

# EVALUATION OF USAID/MADAGASCAR'S CYCLONE RECOVERY PROGRAM (CRP)

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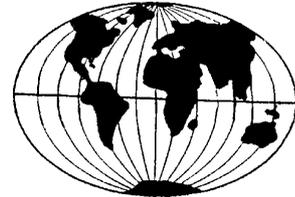
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## ACRONYMS

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AUE	Association des Usagers de l'Eau (Water Users Association)
AUP	Association des Usagers des Pistes (Road Users Association)
ANAE	Association Nationale pour les Actions Environnementales
BEST	Bureau d'Expertise Sociale et de Diffusion Technique
CA	Centre d'Approvisionnement – farm service centers
CAP	Commercial Agricultural Promotion
CARE	Co-operative for American Relief Everywhere – US PVO
CDIA	Center for Diffusion of Intensified Agriculture
CoP	Chief of Party – team leader
CNS	Conseil National de Secours
CRIC	Comité de Reflexion des Intervenants aux Catastrophes
CRMT	Cyclone Recovery Management Team – USAID Madagascar
CRP	Cyclone Recovery Program
CRS	Catholic Relief Services
DART	Disaster Assistance Response Team – Washington DC
EC	European Commission or European Community
EIA	Environmental Impact Assessment
FCE	Fianarantsoa Côte Est Railroad
FCE-R	Fianarantsoa Côte Est Railroad Réhabilitation
FMG	Malagasy Francs (currently about 6,400 FMG = US\$1.00)
FID	Fonds d'Intervention pour le Développement
FOFIFA	Foibe Fikarohana Ho amin'ny Fampandrosoana ny eny Ambanivohitra (old coffee research station, Tamatave Province)
GCV	Greniers Communautaires Villageois (Community Grain Storage Facility)
GoM	Government of Madagascar
ha	hectare
KH	Kolo Harena (farmer business group)
LDI	Landscape Development Interventions
MECIE	Madagascar legislation governing environmental impacts
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
mt	metric ton
NGO	Non-Governmental Organization
OFDA	Office for Foreign Disaster Assistance (USAID)
ONE	Office National pour l'Environnement
ONG	Organisation Non-Governmental – NGO or PVO
OTIV	Ombona Tahiry Ifampisamborana Vola – a mutual credit bank
ReCAP	Réhabilitation du Capital Routier
RNT	Route National Temporaire
SRI/SRA	Système de Riziculture Intensif/Système de Riziculture Amélioré
SoW	Statement of Work (also known as Terms of Reference)
ToR	Terms of Reference
USAID	United States Agency for International Development
ZSI	Zone Stratégique d'Intervention

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In a short mission of four weeks it is extraordinary the numbers of people with whom we have been in contact. Without their inputs to this Evaluation Mission nothing could have been achieved. If we have failed to include any one of these people in our thanks below, it is unintentional and we hope we will be forgiven for these omissions.

Thanks for the assistance provided by all the staff in the USAID offices, particularly the *Cyclone Recovery Management Team* led by Mr. Jocelyn (Jo) Randriamampionona the Disaster Rehabilitation Specialist who has been the “point-man” for the Evaluation Team for the excellent discussions held and backstopping provided. The Team includes Mr. Robert Dean, Cyclone Recovery Program Specialist, Ms. Adele Rahelimihaandralambo, Environmental Information, M&E, Ms. Sylvi Ramangasocuvina, NRO Office and Ms. Monique See Rafidiarisoa, Disaster Response Program Specialist.

Thanks to Ms. Lisa Gaylord, the Environmental Program Coordinator, who has provided the necessary background information in which the CRP has been functioning.

Our particular thanks must go to the Chiefs of Party (CoPs) of the three projects, Ralph Jean of the Re-CAP Project, to Jean Robert Estime of the LDI and FCE-R Projects. Mrs. Karen Schoonmaker – Freudenberger, Regional Director of the FCE-R Project and Ms. Haley Bryant, Finance and Administrative Director for FCE-R were both extremely helpful in helping to organize our field trip logistics as well as helping to provide an intimate view of the railroad. LDI Regional Directors, Mr. Mark Freudenberger and Mr. Glenn Lines also helped to provide significant technical background and logistical support in their respective regions. Thanks are due as well to their staff, for their patience at our questioning, for the excellence of their presentations, for the thoroughness of their preparations, for the transport and other assistance provided during the mission and especially for their professionalism in the delivery of the services of the CRP.

To the numerous farmers, members of the AUP’s and the AUE’s, to road contractors and their staff and other end-users of the services provided by the CRP, thanks for your patience, your local knowledge, your enthusiasm and for your “dedication in rebuilding after the storm”.

The Team wishes to thank the project drivers, the drivers of FCE train and the pilot of the aircraft who all safely, if not always comfortably, delivered us to our destinations. Their involvement has been essential to the successful management of the evaluation mission.

It is to these people and all the people of Madagascar that this evaluation report is dedicated, with the hope that it will provide indicators that will enhance the delivery of improved services when cyclones strike again.

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# Evaluation/Assessment of USAID/Madagascar's Cyclone Recovery Program

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## I. EXECUTIVE SUMMARY

In the early months of the Year 2000 Cyclones Eline and Hudah and Tropical Depression Gloria swept out of the southwest Indian Ocean crossing Madagascar and the Mozambique Channel and striking the southeast coast of the African continent. The high winds, heavy rains, landslides and flooding took their toll especially in Madagascar, Mozambique and Botswana. The donor communities of the world responded with humanitarian aid and relief. The U.S. Government reacted to the regional crisis with immediate emergency assistance funding managed primarily through USAID's OFDA. Long-term recovery and rehabilitation were addressed in the Southern Africa Flood Supplement Funds request sent to Congress in late April 2000.

In Madagascar the storms killed more than 200 and left more than 30,000 people homeless. Roads, rail lines and other communication systems were seriously damaged. The Fianarantsoa to Manakara rail line, a major source of reliable transportation and commerce for more than 100,000 people was closed by multiple mudslides and washouts. USAID/Madagascar worked closely with the Government of Madagascar and the donor and NGO community to affect an effective and coordinated response, first with emergency funds available through the US Embassy, and later with longer-term solutions using the Flood Supplemental monies. This report is an evaluation/assessment of the use of part of those funds under USAID/Madagascar's Cyclone Recovery Program (CRP) administered through the Mission's Natural Resource Office (NRO) and managed by the CRP Management Team.

Overall, the Mission and the contracting entities implementing three contracts within the NRO's CRP have done an extraordinary job of assisting the people of Fianarantsoa and Tamatave Provinces recover from the damage inflicted by the storms in 2000. The work has been / is being carried out using three separate contracts. One is to Chemonics, Inc. as a supplemental funding to the *Landscape Development Interventions* (LDI) contract that was won previously through an open, competitive bidding process. The supplemental funding was awarded based upon their presence on the ground. The other two contracts, *Réhabilitation du Capital Routier* (ReCAP) and the *Fianarantsoa Côte-Est – Réhabilitation* (FCE-R), were issued through a Tier 3 competitive bid under the RAISE Indefinite Quantity Contract (IQC). Chemonics also won those two contracts in bids with the other two IQC-holders under RAISE.

The funding to LDI has been used effectively to repair farm-to-market roads, repair and rehabilitate irrigation systems, provide training and assistance with grain stores, fish ponds, and to facilitate local community planning to better prepare for future cyclones. CRP funds to the ReCAP contract are used to

improve farm-to-market roads, to help establish and train local community associations to manage and maintain those roads and to repair Manakara's port facilities. The FCE-R contract has focused on the rehabilitation and maintenance of the 163-kilometer Fianarantsoa to Manakara rail line in Fianarantsoa Province.

USAID/Madagascar and the staff implementing the three contracts are to be congratulated on the effectiveness of their collective work and to affect results that are greater than the sum of the three parts. In Fianarantsoa the rail line cuts through the forest corridor where USAID has funded activities for more than a decade; LDI is a continuation of some of those efforts. With the railroad as the core the rehabilitation activities of the other two contracts only serve to further complement one another, add to the vitality of the region and work to focus economic activities on settled farming and away from slash and burn *tavy* practices that threaten the forest's rich biodiversity.

Further north in the Moramanga Region of Tamatave Province CRP funding, utilized through LDI activities and ReCAP, focussed on road construction with the emphasis on restarting production in zones of high agricultural productivity. Here again, especially in the rich agricultural land around Lac Alaotra, the activities complement and bolster one another. Hopefully the end result in this area will also be much greater than the simple addition of the two parts. The geology of this area is even more fragile than in the other areas where CRP funding has been used, and where another nearby forest corridor is also being threatened by land clearing. Therefore there is a definite emphasis to refocus local farmers agricultural and accompanying economic activities in the irrigated perimeters around the lake. LDI's activities are helping to do that, and ReCAP roads should facilitate the movement of products to wider Malagasy markets.

The period covered by the CRP funding is short: two years or a little more, in the case of all three contracts. Madagascar is a difficult place in which to work and the rural infrastructure is in a sad state of neglect and will likely stay that way for some time to come. With intense rainy seasons, with cyclones being a regular occurrence, progress is difficult. And shortening the time frame of the CRP even further has been the recent (6-month long) political crisis that slowed most activities to a standstill. This has made the results achieved with CRP funding even more remarkable.

As a result of its assessment, the Evaluation Team presents the following major recommendations and lessons learned:

- The experiences gained with the communes and their development of cyclone preparedness plans, including periodic review and updating, needs to be continued. USAID should continue to work with CNS /CRIC to share experiences at the commune level and to improve the quality and effectiveness of these plans.
- Cyclones are a fact of life in Madagascar. USAID should allocate staff time to improve their preparedness assistance skills and learn more.

There is an opportunity to learn from other USAID Missions in the region who implemented activities with the Southern Africa Flood Supplement funds. Action should be taken to share these experiences as well as other USAID assistance following damage from tropical storms around the world.

- The use of CRP funds has been generous and timely. USAID and its contractors have done very well in tapping and linking communities, the private sector and government with this investment and also building solidly on the foundation of previously funded USAID efforts. This current investment should be used to leverage additional opportunities and funding, both within USAID and working with other donors interested in Madagascar.
- Training periods and experience for some of the AUPs established with CRP funding are too short. To insure their viability and also the success of ReCAP efforts USAID should make certain there are effective mechanisms in place for monitoring and follow-through with the AUPs.
- The ultimate re-provision and re-stocking of the Centres d'Approvisionnement established with CRP funds depend to a considerable degree on regional and national networks of input suppliers. Currently this private network is very weak. USAID should capitalize on the current GoM emphasis on the private sector and privatization to work on bolstering this critical sector of the economy.
- In future road rehabilitation contracts USAID should be certain that an engineer is engaged full time for backstopping, monitoring, and supervision, and for institutional capacity building with local engineering subcontractors.
- USAID should work with other donors and CNS/CRIC to insure that coverage of disaster areas does provide coverage of all affected areas.
- There has been excellent use of local labor employed in the CRP funded activities. In the FCE-R, labor-intensive public works was very appropriate and should not be ignored in future work by the railway, privatized or not.
- The flexibility given in the LDI budget for CRP funds has provided extremely good value for the CRP investment. Similar interventions can certainly draw from this experience.
- There is a need for more explicit contracts with main subcontractors, especially with the Warranty Period and its supervision as pertains to the ReCAP contract. Future construction works projects can benefit from this experience.

## **II. BACKGROUND AND METHODOLOGY**

### **A. Background**

In February and March 2000 cyclone *Eline* and tropical depression *Gloria* swept across much of the Malagasy landmass causing considerable damage to infrastructure, soon-to-be-harvested crops and making some 10 000 people homeless – see map of cyclone path in Annex E. “... *The Government has appealed for international assistance to cope with the emergency. The humanitarian situation in the affected areas is reported to be critical and there is urgent need for international relief assistance to rescue the stranded people and provide them with food and drinking water, medicines and other assistance.*”<sup>1</sup> The response by the international donor community, including the USAID, was rapid and targeted.

Each donor targeted the specific geographic areas in which they were currently working on other development activities, so as to take advantage of their local knowledge and staff in place on the ground allowing them to utilize as quickly as was possible their resources and comparative advantage. USAID thus concentrated its efforts in the Tamatave and Fianarantsoa Provinces.

The three contracts that USAID has funded as part of its *Cyclone Recovery Program* (CRP) are due for completion in December 2002, with possible extensions being considered for some of them. This Evaluation Mission has been delayed from an original date of July 2002, due to the political situation in Madagascar during that period. The Evaluation Team was in the country from 26 September to 25 October 2002.

### **B. Methodology**

Development Associates, Inc. was been contracted to provide three specialists: a team leader, a roads engineer and an agriculturist/institution specialist, to undertake the evaluation of the Cyclone Recovery Program (CRP) funded from September 2000 to December 2002. The Scope of Work for the Evaluation Mission can be found in Annex A at the back of this report.

Over a five-week period the three-member Team were briefed in Washington, travelled to Madagascar and undertook document review, field visits, beneficiary interviews and discussions with a host of USAID partners. The list of people met can be found in Annex B. The Evaluation Team’s itinerary can be found in Annex C, and a list of documents consulted and reviewed is listed in Annex D.

After initial briefings in the capital, Antananarivo, by the USAID mission, the CoPs and staff of the three contracts, the Evaluation Team made an extended field trip to visit project sites throughout the country. There the Team met with

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<sup>1</sup> FAO, Rome Press Release 00/15, March 2000, Rome.

project field staff, road contractors, rail employees and users, local authorities staff, farmers and other beneficiaries.

Upon return to Antananarivo, the Evaluation Team debriefed USAID, submitted a draft outline of their pending report and had additional discussions with other donors, Government of Madagascar (GoM) personnel, with NGO's and project sub-contractors as well as other relevant persons and institutions.

The Team presented USAID Madagascar with a draft report to review and comment and also oral briefings to the CoP's of the three CRP contracts. After receiving USAID's comments the Evaluation Team revised their report and resubmitted it to USAID Madagascar. Prior to their departure on 25 October the Evaluation Team also provided the USAID Mission with an oral debriefing of its findings.

### **III. FINDINGS AND CONCLUSIONS**

#### **A. Contract No. 687-G-00-98-00160-00 *Landscape Development Interventions***

##### **1. Contractual design and targets**

The contract issued to Chemonics was awarded to their *Landscape Development Interventions* (LDI) Project based on their presence on the ground in Fianarantsoa and Tamatave Provinces in September 2000. The CRP tranche was targeted for the rehabilitation of agricultural infrastructure, primarily irrigation systems, and for 156 km of rural road rehabilitation in areas in which LDI was already operating.

Two tranches of financial disbursement were made, one in September 2000 and the second in January 2001, each totalling US\$ 1.3 million.

The LDI Project, very soon after the two storms, cyclone Eline and tropical depression Gloria, had struck in March 2000, undertook a damage assessment exercise and began a reconstruction and rehabilitation program even prior to disbursement of funds and the award of the Cyclone Recovery Program (CRP) contract. Within the contract the Project was tasked with:

- a) rehabilitating dams and irrigation systems to return 5 732 hectares (ha) of farm land to production;
- b) distributing, at a subsidized price, 327 metric tonnes (mt) of short cycle seeds;
- c) constructing 9 agricultural inputs supply centers and six village granaries;
- d) assisting 24 communities to develop disaster mitigation plans; and
- e) repairing 156 km of Commercial Agricultural Promotion (CAP) road sections in the Province of Fianarantsoa.

These interventions were to benefit 3 100 rural families and assist in the development of local capability and institutions and “... *build on rural family initiative and innovativeness to move upwards along the disaster to development continuum ...*”

The separation of the “normal” work of the LDI Project and the work of the CRP interventions, sometimes was difficult ascertain and there was, to a degree, merging of the two in the delivery of the CRP services. This in no way reflects adversely on the management of the CRP, but can be seen as providing synergy with the overall aims of the LDI Project in the work of the CRP. Discussions with LDI staff and with CRP beneficiaries have convinced the Evaluation Team that CRP funds were particularly apropos and have allowed a greater benefit to be realized from LDI efforts than had there been no CRP funds. Also to their credit, LDI went to considerable length to keep the technical and financial reporting separate even in where the two tranches of the contract were concerned.

## **2.0. Technical Aspects Affecting Productivity, Market Access and Living Standards**

**2.1 Agricultural production.** The LDI Project provided the CRP a clear understanding of the technical needs of the rehabilitation process. In the rehabilitation of the irrigation infrastructure the Project's intentions were to enable farmers to get back into production the systems that had been damaged and for there to be as little disruption to the food production efforts of those communities. The choice and provision of a package of seeds, fertilizer and other inputs that would quickly allow the farmers to produce at least a crop for the coming season, was well made. The benefits of the package have certainly allowed many farmers to produce increases considerably in excess of their normal yields. The SRI techniques utilised are similar to those that being used successfully by CRS in their work in the Tamatave Province and by others throughout the country. In the two provinces where LDI is operating a total of 311 tonnes of seeds have been distributed with a further 6 tonnes being distributed for this planting season. The delay in distributing the remaining 6 tonnes of the target of 327 tonnes, is because the repairs to the infrastructure of these particular irrigated perimeters have only recently been completed.

The rehabilitation of the infrastructure of selected irrigation perimeters has been impressive. A considerable number of farm families have been assisted in bringing back into production the lands affected by storm damage to the system. The level of repairs and reconstruction have varied between perimeters with some smaller perimeters requiring extensive repairs whilst some bigger perimeters needed only minor repairs. The construction works observed by the Evaluation Team appear to be a good standard and to be operating well thus enabling a potential total area of 3 832 hectares (ha) being brought back into full cultivation, with the remaining 1 900 ha, of the target of 5 732 ha, coming back into production this planting season.

The cost of this rehabilitation works has varied depending upon the nature of the repairs required and the accessibility of the irrigated perimeters. In some perimeters dams required major reconstruction; in others a few metres of canal – both secondary and tertiary – required repairs. In others there was a need to undertake a major redevelopment of some of the infrastructure. The costs of rehabilitation per hectare has thus varied from perimeter to perimeter but, generally the reconstruction works appears to have been done in a most cost-effective manner. The Evaluation Team was informed that the LDI staff were able to select the perimeters which the CRP would rehabilitate that the selection was based upon those perimeters that would require minimum cost rehabilitation. This selectivity possibly accounts for the per hectare figures being so reasonable.

Since rehabilitation of some of the perimeters the farmers have begun to obtain two crops per year and at the same time have increased, in some areas, doubling yields per hectare, thus increasing land productivity considerably. A very creditable performance that should be attributed not only to the CRP but also to the overall work of the LDI Project and represents a

good example of capitalizing on LDI's comparative advantage in utilizing CRP funds. i.e., had CRP funds not been available LDI may not have been able to benefit the number of farmers, nor in the magnitude of yields that are being attained.

To ensure that the rehabilitated infrastructure would receive the required maintenance and to ensure greater future sustainability, the formation of water users associations - *Association des Usagers de l'Eau* (AUE) - were undertaken by the Project. In the Tamatave Province 24 *Kolo Harena* (KH) and AUEs have been formed where none existed before – a considerable achievement on behalf of the Project. In Fianarantsoa Province 14 AUE/KHs have been assisted in the development of their management skills. In addition LDI's CRP funds were also used to complement community-based farmer training along the FCE line benefiting 253 farmers in the sensitive forest corridor zone.

The diversification of small-scale enterprises that LDI offered to farmers that could improve income generation and spread risk, has been a reasonable success. Cyclone emergency funding provided by the US Embassy via LDI within a few months of the storms helped farmers restock fish farms and beehives. CRP funds further bolstered these activities with improved hives and technical training. (Many of the bee colonies found in the natural forest had been destroyed by the severe storms of 2000, thus farmers were unable to find suitable colonies with which to stock their hives.) Fish farming in ponds has had a minimal response rate and the farms seen by the Evaluation Team were small, poorly managed and not as productive as they could be. More targeted technical advice to the farmers and better follow-up might help to improve their management and overall production as this relatively new enterprise is introduced.

**2.2 Agricultural research and extension.** A small amount of CRP funds have been used for the rehabilitation of the damaged infrastructure at the *Foibe Fikarohana HO amin'ny Fampandrosoana ny eny Ambanivohitra* (FOFIFA) coffee research station at Ilaka Est in Tamatave Province, the Memorandum of Understanding (MoU) was signed in the mid-2001. The Center – now known as *Center for Diffusion of Intensified Agriculture* (CDIA) - will provide to the farmers of the area extension and training services that have not been available to them since the early 1960's. The demonstration of improved land-use management, coupled with the demonstration of sustainable cash crop production, will provide a much-needed boost to the economy of the area. This intervention by LDI was an inspirational use of funds that should provide long-term benefits to agriculture in the Province, and beyond, as well as fulfilling the major LDI goal of protection of the environment.

**2.3 Input supply centers and village grain stores.** The construction of 11 *Agricultural Input Supply Centers* (two are soon to be completed, totalling the target of 13) and 6 village granaries – *Greniers Communautaires Villagois* (GCV) with the rehabilitation of a substantial number more – 36 in Fianarantsoa Province alone - have provided communes with a number of

advantages. These GCV's enable them to store, safely and in dry conditions, their rice harvests. This enables communities to not only have buffer-stocks of food crops - particularly when cyclones hit - as well as next season's seed grains, but also provides the communities with potential collateral when applying to the Mutuelle d'Epargne et de Credit or OTIV Bank.

The Evaluation Team were informed by the members of one of the GCVs that, as yet, they had not attempted to apply for a loan from the OTIV and thus had not used the stored grain as collateral. Whether other villages with GCVs had made any applications for micro-credit loans was not clear.

All targets have been met by the CRP in the construction of these facilities and the ones visited by the Evaluation Team appear to be well made and being made use of. However the design of the buildings does not appear to be particularly "cyclone proof" with tin roofs that could be dangerous if blown off in very high wind velocities. Have alternative roofing materials been investigated for cost-effectiveness and safety – e.g. tiles?

**2.4 Cyclone preparedness / mitigation plans.** As called for in the SoW of the CRP contract, LDI worked with local communes in developing *Cyclone Preparedness Plans* that are specific to each community. These plans will enable 33 communes to be better prepared when cyclones strike in the future and have been produced in a very participatory process with Commune leaders and with consensus of all villagers. The funds used in the preparation of the Cyclone Preparedness/Mitigation Plans were well used and the model could well be replicated throughout the country. The Evaluation Team learned that similar preparedness plans are also being assembled by other communes around the country, but plans outside of those funded by the CRP were not examined. The CRP funds used by LDI for this purpose have enabled communities to make plans that will enable them to reduce the risk of damage to property – houses, stored crops, and possibly growing crops – and as such have reduced the risk of future damage if the plans are implemented properly and kept up to date.

These plans address only cyclones and not the other four hazards listed in the national strategy on catastrophes. They have been made so that responses are locally specific, are adapted to the conditions that apply at any given time – they are updated as and when required – and provide for a hoped for reduction in the damage done during future cyclones. The subcontractor R-Conseil and the LDI field staff have done a worthwhile job as facilitators at the training workshops conducted to draw up the plans. Some of the targeted communes did not complete all their plans due to the national elections.

CRP funds have also helped with the distribution of wind-up radios and with the preparation of cyclone preparedness manuals (printed in Malagasy) and distributed country-wide by the CNS. As part of the cyclone preparedness effort LDI also used some CRP funds to help repair equipment at some transmitter stations.

**2.5 Road rehabilitation.** The identification of the need to quickly bring back into service the road network in and around the LDI Strategic Intervention Zones (ZSI) in Fianarantsoa Province, and the rapid response to the rehabilitation of this network was exemplary.

The LDI Team responded to this need by identifying tertiary CAP roads in the Fianarantsoa Province which required “spot repair” work, cleaning of culverts and the removal of mud-slides rather than total end-to-end reconstruction. A total of 156 km of roads was selected based upon the most urgent need to re-establish farm-to-market access for farmers and to provide for means to deliver goods and services within the communities most seriously affected by the cyclones.

Of the fifteen roads chosen, some only needed minor surface patching and maintenance work. This was accomplished at an average cost of about US\$ 500 per km. Two roads required more extensive rehabilitation which was accomplished at an average cost of about US\$ 4 400 per km. Chemonics formed and led Road Users Associations (AUP) that performed all work except that requiring speciality contractors. In addition, the river ferry at Ambahive was repaired with Cyclone Recovery Program funds and a causeway was built near Tolongoina.

This CAP rehabilitation work was completed long before the arrival of the Evaluation Team and none of the work was observed. If similar work observed by the Team on RNT 14 can be used as a comparative sample, then the repair work was more than satisfactory and the efforts of the AUPs have been successful in maintaining the CAP roads.

### **3.0 Contributions to biodiversity conservation**

The main objectives of the LDI contract are to protect existing biodiversity and to engender a more active and perceived understanding of biodiversity conservation in the two main forest corridor areas of Tamatave and Fianarantsoa Provinces. The CRP funds programmed and used by LDI allowed the longer-term activities to continue unabated and also served to strengthen the work already completed and underway. In this sense the CRP funds have contributed directly to biodiversity conservation in the two regions.

Postulating what is likely to have happened without the CRP funding is more revealing and underscores the unpriced values of LDI activities to biodiversity conservation in Madagascar. Without the funding farmers would have been forced to forgo agricultural activities in irrigated perimeters and would have been far more likely to rely on subsistence farming strategies. This would have meant that without CRP assistance to repair irrigation canals and works, repair farm to market roads, obtain off-season seeds farmers would have been far more likely to return to traditional *tavy* culture with its destructive slash and burn techniques that persistently creep into the forest corridor. Without CRP funds natural forest areas would have been more directly at risk to anthropogenic destruction of the biological resources. This would have

been a serious contradiction to the strategies employed by LDI. The CRP contract helped LDI to minimize and avoid these threats.

#### **4.0 Timeliness and cost effective use of resources**

The professional response of the LDI Project to the implications of the cyclones and the identification of needs was exceptional. The speed and the flexibility with which the LDI Project reacted was commendable.

All the deliverables have been completed, or are being completed, on time and in several instances additional activities have been added or targets increased. The Evaluation Team has found this to be a successful effort, and project staff and beneficiaries are to be commended. It also should be re-emphasized that these activities are being successfully completed given the 6-month hiatus and evacuation of expatriate staff during the recent political crisis.

The Project has used the existing resources of the LDI Project to the best advantage of both the CRP and the continued work of the LDI Project itself.

The human resources of both the CRP and the LDI “proper” have shown considerable initiative and professional judgement, skill and hard work in often difficult circumstances.

Financial resources have been handled prudently and the Project has provided “value-for-money”. It is certain that if a special CRP had not been forthcoming, then the LDI Project would have undertaken some of the work within its own budget, but it was a wise decision to utilise the LDI experiences, staff, unique position and “graft” on the CRP for the greatest possible impact.

LDI Project is to be complimented on the rapidity with which it responded to the needs of the communities where it is working so soon after the 2000 storms. The delivery of the CRP interventions have all been within the time schedule set in the original planning documents.

#### **5.0 Sustainability**

Most, if not all, of the CRP interventions are closely associated with the “normal” work of the LDI Project, and as a consequence it is often difficult to separate them in terms of their sustainability. The repair to infrastructure undertaken by the Project, will ensure continued usage and operation provided the AUEs continue to operate successfully. If the AUEs have really taken ownership of the infrastructure and see that it is through their own efforts that the systems will continue to operate, then there is greater hope for the future.

The establishment of new, and the resurrection of old, AUEs hopefully will also be an encouragement to the communities that they serve and will have a life way beyond the end of the LDI Project.

The farm supply stores, Centres d'Approvisionnement (CAs), are managed by the KH federations. LDI is keenly aware that the two greatest threats to their sustainability are (a) successful and transparent management, and (b) their ability/success to tap into a functioning input supply service. The Evaluation Team learned that there have been management problems in the case of some of the supply centers, but there is also still a very good return rate of the loans provided to members. (The figure in Fianarantsoa Province was 95% but has dropped following the recent political crisis and the overall scarcity of liquid capital. The overall average for both Tamatave and Fianarantsoa regions is still a healthy 79%.)

The problem of input supply is a serious impediment to sustainability of the supply centers and it exists throughout the country. (The poorly managed farmer input supply and distribution system at the national level was also a topic of debate highlighted with the technical assistance provided USAID recently by an agribusiness and forest industry planning team.) The CAs in the Lac Alaotra area currently have 400 to 500 million FMG at their disposal for purchasing input supplies. Although this is a considerable sum for the region its effective use is in jeopardy due to the inadequacies of the *filière*.

Using a participative approach for the development of *Cyclone Preparedness Plans* in 33 communes, the communities have taken ownership of these and it is thus hoped that these plans will be updated, as and when required. Similar preparedness planning approaches have been adopted and used by other projects and NGOs. The Evaluation Team has also been told that the number of communities with disaster plans was an indicator being used even before the CRP start-up. It is clearly an activity that all vulnerable communities could beneficially work on.

The decentralized and participatory approach undertaken by LDI for this activity has worked well. It provides local populations with a perspective that cyclone preparedness begins within their own communities and that they do have the resources to help mitigate the potential damage that can result from these powerful storms. Sharing the experiences gained through this process is important and should become a priority outside the provincial level.

At the other end of the spectrum, UNDP funds provided to the GoM following the 2000 cyclones were reported to be available to help mitigate the damage caused by future cyclones. The Evaluation Team also learned that access to these funds via applications from affected communes is cumbersome and time-consuming. This only further underscores the need and the value to have functioning and updated cyclone preparedness plans at the local level.

The rehabilitated roads system, with the regular maintenance by the AUPs, has an opportunity to provide all year round service and a greater chance of "a long life" than would otherwise have been the case.

## **6.0 Contract management**

The staff of the LDI Project and those hired to implement the CRP, have managed the interventions in a professional and competent manner. The attention to detail, the follow-up provided to subcontractors and the monitoring of performance have all been of a high standard. The use of so many subcontractors to implement the program of interventions seems to be rather high. However, these partnerships have proved to have been mutually beneficial and provided the deliverables that had been planned for. All targets have been achieved within the set budget and within the CRP timeframe.

All staff interviewed by the Evaluation Team are very knowledgeable about existing conditions, subcontractor progress and performance on CRP-related work, and are also usually on a first-name basis with the KH and AUE officers within their regions. It is obvious that they have pride in their work and are sincerely interested in having the beneficiaries realize the maximum advantages of the CRP. Monitoring and evaluation efforts by the staff in each of the two LDI regions have been diligent and professional.

Work with the commune leaders has in most cases been excellent and in one instance the Project obtained US\$ 30 000 from the Tamatave Provincial authorities targeted initially at rehabilitation works. This is an excellent example of the degree of trust and professional respect that has been developed between LDI staff and local government authorities.

There is also a conscious effort to maintain periodic contact, usually monthly, with the counterpart ministry, the Ministry of Environment, at the Secrétaire Général level in Antananarivo, keeping the ministry apprised of LDI's progress with its CRP activities. Both regional offices, and especially in Tamatave Province as just noted, maintain very positive relationships with the provincial governors and with the operational services of the Ministry of Agriculture at the provincial level. In several instances GoM officials have participated in the reopening and/or inauguration of CRP rehabilitated works.

From the reading of quarterly reports and other documentation, financial management appears to have been prudent and financial reporting of a good standard. The CRP from initial analysis have provided "value-for-money".

The most valuable asset in any country is its human resources and the development and training of the Project's staff has provided Madagascar with better-trained and more able human resources with which to develop further. The CRP components implemented by LDI have provided training, both formal and on-the-job, for a wide variety of people – the commune leaders and their constituents in the planning of their cyclone preparedness plans, the project staff, the contractors staff and farmers in improved conservation techniques. These new skills and this new knowledge will enable those who have been trained to provide better services, to earn better incomes and to provide better advice to others.

The need to have quarterly reports on both tranches of funding appears to have been excessive and put an unnecessary burden on contract management. Otherwise reporting has been detailed, regular and accurate and has provided donor, and the GoM ministries, to which they have been sent on a regular basis, with clear descriptions of work undertaken, of planned work and any problems that have been faced.

Chemonics' home office has provided adequate backstopping for the CRP and has sent home office staff on a frequent basis to the field. During the "political crisis" in mid-2002 they were supportive in the evacuation of their field personnel.

The *Cyclone Management Recovery Team* based in the USAID Mission in Antananarivo have performed a considerable service to the GoM and to the projects implementing the CRP. In the initial planning phase, soon after March 2000 the Team worked closely with other donors and provided support to the visiting *Disaster Assistance Response Team (DART)* from the *Office for Foreign Disaster Assistance (OFDA)* in Washington DC and attended the regular meetings of CRIC.

The Team has visited the field activities of the LDI CRP, and have provided a degree of backstopping that has been valuable. They have also been instrumental in arranging for senior GoM ministry officials to visit the field and see "for themselves" the work on the ground.

## **7. Conclusions**

- a) Overall, the CRP interventions provided by the LDI Project staff have been of a high professional standard and the results are a testimony to them.
- b) Target setting within the CRP appears to have been reasonable and of a nature that captured the comparative advantages of LDIs actions in both Fianarantsoa and Tamative Provinces.
- c) The Evaluation Team found that LDI's CRP activities definitely contributed to improved agricultural production and a greater spreading of the risk that accompanies all farm-economies. The road repair work done on farm-to-market roads originally constructed under the USAID-funded CAP project also helped to insure greater market access. Consequently, due to the aforementioned activities, living standards of the direct beneficiaries of these actions was also improved.
- d) The raising of living standards and a reduction of risk also benefited those communes that received assistance for cyclone preparedness planning. This is a self-help action that, when properly implemented and updated, can go much further than "band-aid" assistance from outside of the communes.

- e) Each of the activities also contributed, at a minimum, to mitigating threats to biodiversity in the forest corridors of the two regions targeted by LDI. The use of CRP funds allowed LDI to move quickly to maintain the momentum and focus on settled agricultural crops (as an alternative to *tavy*) preventing a compromise to their efforts to conserve biodiversity.
- f) Overall, actions undertaken with CRP funding have been of a sustainable nature. Specific areas of weakness have been addressed in the discussions above and recommendations for improvement are noted in Section IV.
- g) Work with GoM institutions should have been of greater concern than it has been, but it does “take two to tango”. Updates and collaboration have been accomplished at the national and provincial levels. GoM technical services at the provincial (and commune) level are severely lacking. Given these conditions, deliberate planning and careful liaison with professional counterparts under the “fast-track” operations of the CRP activities was an “unaffordable luxury”.
- h) As far as the Evaluation Team could determine, none of the CRP activities undertaken under the LDI contract were gender-biased. There appeared to be awareness at all levels of the impacts on females and males alike. Additional discussion of gender issues can be found in Section III.D.3
- i) Based upon the Evaluation Team’s review of documentation, discussions with project staff, field visits and interviews with beneficiaries, the use of all resources: human, financial, physical and time, has been of a high standard.
- j) USAID/Madagascar’s “Cyclone Recovery Management Team” has made periodic supervisory visits to monitor LDI’s CRP activities and to learn about the problems and successes they encountered. Hopefully these will become “institutionalized” and help make USAID more effective when dealing with future cyclone, and possible other disaster, emergencies in Madagascar.
- k) Overall, the Evaluation Team believes that USAID received very good value for the CRP monies expended through the LDI contract.

## **B. Réhabilitation du Capital Routier (ReCAP)**

### **1. Contractual design and targets**

This task order was designed to obtain technical services to repair and stabilize rural farm to market roads in both Tamatave and Fianarantsoa Provinces, as well as provide for their continued maintenance, and thus

create all weather roads. A third component called for the repair of a pier and adjacent warehouses at the Port of Manakara in Fianarantsoa Province.

Of the approximately 140 km of tertiary roads to be rehabilitated roughly 64 km are located in the Andasibe – Zahamena corridor of Moramanga region and 76 km are in the Ranomafana – Andringitra corridor of Fianarantsoa Region. It is noted that these roads are located in regions of Madagascar that are extremely difficult to reach. The repair and stabilization work on these road sectors has not been performed regularly (continuously) in the past, but were needed because of cyclone damage.

Rehabilitation of RNT14 from Ifanadiana to Ikongo is also part of this task order.

The contractor (Chemonics) who was awarded this work was not only given the tasks outlined above but also charged with creating and mentoring of Road User Associations which are expected to maintain the tertiary roads constructed under the contract into the future.

## **2. Technical aspects affecting productivity, market access and living standards**

The contractor's Task Order states (page 9 of 17) that the Contractor is to "Undertake Technical Design and Determine Appropriate Mode for Proceeding with Repair and Stabilization Work" for the road Sectors included in this Task Order. The Contractor, with USAID's concurrence, has selected ONG Lalana, a local engineering firm, to provide the services needed to meet this requirement.

The Task Order is not very specific as to which engineering norms the Contractor is to apply for the project but it can be assumed that local design criteria, quality standards and quality control requirements are intended to be met identical to those applied to Public Work projects undertaken by the Travaux Public on projects of this nature and roads of this classification.

In various conversations with Lalana representatives at the construction sites visited by the Evaluation Team several technical aspects were discussed and noted below.

**2.1 Drainage design.** It appears that standard stone wall / concrete slab culverts have been in use in Madagascar for a long time. Even though the standard design provides for 3 opening dimensions and 3 height variations for standard culverts the slope is the same 2% for all culverts. Good engineering practice requires that the catchment area up stream from a culvert to be built is calculated, an absorption rate is determined as applicable for this area and then the flow rate for a, say 50-year storm, is calculated. That flow rate then determines the dimensions and the slope of the culvert. It is possible that since this was a cyclone recovery program and time was of the essence the engineering schedule did not permit design efforts of this level of detail. It was

noted, however, that some culverts seen during the site visits appeared to be undersized in proportion to their catchment areas.

**2.2 Construction contract preparation.** Construction Contracts for the rehabilitation of RNT14 and tertiary road were prepared following the Standard Model probably in use in Madagascar since independence and modelled after French Public Works Construction Contracts. Efforts were made to translate most portions into English to comply with USAID requirements but the Technical Specifications (Annex A, almost 100 pages) appears only in French.

According to the French system construction contractors prepare final construction plans and quantities as part of their construction contract. These final plans are submitted and reviewed by the Owner's Engineers and checked for code compliance and conformity with the Owner's requirements. Whether this was done for the rehabilitation work for RNT14 could not be ascertained. The Evaluation Team was not able to find Plans and Profiles of roads being rehabilitated on any work site.

The construction contracts used do not provide a contractual mechanism for the increase or decrease in quantities that may result in an increase in the total contract amount. This means that when larger than estimated volumes of work have to be performed a reduction in quantities must be made somewhere else, usually reducing the length of road that can be rehabilitated.

**2.3 AUPs and barrage de pluie management.** Experience gained from the USAID-funded CAP project (also a Chemonics-implemented contract) indicated that AUPs require significant training and follow-up to be effective. Lessons learned from CAP indicate that this period may be more than two years. It certainly requires the experience of at least one rainy season to understand their own organization and governance as well as to begin transparent and competent technical management. Chemonics has developed thorough training modules and *recyclages* for the AUPs that includes management, toll rate setting, accounting, conflict resolution and the like.

Because of the delays in starting construction activities of ReCAP roads the formation and subsequent training of the AUPs that will be responsible for maintaining these rehabilitated roads is significantly behind schedule. Training and recycle schedules in Lac Alaotra region only have two months left in the contract to establish effective functioning AUPs (and without the benefit of even one rainy season behind them). Without additional provisions, the Evaluation Team seriously doubts that the AUPs will be able to effectively perform their planned duties and carry out the roads maintenance over the long term.

### **3. Contributions to biodiversity conservation**

CRP investments in ReCAP do not directly contribute to biodiversity conservation. Indirectly the investments will help mitigate the threats to biodiversity in the two main forest corridor regions (Andasibe – Zahamena corridor in Tamatave Province and the Ranomafana- Andringitra corridor of Fianarantsoa Province). The tertiary roads being constructed in both provinces and the rehabilitation of RNT 14 will help local populations adjacent to the forest corridors focus their economic activities on agricultural production that is settled. This action would be a significant shift from the traditional *tavy* systems of slash and burn techniques that threaten the biological resources in the two provinces.

On the east side of Lac Alaotra (Tamatave Province) any shift away from land clearing activities will also be beneficial. This area is extremely threatened due to the underlying lateritic soil structure that is susceptible to large destructive land slips (*lavaka*) that contribute to significant land degradation, serious siltation of downstream crop land and the eventual lowering of the productivity and economic value of agricultural land.

ReCAP activities can help to refocus and concentrate local populations on settled agriculture with the provision of adequate transport corridors for farm goods within and out of the region. The pressure for land clearing and its threat to the conservation of biological resources can be reduced provided the roads are maintained to an effective standard.

### **4. Timeliness and cost effective use of resources**

The three components of this task order are at various stages of completion.

The six lots of tertiary road being rehabilitated near the Andasibe – Zahamena corridor are on average 50% complete and are likely to be finished within their respective contract periods; i.e. before the start of the rainy season.

The tertiary roads (5 lots) in Fianarantsoa Province are progressing similarly and may be completed in a timely fashion as well.

Progress on the rehabilitation work on RNT14 between Ifanadiana and Ikongo is well beyond 80% despite delays caused by the crisis, fuel shortages, uncommonly heavy rains in July and August of 2002 and a flue epidemic that caused a decrease in available manpower in this area.

It is noteworthy that Chemonics subcontractors were able to perform as well as they did under the prevailing conditions.

The remaining component, work on the Port of Manakara, is behind schedule. The re-roofing of two warehouses may be completed by the end of October 2002 but pier reconstruction is likely to take until the spring of 2003. This work has not yet started, nor have the contracts been awarded.

An assessment of the effectiveness with which allocated resources were utilized is generally made by conducting an audit. This however, is not part of the Evaluation Team's task.

Based on the information made available to the Team by USAID, Chemonics and the Field Office Staff at the various rehabilitation sites a general positive impression can be obtained.

The reconstruction and new construction work seen is of good quality, masonry stone work for culvert walls and wing walls is outstanding in appearance and most likely also structural capacity.

At no point did the Evaluation Team see any waste of construction material or loss due to inadequate storage. It appears that the funds invested in the rehabilitation work were spent well. Section III.D.2 discusses the environmental impact assessment procedures undertaken in the contract.

## **5. Sustainability**

The sustainability of the investment made is entirely a function of the maintenance effort that follows the rehabilitation. With the creation of Road User Associations (AUPs) which have agreed to keep ditches along roads free of weeds and mud and to clear debris, rocks, plants and leaves and sand and gravel out of drainage structures and to patch eroded spots on the road surface the utility of those roads can be assured for years to come. The relatively low traffic volume and the slow speeds dictated by the alignment of most roads add to their longevity.

The protection of the longevity of road network that has been rehabilitated, will be linked closely with the regular maintenance described above. The allocation of funds for road maintenance, by both the Central and Provincial governments of Madagascar, has in the past been sporadic and insufficient. The project has embarked, or is initiating measures that will ensure some degree of regular maintenance.

ReCAP has been responsible for the formation of local groups, *Association des Usagers des Pistes* (AUP) to address the issue of regular and sustained maintenance. Because of the delay in the construction phase of the project there is a consequent delay in establishment of the AUPs, especially in the roads east of Lac Alaotra.

One concern of the Evaluation Team is whether there will be adequately trained and sufficient numbers of AUPs along the rehabilitated stretches of road to ensure that no "gaps" are left along its length. Gaps would lead to areas of neglected road that would deteriorate faster and thus negate the efforts of the AUP on other stretches; the strength of any chain is in its weakest link. The involvement of mayors, as locally elected officials within the commune authorities, is essential if there is to be created a sense of "ownership" and thus commitment to preservation of vital infrastructure.

Adequate training and a certain amount of monitoring of the development of the AUPs should ensure that their future performance will provide the required outcome – a well maintained road system.

## **6. Contract management**

The Evaluation Team has observed some minor short-comings in the Construction Contract Administration at the field offices which may be improved to the benefit of all parties. For example, on Lot 5 of the rehabilitation of the tertiary road between Tsahahonemana and Betsianjara (PK 0+000 to PK 6+210) a quantity of 700 linear meters of *fossé de crête* was paid to the contractor while in the original contract the maximum quantity allowed was only for 525 linear meters. When asked about a Change Order to the contract, or any other written trace documenting this change in total contract quantity, the Resident Engineer reported that this increased quantity was reflected in the inspector's daily report.

This construction contract is in the order of magnitude of US\$ 100 000. In a more substantial public works contract more precise documentation of any change in total contract quantities would be required. The ReCAP road rehabilitation contracts do not appear to contain a mechanism for contractual changes of this kind.

The example given above illustrates the point to be made. There are several more items like this. The preparation of adequate construction contracts is as an important an issue as good engineering design and concise technical specifications. In view of the volume of slope rehabilitation work and drainage and road construction work required for the ReCAP project, it appears that the input of a full-time experienced road engineer would have been very helpful to the Project (this input could have been further justified by the road component of the LDI Project and the civil engineering aspects of the FCE-R Project).

The Evaluation Team recognises that Lalana's document preparation effort for the ReCAP road rehabilitation, was performed with budget constraints and under pressure of time. It concluded that with the supervision by an expert in this field of engineering the construction contracts, prepared by Lalana, could have been more concise and the need for the field documentation could have been clearer.

In many countries contractors fail to recognize the role of the construction inspector as the Owner's Representative and see themselves as the experts in the field and see the (usually young and with limited experience) Resident Engineer as a recorder of events with no authority or status. When construction contracts do not clearly describe the functions and the tasks of the Resident Engineer the Contractor will take a lead in managing the project and marginalize the Owner's Representative.

The Owner's Representative on a construction project must take the initiative in preparing monthly payment schedules by measuring daily pay quantities

throughout the month as they are achieved instead of waiting for the contractor to submit his measurements and calculations. The Owner's Representative must also document in detail all technical changes which need to be made for design reasons or because of changed conditions in the field (and not for contractor's convenience) and prepare the contractually required documents to make these changes part of the contract.

The primary contractor did not provide the mix of professional skills that the ReCAP contract required. Towards the end of Contract Year 1 the recommendation to provide a full-time engineer was made by the contractor's short-term engineer. For various reasons this request was not followed through.

## **7. Conclusions**

- a) Minor procedural short-comings, which are caused in part by the insufficient experience of the construction supervisors employed by Chemonics subcontractors, have had no effect on the overall outcome of the project or the quality of the construction work. It is reasonable to expect that review and improvement to the contracts' preparation would help overcome many of these shortcomings.
- b) The Evaluation Team believes that CRP investments should lead to increased agricultural productivity, better access to markets and higher living standards for those people living in the areas being serviced by these roads once they are complete.
- c) In principle the CRP investments in road rehabilitation should help reduce the threats to biodiversity in the two forest corridor regions. Only if the roads are maintained and agricultural productions remains focused on land already cleared and under production will the contributions of ReCAP activities to biodiversity conservation be realized.
- d) Sustainable impacts of the ReCAP activities and CRP investment can only be measured once the rehabilitation work has been completed and the AUPs are functioning effectively in their maintenance roles over a period greater than two years after their completion. Another indicator will also be the demand for similar rehabilitation construction works by other communes willing to provide in-kind services for road maintenance.
- e) No situations were found by the Evaluation Team during document review or interviews with beneficiaries or subcontractors that would give the impression of gender preference in contracting the rehabilitation work. It was noted during the site visits that more than 30 women were employed in stone paving operations (*cloutage*) in the Ambatondrazaka area.

- f) In general the Evaluation Team found that the funds made available by USAID under the CRP for road rehabilitation in those two provinces were effectively spent.
  
- G) The pier repair work at the port in Manakara is behind schedule. A contractor is scheduled to begin a sub-surface investigation program at the pier location in the near future. Some of this work can be performed during the rainy season. An extension of time for this rehabilitation work to the end of June 2003 seems to be in order.

## **C. Fianarantsoa-Côte Est Rehabilitation (FCE-R)**

### **1. Contractual design and targets**

This Task Order is designed to obtain technical assistance for engineering and construction services for the stabilization and rehabilitation of the rail line between Fianarantsoa and Manakara.

The 20-page Scope of Work describes in general terms the stabilization and rehabilitation measures envisioned and clearly states that the goal of the proposed work is to bring the railroad back into service as soon as possible after years of deferred maintenance and considerable damage done to the track and appurtenances by the cyclones of March 2000.

The Task Order states (page 9 of 20) that “ ..... *rehabilitated structures will be built to a higher standard ..... which will result in as new structures. ....*”

This instruction may be difficult to implement in an emergency situation where the primary goal is to re-establish the train service over the entire line in the shortest time possible.

Nevertheless, the target of re-establishing reliable train services was realized on 1 June 2000, three months after devastating cyclone damage had closed it.

USAID, through its timely funding assistance and with the help of its contractor *Chemonics* and its engineering and speciality sub-contractors was able to achieve this praiseworthy goal.

### **2. Technical aspects affecting productivity, market access and living standards**

The technical aspects of stabilizing and rehabilitating a 163 km long railway line in mountainous terrain which has been neglected for decades and hit by at least two cyclones staggers the imagination. The difficulties are compounded by the fact that the line was built in the 1930's, utilized rail produced in the 1890's and functions with rolling stock that has been donated by different European railway systems over the years because its continued maintenance was no longer cost-effective.

Vast stretches of the FCE track had been buried under landslides, left suspended over embankments that were washed away or had disappeared altogether in deep cuts that were filled with mud and debris after the cyclones had passed.

The task of rehabilitating this road was daunting. USAID's contractor Chemonics and its engineering sub-contractor together with speciality railroad construction contractors was nevertheless able to perform remarkable feat in record time and at a fraction of the cost of which would usually have had to be allocated to this type of work in inaccessible mountainous terrain and with access roads equally damaged and rendered useless by the cyclones. This outstanding achievement ensured that banana farmers, who have no other means of getting their produce to markets at either end of the rail line, were able to resume their activities after a relatively short interruption and thus continue, and conceivably increase, their productivity and maintain or possibly raise their living standards.

The approach used by FCE-R to organize farmers and the 19 communities along the rail line was also most effective. The development of a working and mutually beneficial relationship between the FCE managers and the local people to maintain the railroad right-of-way also appears to be working effectively and helping to develop a greater sense of pride. This sense of ownership in a successful enterprise extends not only to the direct beneficiaries of these actions, but to the region as a whole. This cooperation was exemplified during Madagascar's recent political crisis when the FCE and the people living along it worked aggressively to keep the line operational from Manakara to Fianarantsoa. (This was not the experience on the other rail line linking Tamatavre and Antananarivo.) The actions along the FCE helped to maintain a vital economic link for the region and probably helped to affect the outcome of the crisis.

### **3. Contributions to biodiversity conservation**

Investments to the FCE rehabilitation with funds from the CRP can be viewed as having a positive effect on biodiversity conservation in the Ranomafana-Andrinkitra forest corridor. The impact over the long term will be especially important. Had CRP monies and the initiative of the FCER contract staff not been present biodiversity conservation in the short term would have remained stable, but only to be more severely threatened over the longer term.

Without USAID's assistance through the CRP it is almost a certainty that the rail line would have been abandoned. In that state, even though unused by rail traffic, its fallow state would still have allowed easy and continued access for farmers to move into the corridor and clear land for *tavy*. An abandoned rail line would have meant only a temporary reprieve from human interventions, and most certainly only a temporary lessening of the threat to biodiversity conservation.

With the CRP funds and the rehabilitation of the FEC has also come an intensive effort to provide a sustainable maintenance effort of the right-of-way through slope stabilization activities and periodic drainage cleanings. This is coupled with “technical agricultural packages” with training for the local people living in the 19 communities along the railway. The objective of these efforts focus on increasing agricultural activity that is settled (as opposed to the land clearing activities of *tavy*) so that productive economic activity happens away from the forest, rather than being drawn into it.

It was very evident to the Evaluation Team that there is a sense of excitement and pride in the local population all along the railroad. There is also hope that the railroad can continue to support their livelihoods. In an area where bananas and coffee (and to a small degree, tea) is very important, maintaining and improving settled systems of agriculture will be critical to reducing threats to biodiversity in the nearby corridor. The jury is still out, but CRP funding should certainly be seen as having an indirect contribution to mitigating these threats.

#### **4. Timeliness and cost effective use of resources**

The Task Order shows a breakdown (page 19 of 20) of the total Task Order of US\$ 4 700 000 of which US\$ 2 715 000 is shown as “Rail Road Rehabilitation Funds”. In a document entitled “Year 2 Implementation Plan, 18<sup>th</sup> March 2002” a budget breakdown on page 8 shows how the US\$ 2 715 000 were spent or committed.

Considering the accomplishments described previously there should be no doubt that the funding made available by the USAID for this portion of the CRP, was spent in a cost-effective and timely manner. It is clear from the observations of the Evaluation Team in the field that a great amount of individual effort on the part of the Chemonics and its subcontractors contributed to the success of this rehabilitation and stabilisation work. This individual effort in leadership in mobilizing human resources and inviting the participation and commitment of the farmers along the railway line to help maintain it in the future is a benefit that well justifies the investment made.

#### **5. Sustainability**

Sustainability of the rehabilitation of the railroad is closely linked with the long-term future of the rail line. The line’s future is currently being debated within the GoM and amongst the donor community, particularly the World Bank, and the possibility of privatisation is being considered. It is essential, therefore, that the Project works closely with those involved: GoM, donors, private sector companies, to bring its most valuable experience into these discussions and decisions.

The question of the economic viability of the line is outside the brief of this Evaluation Mission. After close inspection of the work of the railroad a number of observations are indicated.

The sustainability of the investment made is entirely a function of the maintenance effort that follows the rehabilitation. Farmers have agreed to keep ditches along the rail road free of weeds and mud, to clear debris, rocks, plants as well as leaves and sand and gravel out of drainage structures.

## **6. Contract management**

An overview of the budget of the FCE-R rehabilitation efforts undertaken with USAID CRP assistance shows that those funds appear to have been prudently managed and responsibly accounted for. They have also been used successfully to leverage future funding for continued stabilisation work of large slopes, track improvements and the continued rehabilitation of rolling stock.

As a result of the re-opening of the rail line on 1 June 2000 and its continuous operation since then, the confidence of passengers and freight haulers, has risen and the volume of revenue generating traffic has increased.

## **7. Conclusions**

- a) There can be no doubt that the timely intervention by USAID with Cyclone Recovery Funds targeted for the stabilisation and rehabilitation of the FCE, is the one event which prevented its abandonment. The necessary funds together with imaginative leadership and the involvement of communities along the line in its reconstruction and maintenance, made the line function when, after cyclones, hope for its continuation was very limited.
- b) It must be noted, however, that a large amount of work remains to be accomplished. Through long stretches ballast cleaning and upgrading remain to be completed. This replacement and tamping below ties is needed in many places and rail splices must be repaired and up-graded over more than half of the line length. In addition, a huge repair and refurbishment job is ahead for the rolling stock in Fianarantsoa. As the volume of the line increases in the future the need for a signalisation system will become apparent as well.
- c) Increases to agricultural production, market access and living standards as a result of CRP fund assistance to FCE rehabilitation are being realized. The technical packages used by farmers in rail line rights-of-way appear appropriate and are being replicated up and down the railroad. Market access, particularly for the region's banana crop, has been a very immediate and continuing benefit. Other agricultural outputs are also being loaded and transported up and down the FCE.
- d) The use of CRP funds in the FCER contract have helped communities along the rail line to refocus on agricultural activities that are attractive alternatives to traditional slash and burn practices, and very probably

more lucrative. Indirectly this should reduce threats (brought on by land clearing) to the forest corridor. In this sense CRP investments contributed to biodiversity conservation.

- e) The rejuvenated livelihoods of rail line communities are a direct result of CRP activities. This means that there will be continued, and possibly increased, economic activity in comparison to what existed before the cyclones of 2000. This can only slow down what was before an inextricable movement up the slopes and into the forest migration of local peoples as their population grew. In this regard there will be a very definite contribution to biodiversity contribution in the area adjacent to the FCE as a result of CRP funding.
- f) The Evaluation Team found that the CRP funds utilized in the FCER contract were extremely cost effective. The results of the activities were immediate and they have had a very positive impact on the region served by the railroad
- g) The sustainability of the interventions undertaken and planned with CRP funds appear to be long-lasting. Farmers along the rail line are usually eager to adopt the technical packages promulgated and cooperation between the FCE and the people bordering the railroad is very much in evidence. The Evaluation Team also found a very open acceptance on the part of FCE managers of the cooperation that occurred with the local communities. There is a mutual sense of ownership of the rail line and the desire to maintain its viability.
- h) Gender issues were considered in the activities undertaken through the FCER contract. Benefits accruing from the investments do not appear to favor a particular gender. Construction contracts, as noted above, also went to women-owned firms.
- i) The rail line, as has been stated many times in documentation and with interviews of both LDI and FCER staff, is a vital link between communities, commercial centers, social services, administrative bodies and “the outside world”. Very few roads exist in the region through which the line passes. The establishment of a road network would be costly to build and particularly to maintain, the network would soon expand outside its original planned routing and thus endanger further the delicate environmental balance that so many are currently trying to be preserved.
- j) The viability of the railway line solely in direct cost and benefit terms is unlikely, as has been shown in previous studies. But it has also been illustrated that an operational FCE is definitely feasible (and highly desirable) when the costs to the region (and the nation) are looked at in relation to the unpriced values of the watersheds, forests, soils, biodiversity and local livelihoods that would be lost if the railway were to stop functioning.

## **D. Cross-cutting Issues and General Observations**

### **1. Contractor inputs and targets**

The very nature of emergency response often means that the design of interventions is hurried and that “things” get left out. In the haste to get things moving the details are often overlooked and this has proved to be the case during this evaluation of the CRP that was designed to alleviate the problems that were left after the two storms of February and March 2000 – Cyclone Eline and Tropical Depression Gloria.

The conception of immediate response that utilized and built upon the strengths of existing projects operating in the field, was sound and has paid dividends in terms of providing an integrated approach and in the cost-effective use of resources.

**1.1 *Sum of the parts is greater than the whole.*** Overall, the Mission and the contracting entities implementing the three contracts within the NRO’s CRP have done an extraordinary job of assisting the people of Fianarantsoa and Tamatave Provinces recover from the damage inflicted by the storms in 2000.

USAID/Madagascar and the staff implanting the three contracts are to be congratulated on the effectiveness of their collective work and to affect results that are greater than the sum of the three parts. In Fianarantsoa the rail line cuts through the forest corridor where USAID has funded activities for more than a decade; LDI is a continuation of some of those efforts. With the railroad as the core, the rehabilitation activities of the other two contracts only serve to further complement one other, add to the vitality of the region and work to focus economic activities on settled farming and away from slash and burn *tavy* practices that threaten the forest’s rich biodiversity.

Further north in the Moramanga region of Tamatave Province CRP funding implemented through LDI activities and ReCAP road construction the emphasis is more on capitalizing the production in zones of high agricultural productivity. Here again, especially in the rich agricultural land around Lac Alaotra the activities complement and bolster one another. Hopefully the end result in this area will also be much greater than the simple addition of the two parts. The geology of this area is even more fragile than in the other areas where CRP funding has been used. Another nearby forest corridor is also being threatened by land clearing and there is a definite emphasis to refocus local farmers agricultural and accompanying economic activities in the irrigated perimeters around the lake. LDI’s activities are helping to do that, and ReCAP roads should facilitate the movement of this production to the Malagasy markets. There is potential weakness and a possible threat to the success if the road portion of the CRP stumbles because the AUPs have not been given adequate time and assistance to learn their responsibilities and confront the governance issues successfully. The short CRP timeframe is partially at fault for this.

**1.2 Use of subcontractors.** The use of a whole raft of subcontractors for the implementation of much of the work may appear at first to have increased the overall cost of the operations. Each subcontractor has overheads and margins that add to the normal operating costs and would thus increase the overall cost of each intervention. Should there have been more use made of the main contractors staff and less of other providers, both local and foreign? This *modus operandi* would have possibly reduced overall costs but would not have provided an opportunity to develop local NGO groups and local contracting companies, but would it have provided “value for money” which is what all donors and recipients, in the end require?

**1.3 Targets.** Targets set at the initial design stage have been met or will have been met before the end of the CRP contracts with the exception of the Manakara port repairs, and possibly some road contracts. At the time of the assessment/evaluation an extension of the ReCAP contract was being considered to allow for their completion.

The targets in each of the CRP contracts appear to have been set as a response to the identified needs but also within the context of what the individual contracts could realistically achieve. There was also a very conscious effort on the part of USAID to capitalize on the experiences within the Fianarantsoa and Tamatave provinces. This allowed CRP investments to (a) achieve benefits to local populations more quickly due to the comparative advantage of previous and on-going activities in these regions and also to (b) help protect investments gained in the region from those activities. Whether or not USAID had a “competitive advantage” over other aid agencies in that their on-going projects were located in badly hit areas, that they had recent experience in the reconstruction of secondary roads and thus they were ideally situated to provide the necessary targeted assistance, is moot. The Evaluation Team, during its discussions with the USAID’s CRMT, learned that the GoM was generally supportive of donors providing rehabilitation assistance in the wake of the 2000 cyclones in the respective areas where the donors were presently working. This approach certainly facilitated the government’s coordination efforts. The question remains as to whether this strategy meant that some regions and populations deserving assistance were neglected.

## **2. Environmental impact assessment and mitigation**

Within each of the three contracts issued under the CRP sincere efforts were made to follow USAID and Malagasy procedures aimed at mitigating the effects of the activities on the natural environment.

Under the LDI contract it was determined following discussions with USAID that an environmental impact assessment for the road repair work was unnecessary. The activities planned and implemented were simply repair works to previously existing roads. The roads were constructed under the USAID-funded CAP project and the environmental impact statements for these roads had been done under that contract and were on file with USAID.

Similar conditions existed for other LDI activities funded with CRP monies. Each was a small infrastructure repair activity and the sums expended did not warrant a full assessment under Malagasy law. Nevertheless, a “mini environmental assessment” was conducted following USAID standards and is on file in their offices.

The ReCAP contract was the first road project in Madagascar to follow Malagasy MECIE procedures for environmental impacts of planned activities. ReCAP completed the environmental screening forms for each road lot and filed these with USAID and with the Office National pour l’Environnement. A waiver for an environmental impact statement and the “okay to proceed” was finally issued by ONE after considerable wrangling. There was much disagreement on the payment of the five percent filing fee (based on the total value of the project) that was to accompany the registration of the environmental screening form with ONE. Agreement between the GoM and USAID was reached when it was determined that the cost of the filing fees would come from GoM in-kind funds.

During the field visits the Evaluation Team observed culvert, drainage and bridge construction work associated with these roads. Care was being taken to minimize damage and potential harm to adjacent land. It is doubtful, however, that if the heavy rains of the rainy season come early (e.g., before the end of the construction currently underway) that the mitigation efforts will be sufficient.

The FCE-R also filed the necessary MECIE environmental screening forms with USAID and ONE. The appropriate order to proceed was granted apparently without the problems encountered earlier by ReCAP. The biggest concerns with the FCE-R activities have been the slope stabilization efforts and the movement and subsequent deposition of large quantities of soil. In most instances this was accomplished without serious incidents and the material was often used for fill in other places.

It is unclear, and it is doubtful, that the periodic six-week reporting requirement of the MECIE has been followed by either the ReCAP or the FCE-R contracts. A wrap-up report for ONE at the end of the contracts is probably warranted. ReCAP does provide progress monthly reports to the GoM.

The general observation of the Evaluation Team is that environmental assessment and mitigation procedures were followed in the contracts issued under the CRP.

### **3. Gender issues**

All three CRP Projects have ensured the involvement of both men and women in all aspects and at all levels of project implementation. From the Evaluation Team's investigation it also appears that there have been no activities conducted that had a particular gender bias.

The FCE-R Project has been using contractors that are owned by women in many of its construction components. For example all the following are female owned companies:

BTPS	Provides drainage works
RJO	Conducts track maintenance and repair
ECOABE	Supplies of parts and materials
GAMA	Provides labor
FIDERANA	Rehabilitates FCE rolling stock

There seems to be a good balance in the FCE-R Project between the work allocated to women and to men including in the communal works undertaken along the track.

There are no women-owned contracting firms engaged under the ReCAP contract. Women have provided certain semi-skilled inputs to road construction such as laying the "cloutage" surfaces along some sections of the roads.

Both women and men are members of the Kolo Harena (KH) and both genders are very much involved in the management of these. The Evaluation Team met with female presidents of water users associations (AUE) and Kolo Harens and also learned that one of the AUPs established under the ReCAP contract has a female president. The gender balance appears to be satisfactory in the LDI with equal participation in planning and implementation of the interventions.

### **4. Liaison and linkages with GoM institutions and donors**

Liaison with GoM institutions appears to be minimal during the implementation of all three projects. At the start of the emergency the USAID initially worked with CNS-CRIC in the establishment of priorities, but subsequently little contact has been maintained concerning the interventions for cyclone recovery. What is of most concern is the lack of contact, particularly at central and provincial levels, regarding future cyclone preparedness. The LDI Project has, during its training of the 33 communities in cyclone preparedness, worked with the officials of these Communes and thus, it is hoped, there will be some degree of future sustainability of these interventions.

All donors, project staff and others involved in development with whom the Evaluation Team has spoken, have indicated the paucity of communications with the GoM. As a consequence of this the CRP has worked hand-in-hand

with other less formal institutions such as the NGO community, community groups in the delivery of the interventions that it has provided.

Through the *Comité National de Secours – Comité de Reflexion des Intervenants aux Catastrophes* (CNS-CRIC), the National Relief Council, USAID had worked closely with others concerned with the targeting, sector and geographic allocation and nature of involvement of each donor in the post-cyclone rehabilitation program. The pragmatic approach to utilise existing projects in the field has proved to have been a sound one and has not only provided the required rehabilitation but at the same time has strengthened the existing projects that will enable them to provide a more sensitive and targeted focus in the future.

Some donors, notably the World Bank, promised considerable assistance for cyclone recovery programs but found that the absorptive capacity of the GoM institutions was limited, and little of the promised funding has been disbursed. NGO groups, both local and foreign, have played a major part in the rehabilitation process.

## **5. Other observations**

Although the projects being evaluated are designed as emergency response interventions, they could have been, and to a certain extent were, conceived as mechanisms for strengthening institutions with which the projects would be working. To the extent possible all the projects have been able to provide some form of strengthening of the groups with whom they have worked, be this in the provision of training for staff or in the development of strategic plans or just working alongside people who have “learned on-the-job”.

The projects themselves have to a certain extent worked in isolation from GoM institutions (see III.D.4 above) but have worked successfully with local companies, NGO’s and others. These partnerships have been able to strengthen these institutions and this applies particularly to *Lalana* an NGO formed after the completion of the USAID funded CAP Project.

Certainly all projects have provided training, for a variety of people (staff, communes officials, contractors and farmers) helping provide additional knowledge and skills to the people of Madagascar. Training sessions with the AUE members appears to have been very good and their members seem to have taken ownership of these social organisations, will be enabled to continue long after CRP completion. The AUP groups associated with rehabilitated CAP roads and at least one other in the Manakra (Lokomby) region are enthusiastic and appear to be well-organized. In the Lac Alaotra region the AUPs have only been recently formed. Training is planned, along with a *recyclage*, for the AUPS. Experience from the CAP project has shown that the successful development and sustainability of these groups is a very long-term process. The Evaluation Team is concerned, as are ReCAP staff, that the AUPs in the Lac Alaotra region may not have sufficient time and guidance to be effective local managers of the newly constructed roads. This

could mean that less than satisfactory results will be achieved for CRP investments.

There appears to have been a good balance between top-down management and bottom-up fulfilment of expectations with consensus building having been achieved at all levels, involvement of all stakeholders has in the most part been done well. However there are some glaring omissions particularly work with the GoM institutions (see III D.4 above). Apart from the 33 Communes in which the LDI Project and the RECAP Project have been working, little capacity building or strengthening has been achieved at either provincial or national levels. The development of the institutions of civil society has been less than optimal.

The Projects have kept the Ministries, with who they have connections, well informed through the regular submission of reports and have on occasions taken their personnel on site visits, however, there has been very little involvement of these staff in the day-to-day management of, and decision making in, these projects. It is excellent that people are kept informed, but they will only grow professionally and in capability if they are involved in the decision-making process and in management planning. It is apparent that recently the GoM is beginning to ensure that it is more involved in the design, planning and implementation of projects, this can only be a good thing for the institutional strengthening of the GoM operational ministries. It is hoped that the development of, with help from the LDI, of a *Unité de Coordination des Projets* will bring about the greater involvement that is needed if the GoM is to become more responsive to the needs of the people that it serves.

In hindsight, liaison with groups such as ANAE, which has an office in Ambatondrazaka may have been advantageous. Periodic discussions between LDI and ANAE staff working in the area might have lent a further boost to LDI's (and ANAE's) activities in the Lac Alaotra area.

The FCE-R Project has worked closely with the management of the FCE railway and provided direction and assistance in the "recovery" of the infrastructure. The question of institutional strengthening, in the light of expected IBRD funding and the possible privatisation of the line, is premature and is outside the brief of this Evaluation Mission. However, the LDI Project itself has been heavily involved in the preparations for possible privatisation and in the cataloguing of assets of the line. Certainly what the CRP has done is to help make the management of the railway aware of the need for good communication and consultation with, and involvement of, the 19 communities along the line-of-rail. Thus ensuring better land-use alongside the track, greater "ownership" by, and involvement of, these communities in the future of the line.

Generally the interventions of the three projects will be sustainable if a number of further actions are taken. There is a need for greater involvement of GoM institutions and indigenous civil society institutions if any lasting benefits are to remain and institutional knowledge is to be enhanced.

In the future it is recommended that greater contact is developed and maintained with the relevant GoM institutions in order that greater transfer of knowledge, skills and expertise is provided by the donors and the projects. Projects and donors are transient, the civil services of governments are there to stay. Working through religious institutions (the churches) and NGOs which have great local following and are well respected in Madagascar, could provide a platform whereby considerable strengthening of local capability could be achieved.

The development of the local contractor community certainly seems to have been enhanced through their use in all three projects. The development of the private sector has thus been an additional “spin-off” from these projects.

The development of the human resources capabilities within the communities in which the projects has worked, has been considerable, and it is hoped that there will have been a reduction in “donor dependence” through these efforts.

The greater involvement of the commune authorities in the provision of financial assistance for the management and maintenance of irrigation infrastructure should be investigated. This especially applies in the Tamatave Province around Lac Alaotra, considered as the rice bowl of Madagascar, where rice is the backbone of the economy and where local taxation is bolstered by rice taxes. Other communities around the world have allocated taxes, accrued from specific agricultural produce, to the development of these sources of production, thus enabling development and required expansion to take place. In other words, use rice taxes for rice production and development.

This assistance to the community should provide the help and support that could ensure the continued operation, and possible growth, of the AUEs and the AUPs thus ensuring that infrastructure is maintained and provides the longevity of service that is required in a country with limited financial resources.

## **IV. RECOMMENDATIONS AND LESSONS LEARNED**

### **A. Recommendations**

This section presents the collective recommendations of the Evaluation Team. Points are made relative to each of the contracts under the CRP. Additional recommendations are made that may be more appropriately considered by the donor community and the Government of Madagascar. The order of the recommendations is made without regard to any priority order.

#### **1. Landscape Development Interventions, LDI**

- a. LDI staff should carefully examine the supply mechanisms and networks for the Centres d'Appro in terms of bulk buying / transport, keeping down transport costs and even the use/roles of other local shop-keepers / businesses in capitalizing on the local and regional supply networks. (Note that there is also a sister recommendation to USAID and the donor community on this topic.)
- b. There is a disparity between owner-occupiers and tenant farmers in some of the irrigation perimeters, particularly the sharing between the tenant and the owner some of the costs i.e. membership fees of the AUEs. LDI should investigate ways to eliminate this disparity.
- c. There needs to be follow-up of the AUE's established with the CRP funds by "normal" LDI activities with support and monitoring as and when needed/required.
- d. More effort should be exerted to engage GoM staff from appropriate institutions work more closely with LDI activities projects. Different mechanisms and approaches should be explored. Project staff should work with USAID to encourage these partnerships.
- e. Cyclone Preparedness Plans are an excellent idea and efforts should be expanded to make this a national theme. The Ministry of the Interior / CRIC might be used to help coordinate the effort. The Evaluation Team does not encourage this body to take over the planning; that should continue to be a decentralized, local activity. These plans provide hope, empowerment and a feeling that communities can take control and can do something themselves about these powerful forces of nature.

#### **2. Réhabilitation du Capital Routier, ReCAP**

- a. The ReCAP contract for the pier work in Manakara port should be extended to June 2003 in order to ensure its effective completion
- b. The training of AUPs should be accelerated or at least prolonged beyond the end of the current ReCAP contract. Enough time and supervision

should be allocated to ensure that the AUPs are well-established, experienced in their technical roles and familiar with self-governance issues.

- c. The road contractors have a contractual obligation to ensure that the work undertaken is in as good a condition one year (the warranty period) after completion as upon completion. The Project and USAID Madagascar should develop a mechanism whereby these contractual obligations are fulfilled, so that what is eventually handed over to the Commune is in the best possible condition, with all problems addressed to the satisfaction of all - the community, the road users, and the donor. The Evaluation Team recommends that Lalana manage and supervise any work required
- d. Talks between the Project and the commune leaders, as well as provincial officials, on their ability to allocate funds for road maintenance should begin as soon as is possible. Involving local authorities, who up until now have been able to provide little or no financial support, should provide a basis for at least some involvement in the protection of these vital economic assets. Techniques used by the LDI Project in involving local authorities in the preparation of Cyclone Preparedness Plans, should be investigated as a means of starting the process by which they begin to take responsibility for roads under their jurisdiction.
- e. Staffing of projects – even emergency ones – should be more sensitive to the fact that engineers are required for engineering supervision, not just good managers.

### **3. Fianarantsoa Côte-Est Réhabilitation, FCER**

There is increasing pride in the rehabilitated railway. More attention should be paid to the morale and discipline of the staff if there is to be continued development of the services it provides. The issue of uniforms, may provide greater pride in the job. Discipline for offenses could also be introduced, or enforced if policies already exist.

### **4. Other**

- a. Cyclone Preparedness Plans are an excellent idea to be further expanded and followed through. USAID and other donors should continue to actively encourage their establishment and active updating at the commune level.
- b. USAID should allocate staff time, to record lessons learned from the 2000 cyclone program and establish a delivery mechanism for sharing this.
- c. There should be a regional sharing of ideas where possibly more lessons can be learned from USAID's cyclone rehabilitation experiences funded by the Southern Africa Floods Appropriation of 2000 in Mozambique and Botswana.

- d. Actions should be encouraged to have communes to contribute towards costs of irrigation system maintenance, to support to KH, AUP's and AUE's through commune structures and possible use of local taxes - e.g. use rice taxes for the maintenance of irrigation systems.
- e. USAID and other donors should capitalize on the current pro-business environment in Madagascar to rectify the poor agriculture input supply structure and network. Farmers need a reliable and effective supply network to help them increase their productivity.
- f. Donors and the GoM need to actively examine how can to avoid the situation where some areas of Madagascar received no post-cyclone recovery assistance following the storms of 2000, because the donors only worked in their own geographic areas of concentration.
- g. CRIC could undertake and distribute a post-cyclone season evaluation of the pervious efforts and learn additional lessons
- h. Donors and the GoM working in irrigated perimeters need to take action to eliminate the disparity between owner-occupiers and tenant farmers in some of the irrigation perimeters.

## **B. Lessons Learned**

The list of lessons below is not in any particular order of priority. Most of them stem from contracts under the CRP, but some are also the result of the collective observations of the Evaluation Team across all the contracts.

1. The development of Cyclone Preparedness Plans have provided a unique and participatory process that encourages ownership and forward planning in local communities. This process certainly warrants greater dissemination.
2. The use of subcontractors for the implementation of projects needs to be carefully examined on a contract-by-contract basis. There may be better use of the primary contractors staff in some situations, and thus a better (more effective) use of finances.
3. The excellent use of local labor in "labor-intensive-public-works" in communities that really have shown considerable initiative and concern for the FCE railway is certain to be utilized in future projects. This coupled with the use of appropriate technology can keep down costs and, more importantly, show local communities that they do have some control over their facilities and infrastructure with the resources around them. This use of "interest-groups" has credibility and contains ingredients for successful future models.

4. The technical packages for agricultural development – for example use of vetiver grass for stabilization and the selection of suitable crops for risk-spreading - are replicable in other geographic areas.
5. Experiences from the LDI contract have shown that the flexibility in budget line items enabled contract staff to address unforeseen issues, an extremely important aspect especially in an emergency and rehabilitation situations
6. The need to provide quarterly and financial reports on the two tranches of allocated funds seemed to be excessive and a poor use of human, financial and time resources.
7. There is a need for more explicit contracts with main subcontractors with particular care given to the Warranty Period and its supervision. In the ReCAP contract this is the year-long period following completion of the roads and the subcontractors responsibility to repair damage due to normal wear and tear of the road.
8. There could be better technical supervision of the local engineering contractor, in this case Lalana. In the future the selection of a technical specialists with pertinent experience in construction contract preparation and administration and construction supervision should be more carefully undertaken. Management of the ReCAP contract could have been enhanced with road design and construction engineering experience figuring more prominently in the overall level of effort contracted.
9. The level of effort for the ReCAP Project was insufficient for proper supervision and was poorly utilized in the use of short-term TA inputs. The contractor and USAID should have given this more scrutiny.

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## Annex A Scope of Work

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### Performance Assessment/Evaluation Special Intermediate Results (SpIR) 3.5 Productive Infrastructures and Systems Rehabilitated Madagascar Cyclone Recovery Program (CRP)

#### I. PURPOSE

This scope of work's purpose is to acquire consulting services for a performance assessment/evaluation of USAID/Madagascar's Cyclone Recovery Program (CRP). Evaluation results will describe the quantity and quality of CRP impact and progress. Specifically, the following four major questions will be answered: 1) Have investments increased cyclone victim agricultural productivity, market access and living standards? 2) Have investments contributed to biodiversity conservation? 3) Have investments been accomplished in a cost-effective manner? 4) Have investments achieved sustainable impact (including building institutional capacity)?

The assessment will result in recommendations to implementing partners and USAID on how to improve program performance and results during the remaining life of the program. Lessons learned documented during the evaluation may also be used in developing future World Bank, United Nations Development Program, African Development Bank, Japanese Embassy, and/or USAID investments.

#### II. BACKGROUND

##### II.1 USAID Madagascar's Cyclone Recovery Program Historic

Cyclones Eline, Gloria, and Hudah struck Madagascar in February-March, 2000. Cyclone damage was particularly severe in forested areas near Fianarantsoa and Moramanga where USAID invests in biodiversity conservation zones. The cyclones caused extensive agricultural crop damage and exacerbated food insecurity for a large number of rural families. As much as 50% of the harvest was lost, particularly rice. Irrigation system and rice storage infrastructure, tertiary and secondary farm-to market roads, the *Fianarantsoa Côte-Est* (FCE) rail line, and the Manakara Port were damaged by heavy rains, wind, flooding and landslides.

The cyclones affected approximately 300,000 people and killed 200. In the Fianarantsoa Province dams and irrigation systems were severely damaged and major road and rail systems closed. The FCE railroad, the only source of "reliable" transportation for over 100,000 people, was closed for two months due to mudslides, washouts and floods. The *Route Inter-Provincial 4* (RIP 4) and secondary roads essential to agricultural marketing and rural commerce were also hit hard. The Manakara Port, which provides an essential transportation link to seagoing freight and domestic and international import and export markets sustained damage to warehouses and wharves.

In the Tamatave Province damage was also severe. Important secondary farm-to-market road sections within the Mantadia - Zahamena forest corridor will need rehabilitation to restore them to all-weather status. Rice irrigation system rehabilitation is also needed in this major rice producing zone.

In consultation with the Government of Madagascar (GOM) and other donors, USAID decided to target cyclone recovery investments in technical and geographic areas where it has established relationships and experience. This will ensure quick and tangible results within the CRP's short, less than two year time frame. Targeted sectors include health, transportation, agriculture, irrigation and disaster prevention and mitigation. USAID wants cyclone damaged rehabilitation investments to protect fragile natural environments from future damage while improving rural family production systems and livelihoods.

USAID/Madagascar's CRP strategy uses Southern Africa Floods Supplemental Appropriation (Tranches 1 and 2) humanitarian relief funding to concurrently buttress biodiversity conservation and rural poverty alleviation. Natural Resource Office (NRO) CRP investments were designed to yield short term agricultural productivity and food security benefits and alleviate rural poverty and conserve biodiversity over the long term. To achieve quick impact with long term sustainability active rural family participation in CRP implementation is key.

The three contracts cited below were implemented under the Special Intermediate Results (SpIR) 3.5 - Productive Infrastructures and Systems Rehabilitated. Each contract was scheduled for completion during the January 2001 - December 2002 period.

## **II.2 Program Summary**

### **II.2.a Implementing Partners**

1 - Chemonics International Inc. - "*Landscape Development Interventions*" (LDI)  
Contract No 687-C-00-98-00160-00 - Cyclone Supplemental  
Allocated Budget: US \$2,600,000 (\$1,300,000 Tranche I and \$1,300,000 Tranche II)  
Starting date: September 22, 2000 – August 31, 2002 (Tranche I)  
Starting date: January 9, 2001 - December 15, 2002 (Tranche II)

2 - Chemonics International Inc. - "*Rehabilitation du Capital Routier*" (RECAP)"  
Farm to market road repair and rehabilitation of the Manakara Port  
PCE-I-00-99-00003-00 Task Order No. 808  
Allocated Budget: US \$5,349,800  
Starting date: January 16, 2001  
Ending date: December 15, 2002

3 - Chemonics International Inc. - "*Fianarantsoa Côte-Est (FCE) Rehabilitation*"  
FCE rail line repair and rehabilitation  
PCE-I-00-99-00003-00 Task Order No. 809  
Allocated Budget: US \$4,700,000  
Starting date: January 31, 2001  
Ending date: December 5, 2002

### **II.2.b Productive agricultural systems rehabilitated**

This sub-result was contracted to Chemonics International's ongoing "Landscape Development Interventions" (LDI) program. CRP interventions are implemented in conjunction with regular LDI activities. LDI is to rehabilitate or repair cyclone damaged dams, canals, and community granaries and distribute short cycle seeds and other agricultural inputs to beneficiary communities. LDI was

also tasked to assist beneficiaries in disaster preparedness and mitigation planning to increase community capacity to cope with natural disaster.

Specifically, LDI should:

- 1) rehabilitate dams and irrigation systems to return 5,732 hectares of farm land to production;
- 2) distribute, at a subsidized price, 327 mt of short cycle seeds;
- 3) construct 9 agricultural input supply centers and 6 village granaries;
- 4) assist 24 communes to develop disaster mitigation plans; and
- 5) repair 156 km of Commercial Agricultural Promotion (CAP) road sections in the Province of Fianarantsoa.

LDI CRP interventions must benefit 3,100 rural families organized into 216 producer organizations called *Kolo Harena*. LDI has implemented CRP interventions in close collaboration with rural associations, decentralized government agencies, and local elected officials. Organizational and institutional capacity building is an integral part of LDI's strategy to achieve long term maintenance of rehabilitated road and irrigation infrastructure. Technical assistance in apiculture, fish farming, tree crops and off-season agricultural production; rural finance; input supply centers; village granaries; and market organization services are provided to increase rural family farm productivity, enhance and diversify incomes, improve food security, and attract agribusiness and other commercial firm investment to rural areas. LDI CRP interventions build on rural family initiative and innovativeness to move upwards along the disaster to development continuum. All LDI activities (regular and cyclone program) encourage beneficiaries to employ environmentally sensitive agricultural practices and manage natural resources sustainably.

### **II.2.c Rehabilitation of rural road infrastructure and systems**

This activity was contracted to Chemonics International. As stated in their Task Order, the “*Rehabilitation du Capital Routier (ReCAP)*” will:

“...provide technical services and commodities to repair, stabilize, and provide for the continued maintenance of rural farm to market roads and minor repair for the Manakara Port. Cyclone disaster rehabilitation work will take place in USAID’s priority biodiversity conservation zones of the Ranomafana-Andringitra corridor of the Fianarantsoa Region and the Andasibe-Zahamena corridor of the Moramanga Region. The Contractor will work closely with Road User Associations, technical delivery organizations, GOM local and national officials, NGOs, and other stakeholders to obtain the following results:

- 1) rehabilitate 93 kms of secondary farm-to-market road (RIP 4);
- 2) create 20 Road User Associations for the RIP 4;
- 3) rehabilitate 140 kms of tertiary farm to market roads; and
- 4) create 30 Road User Associations;

RECAP was also required to take into consideration environmental impact aspects in compliance with USAID regulations.

### **II.2.d Rehabilitation and stabilization of the *Fianarantsoa Côte-Est (FCE)* rail line**

USAID contracted with Chemonics International for FCE cyclone damage rehabilitation. The FCE Rehabilitation (FCE-R) project was asked to contribute to the rehabilitation and stabilization of 163 kms of the FCE rail line to permit year round traffic. The program consists of two elements:

engineering and construction. The engineering element includes rail line design to be stabilized and rehabilitated and securing public bids for construction services. It also includes management of construction services, including supervision of the construction contractor's activities.

The construction component comprises the physical rehabilitation of the rail line, including stabilization of all tunnels, bridges, culverts and other critical structures. Specifically, the contract called for Contractor achievement of at least:

- 1) 1000 meters of tunnel repaired;
- 2) 126 meters of bridges repaired;
- 3) 25,000 meters of structures repaired;
- 4) 6000 meters of breast wall constructed;
- 5) 800 hectares of abutting embankments stabilized; and,
- 6) 3000 meters of alignment stabilized.

Due to financing availability and the nature and age of FCE equipment, the FCE-R project has purchased and mobilized as donations second hand spare parts necessary for rail bed and rolling stock rehabilitation and repair. They have also leveraged substantial funding from the World Bank, Japanese Embassy, African Development Bank and the United Nations Development Programs. Due to the acquisition of this complementary assistance, and on the ground realities, the above performance indicators have changed and the necessary contract modification put in place.

### **II.3 Performance Information Sources**

Detailed performance indicators for each project are described in their contracts, annual work plans, quarterly and annual reports. For FCE-R and ReCAP several socioeconomic, engineering and environmental impact studies are available. The Cyclone Recovery Management Team has documented progress observed as well as potential issues during field visits. All achievements are synthesized in quarterly and semi-annual reports to congress. Each project is requested to maintain an adequate performance monitoring plan. Each has the obligation to assist USAID/Madagascar in collecting, collating, analyzing and presenting data required for management and reporting needs.

## **III. TASKS**

USAID/Madagascar is seeking technical services to undertake a comprehensive performance assessment/evaluation of Cyclone Recovery Program activities implemented by LDI, ReCAP and FCE-R. This evaluation will cover the period from September 2000 up-to the time of this contract's implementation.

### **III.1 Evaluation questions**

**Major Questions:** The performance assessment should answer the following five questions:

- 1) Have investments increased cyclone victim agricultural productivity, market access and living standards?
- 2) Have investments contributed to biodiversity conservation?
- 3) Have investments been accomplished in a cost-effective manner? and
- 4) Have investments achieved sustainable impact (including building institutional capacity)?
- 5) Have gender issues been taken into consideration to increase small productivity and improve natural resources management?

**Cross Cutting Questions:** In answering these four broad questions the performance assessment should also determine whether the implementing contractors have delivered the inputs called for in their contracts, whether environmental impact assessment and mitigation requirements have been fulfilled, and whether there are important lessons learned from CRP activities that could influence future USAID, other donor, Government of Madagascar or private sector investments. Lessons learned should also be generated, where appropriate, to improve the impact of ongoing CRP activities and the performance assessment team should determine whether activities will be concluded within the time allotted. On this final issue, if activities cannot be completed within the time allotted the performance assessment team should recommend an achievable time frame.

### **III.2 Evaluation method**

The evaluation should analyze the technical, financial and managerial aspects of CRP interventions. For example: Are roads, rails and irrigation infrastructure rehabilitated cost effectively? Are engineering standards acceptable? Have commodity procurement budgets been used cost effectively? Do technical assistance teams possess the right skills? Has organizational and institutional capacity building been successful in assuring sustainability of CRP investments? Have rural communities been involved appropriately and do they appreciate CRP interventions? Have gender issues been addressed appropriately in CRP interventions?

Within the guidelines of the 4 major questions, the cross cutting questions, and these “quality control” questions (which should not limit quality control review) the performance assessment team is responsible for defining the assessment methodology. USAID will look for a methodology that maximizes participation, transfers skills to project personnel on performance assessment methodology, and empowers rural families to the greatest extent possible to effectively monitor donor intervention quality and impact. It is expected that the evaluators will share their expert opinions and findings to achieve maximum short term and sustainable impact. To the extent possible evaluation findings should reflect qualitative and quantitative information and analysis.

## **IV. PERSONNEL**

The consultant firm is expected to provide the following expertise:

1. A Performance Assessment Team Leader with extensive background in evaluations and performance assessments. Relevant rail, port and irrigation infrastructure experience, and/or agricultural development and/or environmental conservation experience in Africa or in developing countries is required. This individual will be the primary contact with USAID and will be responsible for team management and final report delivery.
2. An agricultural economist or agricultural development expert with at least 5 years of experience in agricultural development in Africa or the developing world, MSc or better training in a relevant field, experience mobilizing rural communities to undertake agricultural or community development interventions, and participatory rural appraisal knowledge.
3. An engineer with at least 10 years experience in rail and port construction in Africa or the developing world. Additional experience in irrigation infrastructure construction and/or rehabilitation is also desirable. Training in a relevant discipline.

USAID/Madagascar has contracted with a rural roads engineer for 3 ReCAP quality control assessments in January, May and November, 2002. Due to the current situation, this engineer’s

May visit will be delayed. However, his next visit will be coordinated with the visit of the performance assessment team. His scope of work includes responsibilities to answer the four main questions outlined above and his ongoing assessments will comment on the technical and rural association organization aspects of RECAP performance.

While USAID/Madagascar would like to obtain external technical assistance for at least two of the technical positions described above, and preferably all three, the use of Malagasy technical capacity is encouraged to the greatest extent possible. All technical specialists must possess high level French (S3/R3) and English proficiency and be experienced in evaluations and working as a team.

## **V. PERIOD OF PERFORMANCE**

The team must be available o/a July 1, 2002 for a period not exceeding four weeks. During the first week in country, the COP will submit and have approved by USAID a work plan. The work plan should include a final briefing to USAID prior to submission of the final draft. USAID will provide comments on the final draft one week after reception of the final draft and prior to performance assessment finalization.

## **VI. ROLES AND RESPONSIBILITIES**

The consultant team will report to the LDI, ReCAP and FCE-R Cognizant Technical Officer (CTO). The team is expected to keep the USAID CRP management team up to date on evaluation progress. When possible the COP should meet with the USAID CRP management team each week while recognizing that most of the COP's time will be spent in the field. When undertaking field visits the consultant team shall keep implementing partners (LDI, ReCAP and FCE-R staff) fully informed on visit timing and objectives.

## **VII. REPORTING and DELIVERABLES**

During week 4 of the contract the consultant team will organize a debriefing on their findings and recommendations. During that meeting USAID may comment on findings or recommend alternate areas of inquiry or presentation. Where appropriate, the consulting team will incorporate USAID's comments in the draft report.

The consultant team is expected to document in a written report their findings, discussions and recommendations. This report is to be submitted to the Mission near the end of week four of the contract. The Mission will then have 5 work days to provide comments on the draft report. The final report will be submitted to USAID within 15 work days of consulting firm reception of USAID comments. The consulting team shall provide 5 copies (in English) of the final report.

The final document should be user friendly, attractive and informative. It should include a table of contents, list of acronyms, contact list, scope of work, bibliography, and main content responding to, but not limited to, the areas identified in the scope of work.

No payment shall be processed without a submission of satisfactory evaluation report and a written acceptance of such deliverable by the CTO.

## **VIII. LOGISTICAL SUPPORT**

The performance assessment team is expected to arrange for their logistical support and transportation.

## **IX. PAYING OFFICE**

The Paying Office of this award is:

Controller's Office  
Department of State  
2040 Antananarivo Place  
Washington DC 20521-2040  
Fax: 261-20-22-56093

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## Annex B

### Persons Met and Meetings Held

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#### **USAID - Antananarivo**

Mr. Stephen HAYKIN – Acting Director General, USAID, Madagascar  
Mr. Jocelyn (Jo) RANDRIAMAMPIONONA – Disaster Rehab. Specialist  
Mr. Robert DEAN – Cyclone Recovery Program Specialist  
Ms. Lisa GAYLORD – Environmental Program Coordinator  
Ms. Adele RAHELIMIHAJANDRALAMBO – Environmental Information, M&E  
Ms. Sylvi RAMANGASOAVINA – Project Management Specialist NRO Office  
Ms. Susan Anthony, Health, Population & Nutrition Coordinator  
Mr. John BORRAZZO – Environmental Health Adviser  
Ms. Zoely RAMANASE - LDI Activity Manager  
Ms. Monique See RAFIDIARISOA – Disaster Response Program Specialist  
Ms. Jennifer TALBOT – Population - Environment Fellow, University of Michigan – USAID HPN Program

#### **ReCAP Project - Antananarivo**

Ralph J. JEAN – Chief of Party, ReCAP Project  
Ms. Vero RAZAFINTSALAMA – President, *Lalana* (NGO) & Civil Engineer

#### **LDI Project - Antananarivo**

Mr. Jean Robert ESTIME – Chief of Party, LDI and FCER Chemonics contracts  
Ms. Lydia RAZAFINDRAHONA – Infrastructure Manager / Co-ordinator  
Mr. Anselme RAKATOMANANA – Evaluation  
Mr. Joel ANDRIAMAHENINA – Co-ordinator of Sub-Contractors  
Ms. Olga RAMAROMANANA – Monitoring an Evaluation Co-ordinator

#### **FCE-R Project - Antananarivo**

Ms. Hayley BRYANT – Director of Administration and Finance

#### **Donors**

Mr. Michel MATERA – Administrator Humanitarian Program, UNDP  
Mr. Yves MAIRE – Co-ordinator for EC funded Food Security Program

#### **Consultants**

Ms. Chifumi NAGAI – Plant Breeder, Hawaii Agriculture Research Center  
Mr. Alain DUBE – Chief of Planning and Quality Control, *Transports Quebec*  
Ms. Sally CAMERON – Senior Manager, Chemonics, Washington, DC  
Mr. Eckhard F. KLEINAU – Senior Technical Director, Environmental Health Project

#### **LDI Project – Fianarantsoa Province**

Mr. Mark Freudenberger – Regional Director, LDI Project  
Ms. Verosoa RAHARIVELO – Irrigation Engineer – Chief Agricultural Intensification Officer  
Mr. James Olaf RANAIVOSON – Chief Administrative Officer  
Mr. Vladimir RATSIMANDRESY – Marketing Officer  
Mr. Alain ROGE – M&E Assistant  
Mr. Jean Louis – Micro-credit Agent  
Mr. Jean Baptiste – AIDE (ONG) Agriculture Technician  
Mr. RANDRIANIRINA – AIDE Agriculture Technician

Mr. Jean Chrysostome – Agriculture Technician  
Mr. Heritiana RAKOTOMALALA – Community Development Agent (Socio  
Organisateur)  
Mr. Pierre Gabriel ANDRIAMAROLAZA – Agricultural Supervisor, East  
Corridor  
Various USAID Washington staff on site visit for the ECHO Project

### **FCE-R Project – Fianarantsoa Province**

Mrs. Karen SCHOONMAKER FREUDENBERGER – Regional Director, FCE-R  
Mr. Gilles RASOAMANANA – Technical Director, FCE-R  
Mr. Robert M.M. RAKOTOZAFY – Director, FCE  
Mr. Jacques FANOMEZANA – Traffic Manager, FCE  
Mr. Jean Philippe D. RAMONJARSOLO - Chief of the Technical Department

### **Re-CAP Project – Ambatondrazaka – Tamatave Province**

Mr. Jules RAKOTOARIVONY – Supervisor Community Development  
Mr. Gilbert – Quality Control Engineer – Roads

### **LDI Project – Ambatondrazaka – Tamatave Province**

Mr. Solofohury Davida RASON – Zone Supervisor, Ambatondrazaka  
Mr. Hery RAKTONDRATSIMA – Regional Co-ordinator of Irrigation Program  
(Programme Hydraulique)  
Mr. Abel RAKOTONIRAINY – Evaluation Assistant, Moramanga

### **Local Government Officials**

Mr. Marcel RAKOTONDRABE – Mayor of Amparihintsokatra

### **Contractors - roads**

Mr. Aime RANDRIAMBOLA – *Lalana* Enterprise Development Monitor for Tahina,  
ARR, Tolotsoa, EGECORAM  
Mr. Claude RAZAFINDRAKOTO – Public Works Engineer, EGECORAM  
Mr. Jean Claude RAZANAMPARANY – Public Works Engineer, *Lalana*  
Ms. Vero RAZAFINTSALAMA – President of *Lalana*  
Mr. Rene RAKOTONDRAMANANA – Public Works Engineer  
Mr. Andriamaboly RAZAFIMANANTSOA – *Lalana* Public Works Technician, Lavaka  
Stabilisation

### **Non-Governmental Organizations (NGOs)**

#### Antananarivo

Ms. Jennifer OVERTON, Country Representative, Catholic Relief Services (Tana)

#### Fianarantsoa Province

Mr. Armand MAUAUTSARA – Technician, CIADRM (working with LDI in  
Fianarantsoa)

Mr. Victor LAVA – President of KH of Tolongoina

Ms. Georgiue RAHRIMADALANANIRANA – President of AUE Madiorano

Mr. Jean Maurice Henri RAZAFIMAHANDRISOA – OAF Agent

AUE members in Fanavotana, Madiorano

AUP members in Itambaraso, Tahirisoa

Kolo Harena members managing the Agricultural Supply Center (ASC) at Rafi-  
Pitandrana, Familo II, Tombotsoa and Avotra, Soamiaradia.

Grain Storage Syndicate (GCV) members at Vohimaranitra

Fisheries Syndicate members at Vohimaranitra

AUP members in Lolomby (Manakara)

Tamatave Province

AUP members in Amparihitsokatra, Bekatsaka, Antendrondrano, and Antanandava

AUE members in Lokova (2) and Ivakaka (Federation)

Kolo Harena members in Bekatsaka

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## Annex C

### Assessment/Evaluation Team Itinerary

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(Last updated: 23 Oct, 9:30)

#### September

- Monday 23<sup>rd</sup>** Michael Fritzsche, Engineer arrived at DA-I Arlington, VA
- Tuesday 24<sup>th</sup>** Steve Dennison, Team Leader arrived in DA-I, Arlington, VA  
Team building and evaluation strategy review
- Wednesday 25<sup>th</sup>** TL and Engineer depart for Atlanta/Johannesburg
- Thursday 26<sup>th</sup>** TL and Engineer arrived in Johannesburg
- Friday 27<sup>th</sup>** John Durant, Institutional and Agricultural Specialist arrived in Antananarivo  
USAID delivered relevant documentation to John Durant
- Saturday 28<sup>th</sup>** Steve Dennison, Team Leader and Michael Fritzsche, Engineer arrived in Antananarivo
- Sunday 29<sup>th</sup>** Reading documentation and planning itinerary
- Monday 30<sup>th</sup>** Briefing and other meetings at USAID in Antananarivo  
Briefing and meetings at Re-CAP office by CoP and Team in Antananarivo

#### October

- Tuesday 1<sup>st</sup>** Briefing and meetings at LDI office by CoP and Team
- Wednesday 2<sup>nd</sup>** Meeting with Michel Matera of UNDP  
Meeting with Jennifer Talbot, re: ECHO Project  
Telecon with British Embassy re: cyclone recovery program
- Thursday 3<sup>rd</sup>** Meeting with Yves Maire, EC Food Security Program  
Meeting with *Cyclone Recovery Management Team*, USAID
- Friday 4<sup>th</sup>** Fly on commercial flight to Fianarantsoa  
Meetings with Regional Director FCE-R and team  
Meetings with FCE Director and Senior Managers  
LDI regional briefing  
Over night in Fianarantsoa
- Saturday 5<sup>th</sup>** Field trip with LDI Team to Ankibory village AUE  
Fanavotana, to AUP Itambaraso: to Vohimaranitra  
and KH Soamiaradia; to village Sendrisoa and KH

	Federation Tahirisoa.
<b>Sunday 6<sup>th</sup></b>	Rest day
<b>Monday 7<sup>th</sup></b>	Meeting with Mark Freudenberger, CoP, LDI Project Depart by FCE <i>draizine</i> for Manampatrana with FCE-R Regional Director and Technical Director and overnight in Manampatrana
<b>Tuesday 8<sup>th</sup></b>	Meet with ReCAP CoP Mr. Ralph Jean, Consultant, Mr. Alain Dubé (Transports Quebec) and Re-CAP team; field visit to road camp and road construction sites along RNT 14 Travel by delayed train to Manakara arriving at 23:00 Overnight in Manakara
<b>Wednesday 9<sup>th</sup></b>	Visit port area and inspect wharf and warehouse refurbishment Visit AUP at Lokomby Travel to Ambatondrazaka by MAF plane Overnight at Ambatondrazaka
<b>Thursday 10<sup>th</sup></b>	Briefing and field visit preparations with LDI and Re-CAP staff at project offices ReCAP visits to east side of Lac Alaotra including road construction sites, Lots 3 and 5, and AUP visit in Amparihitsokatra LDI visits to Lovoka irrigated perimeter including discussions with the two AUEs; visit with KH and farm supply store in Bekatsaka Overnight at Ambatondrazaka
<b>Friday 11<sup>th</sup></b>	Visit with farmers groups / AUE federation at Ivakaka Meetings with road contractors at lot 4 and review of ReCAP/Lalana contracting specifications Visit to a <i>lavaka</i> rehabilitation site Overnight at Ambatondrazaka
<b>Saturday 12<sup>th</sup></b>	Visits to ReCAP road sites at lots 1, 2 and 6 l'axe est meeting with contractors and also AUPs at Antendrondrano and Bekatsaka Overnight at Ambatondrazaka
<b>Sunday 13<sup>th</sup></b>	Depart for Moramanga/ Overnight in Moramanga
<b>Monday 14<sup>th</sup></b>	Depart for, and arrival in, Antananarivo
<b>Tuesday 15<sup>th</sup></b>	Report writing and briefing USAID on field trips

<b>Wednesday 16<sup>th</sup></b>	Meetings with CoP Re-CAP Project and contractors Meeting with CRS Representative Report writing
<b>Thursday 17<sup>th</sup></b>	Report writing Meetings with USAID/HPN staff
<b>Friday 18<sup>th</sup></b>	Report writing Meetings with LDI and FCER staff Meeting with USAID Cyclone Rehabilitation Management Team
<b>Saturday 19<sup>th</sup></b>	Report writing
<b>Sunday 20<sup>th</sup></b>	Report writing
<b>Monday 21<sup>st</sup></b>	Draft report submitted to USAID for review and comments Briefing and discussion with ReCAP staff on assessment findings Meeting with CARE Madagascar Director
<b>Tuesday 22<sup>nd</sup></b>	Briefing and discussion with LDI, FCER on assessment findings USAID returns draft report with comments
<b>Wednesday 23<sup>rd</sup></b>	Final report writing incorporating USAID comments where feasible
<b>Thursday 24<sup>th</sup></b>	Final Report submitted to USAID/Madagascar Final debriefing with USAID Acting Mission Director
<b>Friday 25<sup>th</sup></b>	Evaluation Team departs Antananarivo
<b>Saturday 26<sup>th</sup></b>	J. Durant arrives in UK
<b>Sunday 27<sup>th</sup></b>	S. Dennison and M. Fritzsche arrive USA

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## Annex D

### Documents Consulted

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ReCAP Project – Task Order 808 – Quarterly Report No.1, March 2001, Chemonics

ReCAP Project – Task Order 808 – Quarterly Report No.2, June 2002, Chemonics

ReCAP Project – Task Order 808 – Quarterly Report No.3, September 2001, Chemonics

ReCAP Project – Task Order 808 – Quarterly Report No.4, December 2001, Chemonics

ReCAP Project – Task Order 808 – Quarterly Report No.5, March 2002, Chemonics

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ReCAP Project, COLAS, Offre Technique, Travaux de Réhabilitation et / ou Réconstruction du Quai Nord di Port de Manakara, mars 2002,

ReCAP Project, COLAS, Offre Financière, Travaux de Rehabilitation et / ou Réconstruction du Quai Nord di Port de Manakara, mars 2002,

ReCAP Project, Protocole d’Accord, Relatif aux procédures environnementales pour le Project ReCAP, December 2001, Antananarivo.

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Dossier d’Appel d’Offres No. 1, RTN14, 41 and 46km, June 2001

FCE-R – Task Order 809, January 20021, USAID, Antananarivo.

FCE-R – Task Order 808, Contract Annex PK 46 to PK 93, 10 August 2001, EGECORAM, Antananarivo.

FCE-R – Task Order 809, Quarterly Report No.1. March 2001

FCE-R – Task Order 809, Quarterly Report No.3. September 2001

FCE-R – Task Order 809, Quarterly Report No.4. December 2001

FCE-R – Task Order 809, Quarterly Report No. 5, March 2002

FCE-R – Task Order 809, Quarterly Report No.6. June 2002

FCE-R – Task Order 809, Quarterly Report No.7. September 2002

FCE-R – Task Order 809, Revised Implementation Plan, July 2001

FCE-R – Task Order 809, Year 2 Implementation Plan, March 2002

FCE-R – Task Order 809, Annual Report, January 2002

FCE-R Contract No. 687-C-0098-00160, Modification No. 5, USAID, Antananarivo.

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Transfer de Gerance des Piste, June 1996, Chemonics,

Traffic Counts (5 sheets) RNT 14, LB11, undated.

COLAS, Offre Technique, Travaux de Réhabilitation et / ou Réconstruction du Quai Nord de Port de Manakara, mars 2002.

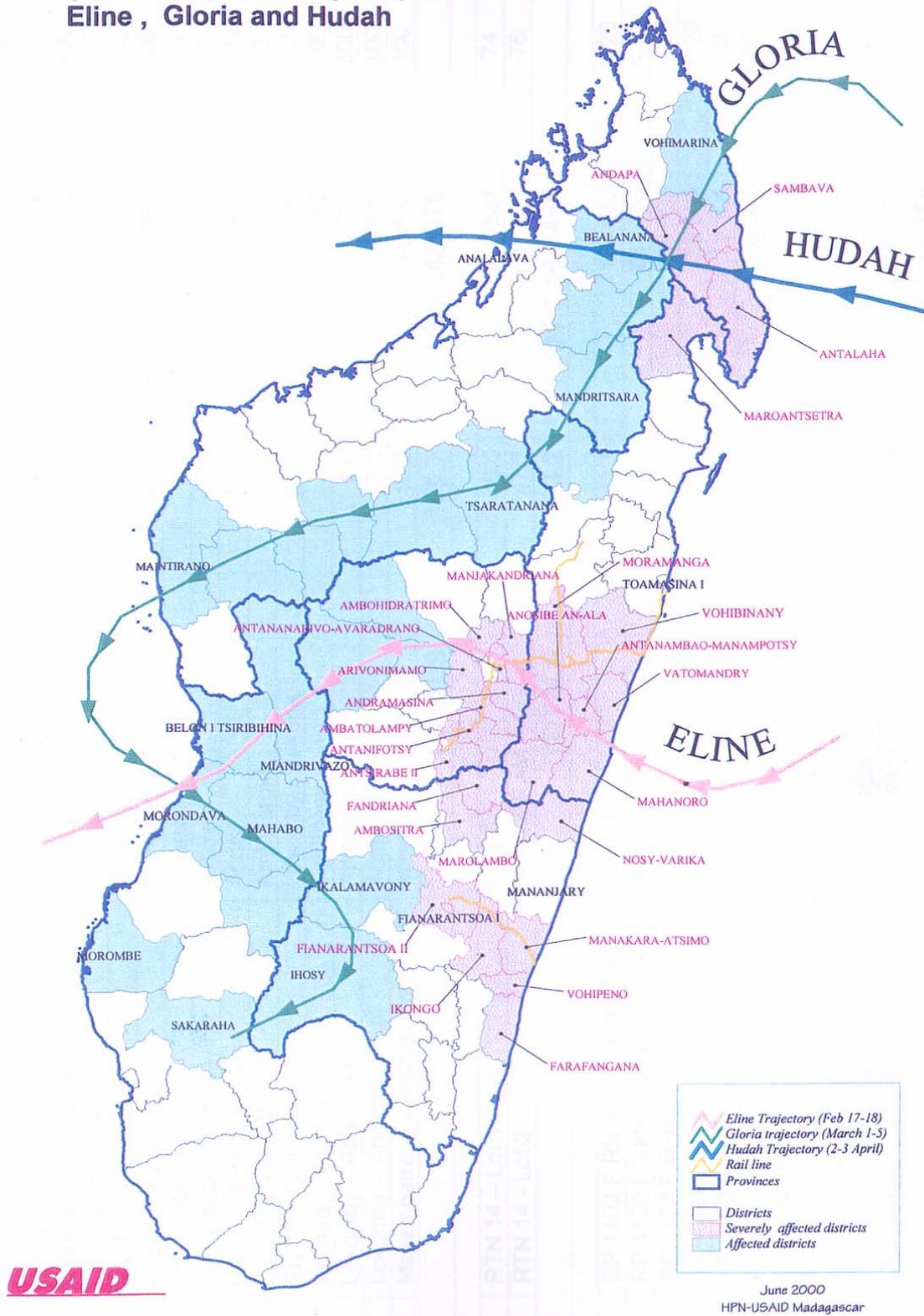
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# Annex E

**Cyclone Trajectories (2000)**  
**Eline , Gloria and Hudah**



**Annex F**  
**Summary of Completion Status of Road Rehabilitation Work**  
(as of 15 October 2002)

No.	Location	Contractor / AUP	Length (km)	Contract Value US\$	Percent Completed
1.	Ankofika – Tsileo	Ezaka	8.0	2 461	100
2.	Tsileo – Andokabe	Soalanana	12.0	4 154	100
3.	Andokabe – Fenoma	Todisoa	12.0	4 000	100
4.	Fenona – Sahalava	Itambaraso	7.0	4 231	100
5.	RN 42 – Andakamby	Fiombonantsoa	9.9	4 154	100
6.	Andakamby – Ivato	Tombontsoa	21.0	9 692	100
7.	Ivato – Kalalao	Lovaso	8.0	5 615	100
8.	Mahasoabe – Ambalavino	Avotra	9.8	4 000	100
9.	RN 42 – Ambandrona	Andry	12.0	4 462	100
10.	Lokomby – Bekatra	Ambalaroka	7.0	34 231	100
11.	RN 12 – Lokomby	Lokomby / Sakona	22.0	8 538	100
12.	Bekatra – Vohimasy	Vohimasy	7.0	4 462	100
13.	Lokomby – Abandrika	Ambahive	5.0	8 923	100
14.	Lokomby – Ambodimanga	Antebe	5.0	3 615	100
15.	Manampatrana – Ambinanintromby	Miray	10.0	40 538	100
<b>TOTALS</b>			<b>155.7</b>	<b>US\$ 143 076</b>	
16.	RTN 14 – Lot 1	EBMA	46.0	817 521	74
17.	RTN 14 - Lot 2	EGECORAM	47.2	647 975	76
<b>TOTALS</b>			<b>93.2</b>	<b>US\$ 1 465 496</b>	
18.	RP 1103 F RN 12 to Sahasinaka	TAHINA	12.5	134 662	< 20
19.	RP 1102 F Sahasinaka – Bebaka	TOLOTSOA	26.5	237 459	< 20
20.	RP 1103 F Beboka – Bekatra	ARR	17.5	194 907	< 20
21.	RP 4 Ademaka – Manampatrana	EGECORAM	6.0	59 032	< 20
22.	RP 1102 RN 12 – Bekatra	ARR	14.0	72 101	< 20
23.	Ankasina – Antendrondrano	TAHINA	11.4	128 966	55
24.	Ambohijanaharikely – Koloara	ARR	7.3	96 890	56
25.	Ambavahadiromba–Antsahalemaka	GROUPEMA	13.5	143 109	25
26.	Ankazosaravolo – Antanandava	EGECA	11.4	115 599	75
27.	Tsarahonenana – Betsianjava	TOLOTSOA	6.2	78 570	35
28.	Andromba – Ambatomafana	EGECORAM	13.8	140 963	25
<b>TOTALS</b>			<b>140.1</b>	<b>US\$ 1 402 258</b>	