of the route has contributed to a generally depressed or angry reaction by the population. Compared to the high quality QMM roads that cross RN 13, leading to the port and to the mine, the unfinished road is yet another reminder to the population that it is a "victim" of QMM, the government and even PIC.

After the construction phases of the QMM mine installations, the quarry and Ehoala Port had been completed, the demobilization of QMM construction workers in early 2009 had a larger than anticipated effect. For three years, 2006-2008, Taolagnaro had enjoyed an economic boom due to construction activities, high employment rates (see table below), hotels at or near full occupancy, as well as, on the downside, a surging residential market and variously high prices for commodities in the local market place (Appleby 2010, pers. comm. to PIC). Employment with Rio Tinto and its contractors fell from a peak of 3,718 employees in May 2008 to 202 in June 2009 (*Rio Tinto, Bilan des suivis sociaux et environnementaux [May 2010], Table 2.7-8, Vol. 2, p. 117*). Moreover, accommodations for Rio Tinto staff associated with mining operations could be provided in facilities built by the company, so there was no longer a demand for housing elsewhere, which meant that the hotel sector largely reverted to its original base of tourism (Appleby, 2010, *ibid.*)

Employment Statistics, Tolagnaro, 2004-2008

Sector	2004	2005	2006	2007	2008
MINING	1046	2088	3115	4142	5281
TOURISM	331	737	994	1340	1660
TOTAL	1377	2825	4109	5482	6841
Source : CNAPS Tana.					

Therefore, while QMM had aimed to mitigate this effect of declining employment, the region did not escape the boom-and-bust phenomenon commonly associated with megaprojects. Nor did QMM avoid

the phenomenon of being subject, sometimes unfairly, to the "syndrome du seigneur," i.e., being viewed as a lord and provider who cannot live up to perpetual and escalating expectations. The increased economic activities and increased population (as migrants came to the Region to find work in the simultaneous construction phases of the port, quarry, roads and mine) have exacerbated the problems and resulted in persistent negative impacts. Inflation, especially in rents for housing, did not decline after the construction boom was over. The number of the unemployed and their proportion of the population increased, because migrant workers chose to remain in the Fort Dauphin area. Around 1,000 workers are reported to now be available within the area. Nevertheless, municipal revenues for Fort Dauphin have experienced a net increase, going from 293.7 million AR in 2007 to 697.9 million AR in 2008, decreasing in 2009, and recovering somewhat in 2010 to 450 million AR.

While these negative effects could be viewed as temporary setbacks in the longer-term perspective of economic growth in the region, the affected population does not have the luxury of the longer-term view. They see themselves as poor now. Irrespective of whether or not people are objectively poorer, there is little doubt that people's expectations have not been met. Not surprisingly, the reaction is to blame QMM, as their presence represents the biggest change in the area.

As a compounding factor, direct and indirect spin-offs of revenue from QMM have been delayed due to technical problems in the mining operations that prevented the company from reaching its original production targets. Since the "rente minière" is directly linked to the level of production, the economic return to the region has suffered commensurately. Furthermore, as indicated above, despite planned measures for assuring transparency, how revenues are allocated to locations and apportioned was not clear to many of those with whom the Panel spoke. The perceived absence of significant visible outcomes combined with relatively inefficient dissemination of information not only about the spending of the revenues but the process overall leads to speculation about inequity and perceptions that benefits are lacking or not shared.

Finally, tourism in the growth pole has been affected both by the international economic slowdown and the political crisis. The slowdown in tourism occurred at a time when the number of rooms and hotels, including three and four star establishments, had been considerably increased as a result of the 2005-2007 boom. The number of available rooms increased by a third between 2006 and 2010: 346 rooms in 2006, 387 in 2007, 432 in 2008, 450 in 2009. (By May 2010:, there was a small drop to 443 rooms.)

While this growth led to an increase in indicators of development (number of rooms available) and, indirectly, a measure of the success of the growth pole, this increase was not matched by clientele. To the contrary, this situation has magnified the impact of the crisis on tourism operators. At least one major hotel reported to the Panel that it was planning to downsize and lay-off staff.

In conclusion, the Panel believes that the combination of (i) the political crisis of March 2009, (ii) the withdrawal of many donor's activities (not just PIC), (iii) the bust phase of the boom-bust construction cycle of QMM and (iv) overall depressed economic conditions as a result of the worldwide economic crisis have acted together to undermine growth momentum.

As a consequence, the Panel believes that re-prioritization of PIC's activities in the pole are required. This re-alignment and re-prioritization should aim to provide an integrated approach, primarily aiming at assisting the local population to gain employment, strengthen technical skills and have opportunities to view themselves as agents of change.

## **4.2 Safeguards Review**

### **4.2.1 Safeguards Documentation**

In accord with the objective “to provide oversight on Project implementation and assess the effectiveness of the activities implemented and their outcomes,” (TOR of the Panel), the Panel has paid particular attention to the environmental and social safeguard Issues and impacts as well as to compliance with national and international standards and guidelines. Abundant documentation on EIAs, ESMPs, and RAPs, in various forms, in addition to the original Framework Environmental and Social Management Plans (CGES, 2005). While every document was not read in detail, all were examined to some degree for what were believed to be critical implementation issues. In the Fort Dauphin pole, in addition to the original 22-volume Environmental and Social Impact Assessment statement produced by QMM in 2001, an additional ESIA for the Solid Waste Disposal site, conducted jointly by PIC and QMM, was prepared. The most abundant documentation consists of thirteen separate ESMPs produced by QMM for various phases (construction and exploitation) for most of the components of its installations (pre-mobilization, mine, weir, quarry, port and roads). More attention was paid to the most recent ESMP (Addenda II, 2011) produced by QMM as a response to the changes in the mining technology and the introduction of dry mining and consequent, substantial changes in the water management scheme. Two series of ESMPs, related to the Quarry and Ehoala Port, were prepared jointly for QMM and PIC.<sup>10</sup> An additional five ESMPs or equivalent were examined; these were produced by PIC as part of the EIAs of various activities, namely RIP 118, RN 13, urban roads, HIMO projects and conservation sites. Furthermore, there were six RAPs or equivalent, prepared by QMM, PIC, or both.

As stated in the CGES (2005), all PIC activities are subject to both the Bank's Safeguard and Disclosure policies, and to Madagascar Environmental Assessment rules and regulations (Décret MECIE). Originally, it was anticipated that the following policies would be triggered, namely PO/OP 4.01 on Environmental Assessment, PO/OP 4.04 on Natural Habitats, PO/OP 4.09 on Pesticide Management, PO/OP 4.12 on Resettlement, PO/OP 4.36 on Forests, OPN 11.03 on management of cultural property and finally PB/BP 17.50 on public disclosure. In the end, PO/OP 4.09 and PO/OP 4.36 were not triggered but all others were. For the purpose of the assessment, in the following paragraphs, all policies are discussed together, except for 4.12 on resettlement which is discussed in a separate section.

In general, all activities in the Fort Dauphin pole have followed strictly the requirements of both the Malagasy environmental assessment regulation and the Bank's various policies. The Panel accepts the assessment by the previous Panel and by successive Bank supervision missions that the application of the safeguard policies during project implementation is satisfactory, with the exception of some aspects of resettlement, as discussed later. On the specific issue of the environmental impacts of mining and the

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<sup>10</sup> Since PIC was involved directly in two components of QMM installations, as per the Bank's policy, all other installations of QMM come under the obligation to meet the Bank's safeguard policies.

standards of QMM operations, the Panel notes that the regular and rigorous approach of the company to environmental and social impacts management, coupled with the ongoing Extractive Industries Transparency Initiative, endorsement by the company and the country, and the Bank's program on assistance to the management of the *rente minière* (PGRM) combine to provide a high standard of environmental and social performances of the ongoing mining operation. The performance of QMM is believed to meet most of the ten requirements of the (Mining) Sustainable Development Framework as advocated by the International Council of Mines and Metals (ICMM).<sup>11</sup>

#### 4.2.2 Unanticipated Impacts or Unforeseen Magnitude of Impacts

As in most projects and despite the quality of the environmental and social management plans, there are unanticipated impacts or impacts, the magnitude of which turns out to be greater than predicted. The Panel has noted such aspects in order to guide PIC toward some priority actions, in cases where such impacts are of concern.

The Panel was informed about some new biophysical impacts directly related to the mine operation in the Mandena zone, such as accidental flow of process, organic-tainted water and some unpredicted direct impacts on the reproduction cycle of amphibians and reptiles. The Panel was informed that these issues are being addressed by QMM, and in particular, the water management system has been reviewed, with an updated ESMP (Addenda II, 2011).

One of the most significant impacts has been the socio-economic bust following demobilization of manpower after the 2005-2007 construction phases of QMM operations. Impacts related to demobilization were in fact anticipated as illustrated by this excerpt from the Aide Mémoire of the Bank's Seventh Implementation Support Mission (November 13-23, 2008).

*There are new risks emerging from the demobilization of the QMM construction workforce; over 2000 workers are expected to be retrenched in the coming months. While QMM has taken a number of steps, the Region and the local communities are not fully aware of the impacts of the workforce demobilization and are concerned about the social impacts. **NPS to recruit an international consultant to assist the Region and QMM in designing and implementing a demobilization plan for the retrenched workers (January 2009). Bank team will organize a meeting with the NPS, Region and other stakeholders with QMM on establishing a***

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<sup>11</sup> 1) Implement and maintain ethical business practices and sound systems of corporate governance. 2) Integrate sustainable development considerations within the corporate decision-making process. 3) Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities. 4) Implement risk management strategies based on valid data and sound science. 5) Seek continual improvement of our health and safety performance. 6) Seek continual improvement of our environmental performance. 7) Contribute to conservation of biodiversity and integrated approaches to land use planning. 8) Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products. 9) Contribute to the social, economic and institutional development of the communities in which we operate. 10) Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.

***demobilization plan and scaling up the income restoration program as well as discuss other social impacts in Fort Dauphin including health and security (January 2009).***

This issue was not properly addressed, probably because of the political crisis in March 2009 and the suspension of many Project activities. Meanwhile, the risks referred to in the Aide-Mémoire actually materialized and were exacerbated by the crisis itself. The Panel was not provided with any document prepared in the wake of the original recommendation, although it was informed that QMM had prepared and implemented a limited demobilization plan. Nevertheless, this plan has not been sufficient to alleviate the negative and lasting effects to this day.

While it is too late to proceed with such a plan, the PIC should immediately and intensively address this issue and proceed in priority with activities as part of a package of measures of “*accompagnement*” to alleviate current socio-economic difficulties. The Panel believes that no new activities *per se* are required, but that priorities should be given to all infrastructures measures that directly affect the population, such as water, power, sanitation and waste management as well as activities targeted at training and capacity building. Specifically, all activities destined to improve the quality and security of water supply to Fort Dauphin and environs, roads and their maintenance, securing of electrical supply, and improvement of sanitation through waste management should be resumed as planned.

The current plan to integrate PIC's activities with the PSDR and the FID to develop integrated supply chains and agricultural-based, income-generating activities is considered by this Panel as a vital approach. For the same reasons and purposes, all activities that would enhance employability of people, such as the Vocational Training Center (Centre Régional de Formation Professionnel Technique de l'Anosy/CRFPTA) including its relocation,<sup>12</sup> should be considered priorities. The present format of a Public Private Partnership (Ministry of Education, QMM and PIC) should be maintained as it is believed to be the most efficient delivery system that involves the major players in economic development of the pole. Vocational training should be designed to respond to present needs for tourism and mining, but should also be conceived for the eventual needs hopefully generated by the agricultural supply-chain development and in the mid- to long-term by the Ehoala Port and future Zone Franche (free port) activities.

#### **4.2.3 Emerging Issues**

During its visit in Fort Dauphin, the Panel was exposed to a number of environmental issues that appear to have grown in significance since 2009, which require consideration by PIC. The most important of those issues are (i) soil erosion and accelerated deforestation; (ii) shoreline recession (beach erosion), (iii) renewable energy issues; and (iv) natural hazard and climate change risk assessment.

**Soil Erosion and Accelerated Deforestation.** The Panel was sensitized to this issue by NGOs active in the area and by representatives of the regional authorities. Unfortunately, no hard data seem to be available other than the general recognition that forests are being increasingly used by an increasing number of persons, mostly for charcoal and energy supply. Rehabilitation of existing roads, such as the

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<sup>12</sup> The present Training Center is located in buildings belonging to the Ministry of Education; the integrity of the building is presently threatened by erosion and bank recession.

RIP 118, appears to be encouraging deforestation. The Panel recommends that PIC conduct a review of the status and ownership of forested or formerly forested areas, particularly along the RN 118, to determine what options might be available to control cutting or encourage re-forestation. The Panel also suggests that PIC consider working more closely with NGOs already active in the region in training people to alternative sources of energy, the use of more efficient stoves, including possibly ethanol fuelled stoves, or designing agro-forestry schemes for supplying charcoal.

**Shoreline Recession.** The Panel was first informed of a pending problem by the Président de la Délégation Spéciale (PDS or Mayor) of Fort Dauphin and was later allowed to visit a site where bank erosion is jeopardizing the present *CRFPTA* (Photo). Whether this phenomenon is attributable to the normal process of bank recession, is related to the changing coastal erosion pattern as a result of the Port of Ehoala (the Mayor indicated that this is a common belief among the population) or is related to climate change, the very occurrence of the phenomenon calls for PIC to address this issue as part of a risk assessment exercise.



This question was already raised in 2008, as shown by this excerpt from the Aide Mémoire of the Bank's Seventh Implementation Support Mission (November 13-23, 2008).

*Assistance to the Region on beach erosion monitoring is delayed. **The NPS needs to assist the Region to take a more pro-active role in addressing the beach erosion problems: QMM needs to provide clear information on beach erosion patterns and causes, the Region needs to provide compensation for the affected fishermen and take rapid measures to relocate houses***

***currently at risk of destabilization as well as find technical solutions to protect the beaches. This should be part of the ONE/NPS work plan as above.***

The Panel was informed that technical studies have been conducted mostly by QMM and the Ehoala Port authorities on shoreline recession and beach erosion, as a result of both the Port itself and changes in ocean currents related to climate change.<sup>13</sup> Monitoring of a number of shore profiles was planned for a period of two years. Presumably, a final report should have been completed in 2010 and should be available shortly; the Panel recommends that PIC pay very close attention to those studies and integrate the results into a risk-assessment exercise to be carried out for its own purpose, as discussed below.

**Renewable Energy Issues.** Energy supplied by JIRAMA to Fort-Dauphin for both QMM and the populations, is entirely produced from fossil fuel through thermal power plants, with a high output of GHG. The Panel sought to determine if potential alternative sources have been or could be considered. The Panel was informed that renewable energy potential of the region, through aeolian sources, has already been assessed, although the original documents could not be traced at the time of the visit. Apparently, the potential was deemed interesting with winds at 5m high reaching a sustained mean speed of 8 m/s (all data provided through personal communication) and the cost was estimated at 2.5M\$/MW. It seems that a project document (not seen by the Panel) was prepared in 2007/2008 for a joint endeavour by PIC-UNEP and AfDB for an extended feasibility study, but that project was never carried out. This Panel suggests that PIC updates such a feasibility study within the present Project and plan for possible infrastructure as part of a possible PIC 2.

**Natural Hazards, Climate Change and Risk Assessment.** Madagascar is generally recognized to be one of the African countries most exposed to natural hazards, such as cyclones, droughts and floods. It is also vulnerable to climate change that could affect the intensity and distribution of these weather-related hazards<sup>14</sup>. In addition to terrestrial vulnerability, marine, near shore and littoral ecosystems, such as reefs, mangrove and littoral forests, could be (and already seem to be) threatened by climate and temperature changes in addition to direct human interferences.

**The Panel strongly recommends that PIC incorporate consideration of climate change resilience and conduct overall natural hazards risk assessment as part of a sustainability assessment of all PIC's actions and as a measure of resilience of PIC-supported infrastructure and regional development schemes. The** development of a risk assessment tool and the compilation and analysis of the most advanced or important on-going climate-change related studies and actions in Madagascar, could be outsourced to an expert consultancy or be developed as an in-house expertise for PIC staff.

#### **4.2.4 Environmental Monitoring**

All the ESMPs prepared, whether by QMM or PIC, are exhaustive and very carefully prepared, they are not an end in themselves. To, the contrary, they mark the beginning of a lengthy process of follow-up

<sup>13</sup> Rio Tinto, June 2008, Bilan Social et Environnemental, Section 7, Chapitre 4, Addenda Sols: "Suivi des berges de la Baie d'Ehoala, pp.1-11.

<sup>14</sup> Ratsimamanga, A. et Bettencourt, S., 2010, La gestion des risques naturels; vers une prévention renforcée et coordonnée; in Madagascar: vers un Agenda de Relance Économique, Banque Mondiale, Juin 2010, pp.351-364



and monitoring. Under Malagasy law, this role is mainly the responsibility of the Office National pour l'Environnement (ONE) to act as recipient and valuator of monitoring and follow-up programs, leading to, in most circumstances, to a final "Quitus environnemental." The Bank has also obligations to review monitoring programs. In Madagascar, the ONE, as per the Décret MECIE, has established the "Comité de Suivi Environnemental Régional" (CSER) in addition to the "Comité National de l'Évaluation Environnemental" (CNE). These Comités are composed of permanent staff from ONE, various delegates from different ministries at the national or regional level, and local stakeholders representing civil society. The Panel views the capacity to evaluate, validate and assess the various environmental monitoring reports, in particular by the CSER, as being a critical and essential part of the environmental and social sustainability of the growth in Fort Dauphin.

A first round of evaluation has already been effectuated in 2008, as mentioned in the Aide-Mémoire of the Bank's supervision mission in November 2008.

*The first Environmental Monitoring report for the Social and Environmental Assessment (Construction Phase: October 2005 to October 2007) was submitted to the Bank in March 2008. The report was reviewed by the Bank safeguards team and comments were provided to QMM via the ONE.*

*A MOU was signed between the ONE and NPS in April 2008 for a 3 year monitoring program. The detailed work plan and budget for the ONE/NPS monitoring program is still pending. **Based on the MOU, a detailed work plan and budget for the ONE/NPS monitoring program needs to be submitted to the Bank by March 2009.***

Since March 2008, numerous monitoring reports have been issued by QMM and received by the Fort Dauphin CSER. In a meeting with the latter, the Panel observed that the resources available to the CSER are considerably asymmetric relative to the resources of QMM to carry out monitoring programs and prepare reports. The Panel expresses its concerns about this asymmetry and believes that the credibility of the process, both for QMM and PIC, relies upon assuring sufficient resources to the monitoring, evaluation and assessment process at the regional level.

#### **4.2.5 Resettlement Issues**

The Panel's primary concern was, as for Nosy be, to determine the extent to which the RAPs were ready for closure, in order to incorporate the closure report in the ICR.

**Scope and Activities.** For Fort Dauphin, the Panel reviewed the RAPs to be implemented by PIC for: (i) RN 13 (Rte Maréchal Foch et la Corniche) (2005); (ii) Ankarefo (décharge) (2008); and (iii) RIP 118 et voiries urbaines (2008). The Panel visited the sites for (i) and (iii) but time available was not enough to visit Ankarefo.

The Panel also reviewed the RAP (2005) and the amendments (2007) for the QMM mine, which comprised several distinct components: the quarry; the road from the mine to Ehoala port; the road from the quarry to Ehoala port; the Ehoala port concession area; and the workers' camp. The amendments of 2007 did not replace, but modified and complemented, the original document. The

Panel visited the mine and port. The acute sensitivities surrounding the implementation of parts of the QMM RAP and its history of confrontation and conflict had created a considerable volume of documentation, which the Panel studied. It opted not to engage in detailed on-the-spot investigations, in order to avoid being viewed as some sort of tribunal or court of appeal, but chose instead to focus on some of the larger questions which, in its view, need to be taken into account.

**Overview of PIC RAP implementation.** The three PIC RAPs and the greater part of QMM resettlement have been reported on independently. It is the opinion of the Panel that, as for Nosy be, it is time to bring closure to these RAPs with definitive final reports after the completion of any necessary minor outstanding actions.

Recommendation. PIC has implemented its three RAPs satisfactorily. There is now need to consolidate the documents, finalize any outstanding matters and provide summative evaluation in order to prepare to close the files (see section on resettlement for Nosy be).

**Overview of QMM RAP Implementation.** The Panel reviewed the QMM implementation and particularly the issues raised in the 2007 RAP amendment. The Panel considered the matter of the exclusion of the fishermen from the port Ehoala area (Somatraha, village Ambinanibe), which had become contentious and problematic around 2007-2009. These matters were first identified in a 2007 Bank report on resettlement.<sup>15</sup> They were incorporated into the 2007 amended RAP (the matter not having been foreseen in 2005). These fishermen have been the subject of extensive livelihood support measures (equipment and training) by an NGO, ACT. A 2011 evaluation gave a cautiously positive evaluation on the marine fishery and made some recommendations to improve impact<sup>16</sup>, with which the Panel concurs. The Panel saw evidences of improved cooperation between QMM and the fishermen. The Panel has no further comments on these matters, other than to suggest that the possibility of an artificial reef be investigated. Such reefs have been established elsewhere with significantly positive impacts on the fishery, including crustaceans, and can be generated at low cost through the systematic dumping, with environmental supervision and in an appropriate location of inert materials, (wrecks, used car tires and bodies.)

The Panel was less comfortable with the matter of the livelihood impact on fishermen of Lohalovoka changes in the freshwater regime and water fertility seems to require an alternative livelihoods program which is apparently yet to start up. The Panel was also concerned with the impacts of, and responses to, the flooding 130 ha of agricultural land by the Seuil dam, required by a change in the method of mining operations. This is in principle a resettlement matter (economic displacement resulting from change in land use). It is understood that QMM is engaged in a development response, which should be evaluated, documented, and included as an item in the 2007 RAP even although it was not specifically foreseen.

The key matter that preoccupied the Panel in resettlement were the prospects of bringing closure to the most contentious and difficult element in the QMM RAP, the quarry resettlement, which requires more detailed discussion.

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15 Appleby, 2007.

16 QMM 2011: 2.3.2, 5.2.2, 11.2.

**Quarry resettlement: History of the Problem and Responses.** Preliminary studies in 2004-5 established a series of developments arising from the construction of the new Ehoala port, all of which would require expropriation of land in the public interest. These included including an adjacent area for industrial/commercial development, a road linking the mine to the port, a temporary private road linking the quarry and port, a temporary workers' camp and a quarry to provide stone for the port and the roads. These were written into the 2005 RAP. Land expropriation requirements (excluding the mine itself) totaled 505 ha, of which 140 ha<sup>17</sup> were for the quarry. Ninety five households would be physically relocated. About 18 ha of the land was under subsistence cultivation and 150 ha pasture or fallow. The agreement between QMM and the government was that the latter would deliver the necessary land in the public interest, and make replacement lands available, while QMM would finance the costs of compensation.

According to the 2005 RAP, the quarry population, living on or using land classified as State Lands (Domaine de l'état) would be compensated with land of equivalent characteristics and area, with replacement housing or (after full information and informed choice) the monetary equivalent. The quarry being temporary, the displaced inhabitants would be resettled in a village close to the old one. The great majority of persons were classed poor or vulnerable, and therefore would qualify for a 5-year complementary program of food support, micro-credit and transitional assistance in making the new lands productive. A PAP was therefore entitled to several different types of assistance according to the nature and extent of their losses and their vulnerability.

**Resettlement Situation in Early 2007.** In the event, the actual QMM displacement numbers, including the quarry, varied slightly from projections, as a 2007 update on all QMM resettlement showed:

**Number of PAPs, by Project Area and Type of Impact<sup>18</sup>**

LOCATION	TOTAL	HOUSE	FIELD	HOUSE AND FIELD	OTHER
QUARRY	152	83	125	40	0
QUARRY-PORT ROAD	30	0	4	0	26*
PORT	227	3	227	3	0
MINE-PORT ROAD	91	10	75	6	0
RN 12 A	27	0	27	0	0
TOTAL	498				

17 Table 3.5 and 3.5 at p 3-4 of the RAP give slightly different figures cited in the next sentence.

18 Appleby, 2008. Figures vary slightly from those given in his 2007 report, which was based on December 2006 Prospect International monitoring report.

The 2005 RAP had committed to improving or at least restoring economic livelihoods and a program had been developed with NGOs. By March 2007 this program had yet to get going. Meanwhile, a serious issue had arisen with regard to replacement lands. The government had identified a resettlement area primarily for the quarry PAPs, who constituted the majority of those to be physically resettled. The unsuitability of this land is recounted below. Moreover, the grievance system was overwhelmed. The actual consultation process seems to have been significantly defective. Therefore, in place of the consensual, collective and amicable resolution arrangements envisaged by the RAP to deal with the exceptional complaints, 563 complaints had been lodged by December 2006 and a further 522 by December of the following year. In fact, the great majority of these were resolved, with a little over half being accepted and the remainder rejected or (seldom) unresolved. These complaints seem to have arisen largely from lack of understanding of (or agreement with) the method of valuation of losses, and to have concerned primarily agricultural land and fallow. Finally, the 2007 report noted significant problems with population counts and asset inventories and noted that the M&E system was so defective that almost none of the indicators listed in the RPF and the RAP were being reported.

As a result of the situation, the 2007 report made strong and urgent recommendations to: (i) replace lost usufruct lands; (ii) improve communications; (iii) start up the livelihoods program; (iv) implement the monitoring system; and (v) conduct a resettlement audit after land acquisition and compensation were complete.

**QMM RAP Amendment, 2007.**<sup>19</sup> A revised RAP in July 2007 was required to be prepared by PIC for the QMM project for several reasons. There was some change in the QMM land requirements; the future status of the quarry, quarry-port road (realigned) and workers' camp had changed from temporary to permanent and no quarry buffer zone land would now be available after the construction phase. Further, an additional 4 PAPs were to be compensated monetarily. Suitable replacement agricultural lands had not been found, as explained in the paragraph below; because of this delay in finding replacement agricultural lands, the majority of PAPs requested financial compensation and the opportunity to buy agricultural land elsewhere. In addition, the Somatraha fishermen case had arisen, as discussed above.

Five parcels of land had been identified for dryland farming and rice, but expert assessment by Foibe Fikarohana moba ny Fambolena (Centre de recherché sur l'Agriculture)/Centre National d'études et d'application du Génie rural (FOFIFA /CNEAGR)) had indicated that two were unsuitable and the others would require an uneconomic level of inputs. Therefore, the revised RAP proposed a three-way choice for 118 (later 123, due to death of a PAP replaced by several heirs) PAPs from Ilafitsinanana (quarry): (A) full replacement value, single payment with livelihood enhancement program and compensation for future crop losses; (B) a variant of A with 50% of the future crop losses, invested in an interest-bearing account; and (C) land for land, not on land identified through the RAP, but through assistance to the PAP to purchase an equivalent plot identified by the PAP within a 25 km radius. Compensation for loss of future crops would continue for "some years".<sup>20</sup> All those who lost housing would have title to a 400m<sup>2</sup> plot. Sixteen ha of land were initially identified, and the RAP undertook that "La commission n'obligera aucune PAP à opter pour la compensation monétaire à cause des difficultés de trouver des terrains

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19 Madagascar, PIC, 2007.

20 \$317,000 was remaining to be paid out against the value of future crops lost.

adéquats à proximité du village<sup>21</sup> (p.37). The results of this choice for 118 PAPs were A: 112; B: 3; C: 1; not present: 2.

The 2007 RAP amendment also spelled out in some detail the three-year livelihood restoration program: fishing, artisanal activities, youth literacy, health, and agricultural support. Together with the replacement agricultural lands, explained below, policy would ensure that nobody would suffer losses or a deterioration in livelihood. The commitment was important, because resettlement issues had attracted the critical attention of international NGOs.<sup>22</sup>

**2007-9: Period of Progress and Promise.** A resettlement evaluation mission in January 2008 reported considerable progress under the amended QMM RAP. Grievances had almost all been resolved. The 83 houses for the quarry displaced were occupied and acceptable. Many houses were rented to QMM construction workers, a situation that the report noted would cause difficulties when construction ended at the end of the year. Water, latrines and domestic energy needed attention.

The monetary compensation provided was mostly invested in house improvements, cattle, food and furniture. Only 18% had invested in income generation (other than house rental). In 2008, Appleby reported<sup>23</sup> that the most of the cattle had died. This made livelihood restoration all the more urgent.

To address livelihood support, an active program was developed for the PAPs of the villages of Ambinanibe (marine fishermen), Ilafitsinanana (quarry resettlement) and Lohalovoka (freshwater fishermen). Activities included artisan training with an outlet for products at the airport; livestock (poultry, ducks, pigs); agriculture (FAFAFI), such as rice, market gardening, manioc and sweet potatoes (increase in beneficiaries, from 19 in 2007 to 35 in mid-2010). The impact of this program was generally positive but modest. The activities provided supplementary incomes but did not provide secure livelihoods. The numbers of people benefiting from the different programs were small; some programs increased and others failed to retain adherents; there were many trials and failures. Sustainability and scale were major issues. Among the constraints was the small scale, owing to lack of land, technical deficiencies in the NGO program and inability of adherents to reinvest income in growing the enterprise. In contrast to the marine fishery, where significant income enhancement was achieved, the villages of Ilafitsinanana and Lohalovika saw only modest increases. In addition, it was reported that 130 ha of agricultural land had been flooded by the Seuil dam and that “Rio Tinto QMM is now undertaking agronomic studies to investigate the possibility and cost of developing this area with the farmers”.

**2010: Lost momentum.** Several factors contributed to a loss of momentum from 2010. The overall context of the political situation, and attitudes to QMM, became more difficult. The construction boom ended and, with it, much of the rental income from construction workers that had benefited PAPs. The supply of inputs for the livestock program became problematic. Unemployment and local economic downturn increased frustration and led to several blockades of the mine roads, interrupting production and causing a strong protest from QMM to the government.

ATW, a consultancy company who provided QMM with a thorough and conscientious mid-term

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21      *ibid.* p 37.

22      E.g. Panos, 2007.

23      Appleby, 2008, based on Prospect International.

evaluation of the PAP livelihood support programs, commented<sup>24</sup> on an unwelcome development in PAP attitudes, one of being permanent victims and dependents on QMM. They attributed this to the effect of monetary compensations and particularly to a lack of clarity on how different compensations were calculated and paid. They advised an intensive program of communication to replace the “victim PAP identity” with one of partnership with QMM in development opportunities, since absolutely no more compensation money would be paid other than the outstanding amount allocated for “future crops”.<sup>25</sup>

**Agricultural Replacement Lands.** One effect of this negative mentality was the lack of interest by PAPs in replacement agricultural lands that had finally been identified and assessed. The background lay in the 2007 amended RAP. In addition to compensation under choices A, B or C, the “vulnerable” PAPs (in effect, nearly all) would be entitled to additional lands for cultivation which were not less in quantity and quality than those they were actually using. Lost land under cultivation had been calculated at 36.5 ha. These cultivable lands were offered as a “bonus” to support the livelihoods of the vulnerable, on the grounds that (at least for QMM and the government entities concerned with expropriation) full compensation for expropriation had already been paid. The RAP noted that something between 20 to 40 ha would be available from a larger parcel (91) ha in the Commune of Manambaro, about 4 km distant, attributed to the Ministry of Agriculture.<sup>26</sup> The land is potentially irrigable and an expert consultant technical evaluation in 2010 was encouraging.<sup>27</sup>

Probably because they were holding out for more monetary compensation instead, PAPS almost unanimously refused this offer. However, since these lands were designated as a “bonus”, cash in lieu is not an option.

**Requirements for Resettlement Closure for ICR.** Two provisions of the governing OP/BP4.12 are relevant here. The first is that the assets and livelihoods of displaced persons must be restored to at least pre-project levels, and if possible enhanced. The second is that if this is not done by the end of the Project, supplementary measures must be taken by the country concerned; in that case, Bank supervision continues, until the policy requirements are met.

The Panel examined the implications of these provisions in light of the QMM resettlement story presented above. The Panel’s analysis and recommendations are discussed below in three subsections: assets, livelihoods, process and final evaluation.

**Assets.** The lost housing assets have been effectively restored and almost certainly improved, with those affected being given title to 400m2 residential plots. The award of cash compensation for lost land, however, proved problematic. In the first place, the choice of PAPs for cash instead of land was, as the amended RAP makes explicitly clear, based on the non-availability of land which they had earlier been promised. Second, the actual amounts (by government valuers) were very conservative, and were challenged by a subsequent NGO<sup>28</sup> evaluation. Secondly, to the extent that it was invested in housing

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24 QMM 2011.

25 “Future crops” refers to a 3-year estimate of the value foregone of the production on the expropriated lands.

26 *ibid*, p.42.

27 Madagascar, PIC, 2010.

28 The Panel understands that this was the Andrew Lees Trust. Panos may also have been involved.

improvements, the compensation likely kept its asset value. But the second most common investment (almost half the PAPs) was in cattle, which did not survive, probably because of poverty. This was not an unreasonable investment choice (traditional cattle generally have a high rate of return in the region of 15 percent).

The project will, therefore, have to make a directed effort in order to be able to demonstrate that asset values have been restored. A resolution to the agricultural replacement lands issue would be of great assistance, particularly if a solution were to target those who lost most. Annex 6 of the 2007 amended RAP contains a detailed list of losses by PAP, which could assist in this task.

Recommendation: The Panel recommendation on this matter is that the agreement of the authorities should be obtained whereby the agricultural lands should be surveyed, demarcated into parcels, attributed to PAPs either collectively or individually in the interim, and that it be immediately put in escrow and offered again to the eligible PAPs, with the clear message that they may subsequently sell the asset on the market, but that the offer cannot be exchanged for cash. There should be a defined period, perhaps three years, for acceptance of the offer, after which it lapses. The project has already drafted terms of reference for a bailiff to serve such notice, which could be amended once the necessary arrangements have been made for this scheme with the authorities. The authorities should be aware of the collective obligation of the government to bring the resettlement exercise to a satisfactory conclusion. In the Panel's view, a demarcated, pegged and numbered individual plot, with a title prospect, may well prove more interesting to the PAPs than a theoretical "land for land" offer. Such an offer would go a long way to meeting the RAP requirement for restoration of lost assets, provided that it is accompanied by some targeted transitional assistance.

**Livelihood restoration.** QMM has made determined efforts to restore livelihoods. Nevertheless, given mobilization problems, capacity limitations and the need for experimental management, a three-year livelihood program is too short; a duration of 5 or 6 years is required to ensure sustainability and end dependency on the NGOs. The very comprehensive mid-term evaluation points to additional strengthening and scaling-up in order to achieve sustainable impact on incomes. The Panel endorses these recommendations. Livelihood restoration goes beyond income to quality of life.

Recommendation. The Panel agrees on the need to intensify efforts on livelihood restoration and to improve mother and child health and youth skills and functional literacy. These need not necessarily be targeted specifically to PAPs, but should be community-wide with an emphasis on PAP inclusion.

**Evaluation for closure.** The Panel draws attention to the need to address some apparently unresolved issues that may need to be faced in preparing a closure report. First, the original baseline studies reported on assets and incomes, but did not undertake a livelihoods study. It may, therefore, be difficult to demonstrate before and after restoration of livelihoods. The QMM 2011 mid-term evaluation compared PAP and non-PAP incomes as a proxy, but this involves methodological problems. Another option is to look at household expenditures and other household characteristics. Furthermore, the QMM evaluation does not adequately address the issue of asset restoration. A final evaluation needs to

address these matters clearly and competently, but also recognizing that good information on incomes, expenditure and assets may be difficult to obtain.

The need for a final evaluation of good quality is not simply a matter of Bank requirements. Some Project undertakings that were not well addressed in the start-up rush of 2005-7 attracted the attention of international NGOs. In the present climate, complementary actions to improve livelihoods and assets built into a good report would serve to counter any possible hostile evaluation.

Recommendation: In addition to additional supplementary support measures to achieve results on the ground, PIC and the Bank should prepare now for the design of a robust closure report that can convincingly demonstrate, in the face of possible close scrutiny, restoration of assets and livelihoods.

**Summary of Recommendations:**

1. Irrespective of PAP rejection, the project should proceed with government to allocate, title, put in escrow and offer formally agricultural replacement plots to those eligible, as outlined in the 2007 amended RAP.
2. The QMM livelihood restoration program should be strengthened and continued for a further 3 years in order to obtain durable and meaningful results.
3. In addition to measures to strengthen results on the ground, PIC and the Bank should start preparing now the design of a final evaluation on the QMM resettlement that will be robust and convincing.

**4.3 Recommendations for Re-Allocation and Revised Priorities**

Based on its observations and key findings, the Panel recommends the following list of priority actions in the Fort Dauphin growth pole. For convenience, these recommended actions are grouped along the four main axes of the PIC program, namely, Infrastructure, governance, private sector and environmental and social safeguards.

This list of recommended actions and priorities assumes that funds already committed for activities will remain committed. In Fort Dauphin, the Panel is **not** recommending that commitments already made be withdrawn or any contracts annulled or changed.

The Panel emphasizes that all amounts cited are merely indicative (and potentially on the high side) of a possible envelope of costs, for several reasons. First, the PIC will need to exercise judgment in juggling among committed costs and the re-allocation to priority actions. In the case of Fort Dauphin, the Panel is not suggesting that anything be dropped, but that scheduled amounts for lower priority items be shifted to higher priorities. Second, a more refined allocation of costs will need to be informed by more specific information and, in some cases, updated feasibility (APD-level) and design studies. Unless otherwise specified, the costs indicated are potential totals and not additional to costs in the DCA for Credits 4101 and 4399.



#### 4.3.1 Infrastructure

- 1. Complete the portion of RN 13 (2.3 to 2.5km) within the town of Fort Dauphin. The current situation with an unfinished link within the center of town creates unsafe and unsanitary conditions. Furthermore, the lack of completion of the rehabilitation is a daily psychological reminder to the population that their expectations have not been fulfilled. Compared to the high quality QMM road to the port that cross RN 13, the unfinished road is a symbol that the population is considered unimportant.

Consider US\$2.5 – 3.5 million for the missing section to allow for increased costs and re-mobilization of the contractor, since in the time since the project was originally bid.

- 2. Support additional upgrading of the road network (Item D-02 and D-07). This work should pay particular attention to the mechanisms for maintenance of non-national routes and ensure that training is put in place as well as encouragements to use mine revenues where applicable as a source of maintenance funding.

Consider US\$10 million.

- 3. Identify agricultural areas that would benefit from rehabilitation of rural access roads (similar to the RIP 118) in order to help open up remote (enclave) zones to commercialization of agriculture.

Consider amounts based on the number and length of promising areas identified.

- 4. Labor intensive road maintenance and upgrading (HIMO) in addition to the \$800,000 (Credit 4399) allocated in the October –November 2010 Aide Memoire.

Consider total of US\$2 million

- 5. Extend community water/sanitary infrastructures in Fort Dauphin, as foreseen in the October-November 2010 Aide Memoire. The Panel also recommends additional support to protect the water supply from Lake Lanirano. This would include (i) analysis of the tests taken by JIRAMA to determine if residents' perceptions that the water supply causes typhoid have any foundation in fact followed by recommendations for treatment if needed; and (ii) long-term measures by working with the municipality to place a moratorium on additional building around the lake shores and to protect the immediate watershed and thus, the water supply.

Consider US\$100,000 to \$200,000 for the water testing and remediation, if necessary, and protection of the watershed through negotiation/agreement on limiting development with the town and reforestation.

- 6. Support to waste management in Fort Dauphin. The investment of QMM in the joint QMM-Fort Dauphin landfill site needs to be secured so that this investment is not lost. Solid waste management is important to reduce health risks associated with the neglect of this issue in Fort Dauphin. A waste management plan should be a pre-requisite to financing works and purchase of equipment. Work would entail repairs to the site, purchase of equipment, support to efforts for the pre-collection, transfer to the site (including purchase of trucks) and waste segregation (sorting/separation) to provide a sustainable waste management disposal process. According to the

October-November 2010 Aide-Memoire, a landfill site management company needs to be recruited by QMM, but was pending the development of a waste collection and disposal system for Fort Dauphin.

Consider US\$350,000.

- 7. Extension of water and electricity to the 11<sup>th</sup> *quartier* of Fort Dauphin. Ten other quartiers already are served. This will provide important health and social benefits to the remaining “have-nots.”

Consider US\$1,000,000.

- 8. Update the feasibility study of harnessing wind power energy for Fort Dauphin, and consider reactivating a joint project with other donors, or private investors through the matching grant scheme.

Consider US\$500,000.

#### **4.3.2 Governance**

- 9. Update Anosy Regional Plan including assessment of free port zone in Ehoala.
  - The vision of the plan should include analysis of natural resource constraints and opportunities, using landscape analysis techniques and GIS.
  - Funding should be sufficient to allow for the recovery or reconstitution of the “lost” or missing data base and GIS of the previous 2005 plan.
  - In addition to physical analysis, the economic opportunities and constraints of the region need to be analyzed in order to prioritize development opportunities.
  - The planning process also presents an opportunity for a significant and extensive process of communications and consultations with the affected population. The communications process in the Region has been lacking and the political crisis has exacerbated this situation. The updating of the plan provides a mechanism to improve communications.
  - The importance of ecosystem services and the values of a green economy (e.g., Anosy as a green growth pole) should be taken into account.
  - This effort would also include working with the CRD as a platform for outreach and communications within the Region. The CRD and the Region working together will provide for a comprehensive view and representation of a diversity of expertise and points of view. The PIC should support a technical secretariat for the PRD.

Consider amount of US\$400 000. A higher amount could be needed to attract international consulting expertise.

- 10. Work with the PGRM to support communities who receive mining revenues and to enhance their understanding of these. PIC should also work with PGDI to enhance the overall communications regarding the allocation and expenditure of mine revenues within local communities. Training in local communities with PGDI could be supported by PIC. The implementation of this activity should be coordinated with the work of updating of the Anosy plan.

Consider amount of US\$200,000.

#### 4.3.3 Private Sector

- 11. Collaborate with PSDR and FID to provide funds to enhance the value chains of producers in the market basket areas along the RP 118 road and maritime fishing. Under PRSP, producers (in 10 target communes for an estimated 110 projects) will obtain technical assistance and through FID rural *pistes* to connect to the RP 118; PSDR will also work with fishermen; under PIC operators who can resell and transform products to enhance the value chains will be identified and assisted to provide products to the local market and for export through the Port of Ehoala. The PIC assistance will be an improved and re-oriented PARC activity, for which US\$1,500,000 remains. In addition to actions currently under consideration for this collaboration, the Panel recommends adding:

- *Abattoir* for the safe and sanitary butchering of meat (which in turn would allow QMM to provision itself locally in meat);
- Review of the status and ownership of forested or formerly forested areas, particularly along the RN 118, to determine what options might be available to control cutting or encourage re-forestation; and Conservation actions working with increased revenue generating activities for local populations (through ONGs already active in the region) to diminish deforestation and slash and burn agriculture. The Panel notes that both FID and PSDR would be able within their mandates to finance village plant nurseries. Using HIMO, FID can also support reforestation.

Consider US\$300,000 overall for collaboration with PSDR to enhance value chains plus 400,000 for abattoir and conservation efforts = US\$700 000.

- 12. CRFPTA has benefited from a Public-Private-Partnership among PIC, QMM, Ministry of Education and UNDP. Another building needs to be leased and equipment transferred. Meanwhile, the Panel urges PIC to ensure that the remaining equipment currently stored in the building is in a safe (or less risky portion) of the building that may be imminently subject to collapsing. As possible, the Panel recommends that as many people be targeted as the budget might allow. This investment in people in Fort Dauphin is likely to reap long-range benefits for the region, QMM and growth.

Consider US\$500 000.

- 13. Provide additional, but limited support to improve tourism. The Chamber of Commerce and the Office du Tourisme as well as at least one hotel operator are interested in making the old port a tourist destination. At this juncture, the Panel is not willing to recommend investments in the pleasure port aspects of this scenic location, as studies of currents, shipwrecks and other navigational and safety aspects as well as demand would be necessary. However, the aspects of making this a waterfront destination with some attention to its historic aspects, restaurants, craft kiosks and a place where outdoor entertainment could occur would provide an important injection of hope into the tourism and hotel industry in Fort Dauphin.

Consider US\$300,000 through PARC or support to studies and publicity if direct support to SME operators would not be possible.

#### **4.3.4 Environmental and Social Safeguards and Accompagnement**

- 14. Implementation of the existing amended RAP for the QMM Quarry. The Panel recommends that the PIC provide a report to World Bank Task Manager on the status of the RAP with recommended actions and requesting endorsement of such actions including a plan for closure of the matter. The plan should pay particular attention to (i) replacement agricultural lands; (ii) socio-economic impact of the freshwater dam on fishing and agricultural lands; (iii) continuation of the QMM livelihoods support program to ensure sustainable and sufficient results; and (iv) robust, final evaluation of assets and livelihoods' restoration. The Panel recommends that the Task Manager seek non-objection from Africa Region Safeguards.

Hold US\$100,000 (4399) and any part of the US\$60,000 (4101) noted in the October-November Aide Memoire in reserve pending resolution of RAP. Panel recommends considering adding to this sum US\$150,000, to be shared with QMM.

- 15. Reinforce provisions for monitoring and follow-up of environmental and social safeguards regarding QMM investments and PIC investments. This function is critical, given the long-term nature of the QMM mining investment, the need to adapt the ESMPs (PSGEs) to changing circumstances and the variety of specialized environmental and social expertise that will be required for an operation that touches so many aspects of the landscape and the population. The Panel recommends increasing access of ONE to a pool of experts, specialized equipment to conduct monitoring and the strengthening of capacity. The Panel notes that ONE has taken on the role of managing complaints related to QMM activities beyond what might have been expected, because they are visible and accessible.

Consider US\$400,000 to 500,000.

- 16. The Panel strongly recommends that PIC environmental and social task team incorporate climate change resilience and overall natural hazards risk assessment as a component of the sustainability assessment of all PIC's actions and as a measure of resilience of PIC's sponsored infrastructure or regional development schemes, both in the Fort Dauphin and in the Nosy be poles. The development of a general and local-specific risk assessment tools and the compilation and linking with the most advanced or important on-going climate change related studies and actions in Madagascar, could be outsourced to expert consultancy or in-house PIC expertise developed. PIC is encouraged to explore opportunities to work with a GEF project under consideration by the Bank for climate change adaptation in southern Madagascar, assuming the project goes forward.

Consider US\$300,000.

- 17. The Panel notes that the issues related to the water source on Lake Lanirano and solid waste management could also be considered safeguard measures.
- 18. Allow for potential to need to address unexpected social and/or environmental impacts at the time of Project closure.

Consider allocating US\$100,000 as a contingency.

- 19. PIC is encouraged to work with World Bank EP3 to encourage activities in the Anosy Region.

## 5. PIC 2

### 5.1 Introduction

The Panel recommends that the Anosy Region (expanding upon the Fort Dauphin growth pole) and the Nosy be growth pole linked to the larger Diana Region are included in a future PIC 2. The Panel makes this recommendation because the achievements and accomplishments to date in PIC 1 demonstrate good gains and value to the respective growth poles, despite the difficulties of the political crisis and the suspension of funding in 2009.

The Panel believes that a PIC 2 will (i) allow for follow-up on aspects of growth that were not foreseen under PIC 1, (ii) extend the gains acquired, and (iii) accelerate the momentum of growth already achieved. While it might be tempting for the Bank to declare victory in Fort Dauphin and Nosy be and move on to new poles de croissance, the Panel believes that both poles merit further technical assistance and institutional support, in order to enhance and strengthen *sustainable growth*.

The method of preparation and strategic focus to be explored for a PIC 2 are listed and described briefly below, followed by sub-sections explaining some particular themes of interest.

- ***Do upstream work within the Bank and especially with other multilateral and bi-lateral donors as well as NGOs and the private sector*** to identify areas of synergy and collaboration, overlap and/or divergence.
- Whatever the sectors or types of assistance chosen, ***explicitly encourage and incorporate in the design of PIC 2 synergy and collaboration with other Bank projects, such as PSDR, PGRM and PGDI.***
- If additional growth poles are chosen, consider in particular poles with potential for substantial private sector, e.g., mining investment, so that the lessons learned from PIC 1 can be transferred.
- Most importantly, ***strongly consider adopting the concept of Green Growth Poles***, where green connotes explicit recognition of ecosystem services in a green economy, environmentally and socially sustainable management of resources and endorsement of compensation for resource restrictions through provision of development benefits and opportunities.

### 5.2 Tourism's Regional, National and International Dimensions

Both poles will need attention to the regional, national and international dimensions of tourism (airline service safety, reliability and availability of options, access by boat and cruise ship, non-European markets), marketing of tourism circuits rather than single destinations and strategies to weather the ups and downs of international tourist destinations.

In Nosy be, the Panel particularly recommends as the premier infrastructure investment, significant rehabilitation of the Hellville port and improvements to the port of Ankify.

### 5.3 Agriculture and Fishing

Planning for rural development, agricultural strategies and, sustainable fisheries will be essential components of Green Growth. The Panel recommends that as part of the preparation of PIC 2 a Strategic Environmental Assessment be carried out to reflect on the future development of agriculture

in the context of opportunities such as specialized fruits, vegetables, rice or cereals, with or without local transformation, for export or local (tourism-led) market, niche production (e.g., essential oils for export market), or medium to large agro-business investment. The Panel further recommends that PIC develop plans for sustainable agricultural and rural development and fisheries, in conjunction with the Bank's PSDR program and in the context of a larger regional entity, namely the whole Diana or Anosy region. Attention should be paid to issues of land lease for agribusiness that could be seen as "land grabbing" or land appropriation by foreign interest to the detriment of the local economic development.

#### **5.4 Energy**

A PIC 2 should consider how to provide the growth poles with alternative, reliable sources of energy. In the Nosy be pole, while some supply may eventually be provided by hydroelectric development on the mainland and a submarine power line, the Panel believes that it is essential to explore and consider investment in the development of the demonstrated geothermal energy potential of the island. Similarly, the demonstrated potential for aeolian energy in the Fort Dauphin region should be considered, jointly with QMM, as a line of infrastructure investments for PIC 2. In both poles, PIC 2 might wish to support or initiate local solar-based energy sources as well.

#### **5.5 Institutionalization of Operations and Maintenance for Infrastructure**

In both Fort Dauphin and Nosy be, the PIC has invested considerable amounts in infrastructure, by itself or in partnership with others, such as QMM in Fort Dauphin. The Panel has made recommendations regarding maintenance of infrastructure as part of the current PIC, but the need to reinforce training and funding to ensure proper operation (to reduce maintenance needs) and maintenance of this infrastructure will remain as a critical need. In particular, there is a need to establish mechanisms for institutionalizing this function within local governments and community committees. PIC 2 in Fort Dauphin should consider working with the PGRM and PGDI to determine how mining revenues could be used to fund maintenance. In Nosy be, PIC 2 should consider analysis and application of mechanisms by which a tourism tax could be used to assure maintenance of roads and the safety and sanitation of tourism destination sites.

#### **5.6 Partnerships with the Private Sector**

In Fort Dauphin, PIC will have both the opportunity to work in partnership with QMM and serve in the important buffer role between QMM and the population. The Regional has additional possibilities for investment in mining, including bauxite. Thus, the PIC could become a model in Madagascar for how to work with larger international mining firms in order to protect the environmental and ensure benefits to affected populations. In Nosy be, work with small and medium scale enterprises to develop tourism activities and circuits within the island remains a challenge that PIC 2 could profitably address.

## **6. Next Steps**

### **6.1 Communication and Dissemination of the IAP Report**

In accordance with the Terms of Reference for the Panel, this report will be shared with the World Bank Project Manager and others. The Panel recommends that the safeguard issues be discussed with the Africa Region Safeguards team, in particular the issues regarding resettlement.

The Terms of Reference also require that the Panel's report be made accessible to the target population and stakeholders. The World Bank is expected to disclose the report on its Infoshop website. The Panel recommends that the report (or its Executive Summary) be provided to the agencies, NGOs and local authorities in Nosy Be and Diana as well as in Fort Dauphin and Anosy. The Panel suggests that PIC hold public meetings in Nosy Be and in Fort Dauphin to provide information on the Panel's report. This could be done in conjunction with the need to communicate on other issues, such as the resumption of project activities where appropriate. In Fort Dauphin, the Panel specifically recommends that PIC discuss the contents with QMM. Communication concerning the Panel Report should occur prior to the end of October 2011, in the Panel's view.

### **6.2 PIC Actions**

Based on the Panel's findings and recommendations and review with the World Bank Project Team, the Panel expects that the PIC will take actions to resume activities, taking into account the priorities stated in Chapters 3 and 4 of this report.



## **Annexes**

**Annex A List of Persons Met**

**Annex B Photos**

**Annex C Google Maps of Nosy be and Fort Dauphin**

**Annex D References Cited**

## Annex A

## LIST OF PERSONS MET/LISTE DES PERSONNES RENCONTREES

NOSY BE June 28 to July 1, 2011

N°	NOM	ORGANISME / FONCTION
1	Mme Aina ANDRIAMAMPIANINA	<u>PIC Nosy be</u> <i>Déléguee du Secrétaire National</i>
2	Mr Tsiong HOTUNKEN	<i>Assistant technique Secteur Privé</i>
3	Mr Lova RAZAFINDRAMAKA	<i>Assistant technique Infrastructures</i>
4	Mr Hery ANDRIAMANGA	<i>Assistant technique en Socio-organisation</i>
5	Mr Richard RAKOTOZAFY	<u>Amporaha : Travaux HIMO en cours</u> <i>Chef de mission CFHIMO</i>
6	Mr Lahakoto TOLONTSOAZANAHARY	<i>Entreprise Aigle Blanc</i>
7	Mme TINA	<u>Loharano Hôtel</u> <i>Chargée des arrivées et des départs</i>
8	Mr Taciano <b>RAKOTOMANGA</b>	<i>Commune Urbaine de Nosy be</i> <i>Président de la Délégation spéciale</i>
8	Mr CHAKIRA	<u>Pont cassé. Problématiques du quartier</u> <i>Chef du Fonkontany Senganiga</i>
9	Mr LEON	<i>Membre de l'Association AFSCA</i>
10	Mme MBOTY Françoise	<i>Chef du Fokontany Ambodivoanio</i>
11	Mr Bertrand LOUVIAUX	<u>Déchets et Assainissement</u> <i>Commission Hygiène et Santé, GIHTNB</i>
12	Mr Gérard POULTEAU	<i>Président de l'Association de Tanana Madio</i>
13	Mlle Mylène FAURE	<i>Représentante du GIZ</i>
14	Mme Rindra RALAINIRY	<i>Représentante permanente d'ENDA OI à Nosy be</i>
15	Mlle Felana RAMASY	Economic Development Board of Madagascar EDBM (bureau PIC) <i>Chargée d'Antenne</i>
16	Staff AMPC	<u>Nosy Tanihely</u>
17	Mme Dolcéa Léa RAVO	<u>ORTNB et DELTO</u> <i>Déléguee du Tourisme de Nosy be</i>
18	Mr Adbon MANANJARA	<i>Guide touristique à Nosy be</i>
19	Mme Rondro RANAIVOJAONA	<i>Représentante du GIZ</i>
20	Mme Françoise CHATEL	<i>Opératrice, ex Vice Présidente de l'ORTNB</i>
21	Mr Michel RAMASY	<i>Directeur exécutif de l'ORTNB</i>
22	Mr JAFIMANJO	<u>District</u> <i>Adjoint au Chef District</i>
23	TAFARA Jean Baptiste	<u>Usine d'extraction d'huile essentielle d'Ylang ylang</u> <i>Chef de la distillerie</i>
24	Mr RENE, Fiorenzo MELERA	<u>Centre de formation en Tourisme et Hôtellerie</u> <i>Président et membre de la Fondation suisse Madagascar et membres du Conseil d'Administration du CFTH</i>

25	Mme Mascia CANTONI	<i>Présidente de la Fondation suisse en Suisse</i>
26	Mr Franck FIGUERA	<i>Directeur de l'établissement CFTH</i>
27	Christophe	<u>Station Eau Jirama</u> <i>Agent de conduite de la JIRAMA</i>
28	Mr MANANJARA Rémi	<u>Nouvelle centrale thermique Jirama</u> <i>Directeur de la JIRAMA de Nosy be</i>
29	Mr CLEMENT	<i>Chef d'usine</i>
30	Mr SAID	<i>Chargé de la Distribution</i>
31	Mr MAROUF	<u>Bornes fontaines</u> <i>Adjoint au Chef quartier du Fokontany de Dar Es Salam</i>
32	Mr Gérard POULTEAU	<i>Président de l'Association TANANA Madio</i>
33	Mr Dolan RANDRIAMANANJARA	<i>directeur</i>
34		<u>Nouvelle place de marché, routes</u> <i>Anciens vendeurs de rue relocalisés</i>
35	Mr Cesare DI FRANCIA Mlle Myriam	<u>Zahir Lodge</u> <i>Propriétaire de l'hôtel</i> <i>Chargée de l'accueil</i>
36	Yves BOURDAIS	<u>Opérateurs du secteur privé, autres que Tourisme</u> <i>(Pêche ou exportation de produits fruitiers)</i> <i>Opérateur, ancien Chef de production chez Pêcheries de Nosy be</i>
36	Mr FERNAND	<u>Bassin versant du lac Amparihibe</u> <i>Président de l'Association FITAMIMIA</i>
37	Gervais TSANGAMANANA	<i>Vice Président de la FITAMIMIA</i>
38	RAZAFINDRAJAONA Samuel	<i>Agronome en appui à la FITAMIMIA</i>
39	FREDON et David FERNAND	<i>Membres</i>

**ANTANANARIVO July 4 and 5, 2011**

N°	NOM	ORGANISME
41	Jean Chrysostome RAKOTOARY	<u>ONE Antananarivo</u> <i>Directeur Général</i>

**FORT DAUPHIN July 6- July 9, 2011**

N°	NOM	ORGANISME
42	Mamialisoa ANDRIANASOLO	<u>ONE Tolagnaro</u> <i>Chef d'Antenne</i>
43	Vice Président	<u>Chambre de Commerce Tolagnaro</u> <i>Vice Président</i>
44	Rollis RAKOTOSAMIMANANA	<u>PIC Fort Dauphin</u> <i>Délégué du Secrétaire National</i>
45	Daniel RABENARIVO	<i>AT/Infrastructures</i>

46	Rachel RAMANANKAVANA.	<i>AT/Secteur privé</i>
		<i><u>Economic Development Board of Madagascar</u></i>
47	Volatiana TOMBOTSIORY	<i><u>EDBM, CGA</u></i> <i>Chargée d'Antenne</i>
48	Armand ZAFINANDRO	<i>Mairie (guichet unique, services informatisés)</i> <i>PDS</i>
49	Célestin RANDRIANAMBININA	<i><u>Région ANOSY et CRFPTA</u></i> <i>Directeur du Développement Régional</i>
50	Philippe MURCIA	<i><u>Port d'Ehoala</u></i> <i>Directeur Général</i>
51	Jean Marc COURBY	<i>Responsable HSE</i>
52	Vincelette MANON	<i><u>QMM Mandena</u></i> <i>Directeur Général du Développement</i>
53	Daniel ANDRIAMANAJAKA	<i>Directeur Communication</i>
54	Willy RASAMOELINA	<i>Directeur des Affaires Sociales</i>
55	Réal BRIERE	<i>Directeur Financier</i>
56	Henri KOLLER	<i><u>Hôtel Restaurant Kaleta</u></i> <i>Directeur</i>
57	Delphin ANDREAS	<i><u>Bénéficiaire PARC (Hôtel Restaurant Népentès)</u></i> <i>Propriétaire</i>
58	M. AZIZ	<i><u>Hôtel Restaurant Talinjo</u></i> <i>Propriétaire</i>
59	Isabelle RAHARIMALALA	<i><u>Office du Tourisme</u></i> <i>Présidente de l'ORT/Tolagnaro</i>
60	Bruno MAZARALY	<i>Hôtel LA MARINA</i>
61	Faravololona MANERA	<i>Etablissement MAROMAHAY</i>
62	Aziz BADOURLY	<i>Air Fort Services</i>
63	Perline ZAIFORONA	<i>Chez Perline</i>
64	José ANDREAS	<i>Kaleta</i>
65	Béatrice MAMPIONONA	<i>Le Port</i>
66	Elina RAFIRINGA	<i>Ditecreu Exécutif de l'ORT</i>
67	Patrick LOIVEL	<i><u>RIP118</u></i> <i>Chef de mission EGIS International</i>
68	Docteur Augustin ANDRIAMANANTENA	<i><u>Hôpital d'Amboanato</u></i> <i>Directeur</i>
69	Angelin NARISON	<i><u>Stations de pompage Jirama de Lanirano</u></i> <i>Chef de service Eau</i>
70		<i><u>Bornes fontaines</u></i> <i>Président d'une association des usagers de l'eau</i>
	Julio RAZAFINDRAMARO	<i><u>CRD (Comité Régional de Développement de l'Anosy)</u></i> <i>Excellence Consulting</i>
71	Gabriel TIARO	<i>Directeur FAFAFI (Eglise Luthérienne)</i>
72	Harinesy RAZERIHARINDRANTO	<i>Directeur ASOS/Zone Sud</i>
73	Jean Sébastien ANDRY	<i>Région Anosy</i>
74	Emma RANOROSOA	<i>Ex Présidente du CRD/Anosy</i>
75		

76	Miharisoa RAKOTOMALALA	<u>WWF Tolagnaro</u>
77	Hamed N'RINDJEE	<i>Chef de Projet</i>
78	Rivo ANDRIAFANOMEZANA	<i>Socio-organisateur</i>
		<i>Socio-organisateur</i>
79	Hanitra RAHARIMANANA	<u>ALT/Tolagnaro (appuyé par Andrew Lees Trust/London)</u>
		<i>Chef de Bureau</i>
80	Heritiana RAVELOJAONA	<u>PGRM Tolagnaro</u>
		<i>Représentant</i>

**ANTANANARIVO July 11-15, 2011**

81	Nanie RATSIFANDRIHAMANANA	<u>WWF Antananarivo</u>
		Directeur de la Conservation
82	Josiane RAVELOARISON	<u>Banque Mondiale</u>
		Finance and Private Sector specialist
83	Paul Jean FENO	<u>Banque Mondiale</u>
		Safeguards specialist
84	Mamisoa RAPANOELINA	<u>FID, Antananarivo</u>
		Directeur des Opérations
85	Robert RAKOTO	<u>PSDR, Antananarivo</u>
		Directeur technique
86	Patrick RANJATOSON	<u>École Supérieure des Sciences Agronomiques (ESSA), Université d'Antananarivo</u>
		Professeur
87	Lala ANDRIANAIVO	<u>Ecole Polytechnique Supérieure (ESPA), Université d'Antananarivo</u>
		Professeur