



Chemonics International

USAID RAISE IQC No. PCE-I-00-99-00003-00, Task Order 808

**Madagascar Cyclone Recovery Program
Rural Roads Infrastructure and Systems Rehabilitation
ReCap Project**

Annual Report



January 16, 2001 to January 15, 2002

Table of Contents

List of Tables	2
List of Figures	2
List of Acronyms	3
1. Executive Summary	4
2. Report on Results	5
3. Procurement Plan	5
4. Activities during the Quarter.....	6
a. <i>Ifanadiana – Ikongo Secondary Road, RNT 14/RIP 4</i>	6
b. <i>EGECORAM - Lot 2, PK 46 to PK 93</i>	7
c. <i>RN 12 - Sahasinaka - Bekatra Tertiary Road, RP 1102F and RP 1103F</i>	8
d. <i>AUPs</i>	10
e. <i>Port of Manakara Rehabilitation</i>	10
f. <i>Short-term Assignments</i>	11
5. Expenses.....	12
6. Map of Project Areas	13

List of Tables

Table 1: ReCap Results Tracking Table

Table 2: Status of work on January 31, 2002, Lot 1, RNT 14, EBMA

Table 3: Status of work on January 31, 2002, Lot 2, RNT 14, EGECORAM

Table 4: AUPs along the RNT 14

Table 5: AUPs created along the Sahasinaka road

Table 6: Short-term assignments, ReCap project, 2001

Table 7: Project Expenses by Line Item

Table 8: Construction Subcontracts (as of January 15, 2002)

List of Figures

Cover: RNT 14, Lot 1, EBMA

Figure 1: Sahasinaka Road, Lot 2, Tolotsoa

List of Acronyms

AUP	Association des Usagers de la Piste (Road Users Association)
CO	Contracting Officer
COP	Chief of Party
EIA	Environmental Impact Assessment
ESF	Environmental Screening Form
FCE	East Coast Rail Line
FCER	FCE Rehabilitation Project
FAR	Federal Acquisition Regulations
FID	Fonds d'Intervention pour le Développement
FMG	Malagasy Francs
GOM	Government of Madagascar
GTDR	Groupe Technique pour le Développement Rurale
IQC	Indefinite Quality Contract
LDI	Landscape Development Interventions
MOE	Ministry of Environment
MTP	Ministère des Travaux Publics
ONE	Office Nationale de l'Environnement
PIL	Project Implementation Letter
PST	Programme Sectoriel de Transport
RAISE	Rural and Agricultural Income with a Sustainable Environment
RFB	Request for Bids
RFP	Request for Proposals
RIP	Route d'Intérêt Provincial (Road of Provincial Interest)
RP	Route Provinciale
RN	Route Nationale
RNT	Route Nationale Temporaire (Temporary National Road)
SG	Secretary General
TVA	Value Added Tax
USAID	United States Agency for International Development
USG	United States Government

1. Executive Summary

Two major road projects were started during the first year of the Madagascar Rural Roads Task Order:

- RIP 4/RNT 14 from Ifanadiana to Ikongo (87 kilometers) and
- Provincial Roads RP 1103 F and RP 1102F from the National Road 12 (RN 12) to Sahasinaka and from Sahasinaka to Bekatra (56 kilometers).

Work on the RNT 14 is about sixty percent completed and the Sahasinaka road is approximately 70 percent finished as of January 31, 2002. Work on the RNT 14 will continue during the first half of 2002 and the Sahasinaka road should be rehabilitated by the end of March. Work on the RNT 14 is far behind schedule, principally Lot 1, but is still slightly ahead of the target set in the first implementation plan.

Work at the Port of Manakara was scheduled to start during the first year of the project but was postponed to year 2. The repair of the two warehouses will begin in May and the wharf rehabilitation bids were received in April.

Numerous consultants and Home Office staff traveled to Madagascar to provide expertise and support to the project. Four engineering assignments took place during the first year of the ReCap project. Anthony Carvahlo advised the local engineering staff on the technical challenges of the RNT 14 work and Ken Rikard conducted a seminar on Value Engineering in March. In the last quarter of 2001, Frantz Joseph completed a Quality Control review of the work in progress and provided recommendations on how to improve productivity and efficiency. Finally, in January 2002, Ken Rikard returned to follow-up on Frantz Joseph's visit and concluded that significant progress had been made since the last report but additional actions were still required in order to improve project monitoring.

Criss Juliard trained the local staff and AUPs on planting techniques and nursery management in October in order to ensure that the planting of vetiver was started before the rainy season.

Thirteen AUPs were created during the first year of the project: eight along the RNT 14 and five in the Sahasinaka region. Six staff members work full-time in the field with the local population supporting the road maintenance activities of these associations.

The first year of the project also included start-up activities such as hiring, procurement, the establishment of administrative procedures and the drafting of contract documents.

Six subcontracts were signed with local firms for a total amount of \$ 2,021,988 and \$1,834,358 had been disbursed as of January 31, 2002.

2. Report on Results

During the first year of project activities, the equivalent of 54.75 kilometers of the RIP 4/RNT 14 was rehabilitated, exceeding the target of 45 kilometers set in the First Implementation plan. However, instead of starting work on only the first 45-kilometer section of the road, work on the whole road (with the exception of 5 km. between PK 41 and 46) was started during Year 1 in order to ensure that the work would be completed before the end of the project. If the second section of the road had been started this year, it is unlikely that it would be completed before December 2002 given our experience with these local firms. As of January 31, 2002, fifty percent of Lot 1 and seventy five percent of Lot 2 has been completed, resulting in the equivalent of 54.75 kilometers being completed in Year 1.

Eight AUPs were created along the RNT 14 in the communes bordering the road. The target of 20 will not be reached because only one AUP was formed per commune. While each village may have its own GUP (groupement d'usagers de Piste), this group is not organizationally sustainable nor does it have a legal status. Five AUPs were also created along the Sahasinaka road. While eighty-four kilometers of tertiary roads still remain for year 2, the overall target will not be reached.

A target of sixty kilometers of tertiary roads was set for the first year and work was begun on fifty-six. Of those, the equivalent of forty-two kilometers was completed as of January 31, 2002.

Rehabilitation work at the Port of Manakara was not started in Year 1 as originally planned due to financing uncertainties and budgetary limitations, however, work will start in 2002.

Table 1 : ReCap Results Tracking Table

Results	Target	Completed to Date	Over/short of target	Percent of target
RIP 4 rehabilitated	45 km.	54.75	+9.25	121
Road User Associations created along the RIP 4	10	8	-2	80
Tertiary Roads Rehabilitated	60 km.	41.925	-18.075	69.875
Road User Associations Created along the Tertiary Roads	15	5	-10	33
Manakabra Port Warehouse Roofs Repaired and Wharf Stabilized	2	0	-2	0

3. Procurement Plan

All equipment and furniture has been purchased and delivered.

4. Activities during the Quarter

a. *Ifanadiana – Ikongo Secondary Road, RNT 14/RIP 4*

a. **EBMA - Lot 1 –PK 0 to PK 41**

The rehabilitation of the RIP 4/RNT 14 was mandated in the Task Order and the engineering surveys were started in March. While the studies were being completed, a pre-selection process was set up in order to identify qualified firms that would be invited to bid on the ReCap work. A variety of criteria, such as those in FAR 9.104 that include financial viability, prior experience, and the firm's organizational capacity formed the basis of the analysis. Nine of fifty-one firms who submitted documents for our consideration were pre-selected for the rehabilitation of the RNT 14 and seven other second-tier firms were chosen for the tertiary roadwork.

A site visit was organized in June and the bids were opened later that month on June 28th. After the bids were analyzed, negotiations were begun with the firms who scored highest for each lot. For Lot 1, EBMA had the highest combined score. Following USAID's approval, a subcontract was signed on August 10th. The Work Order was not issued until September 5th due to a delay in the signature of a Memorandum of Understanding with the Ministry of public works.

After the first month of work, EBMA had made significant progress. The Director of the firm had even stated that he would try to complete the work before the presidential elections in December. The firm had managed to mobilize quickly, however the heavy strain on their old construction equipment began to slow the early progress that they had made. By the end of October, eight weeks after work had started, EBMA was four weeks behind the schedule.

EBMA was supposed to have completed all of their work by the end of January, but they had accomplished a little over fifty percent. There are many reasons for their delay, in addition to the most important one mentioned above. The chief engineer for the firm, Honoré Rakotonanahary, while experienced, seems to lack the organizational skills to manage a work site of this magnitude. Work on the first half of the road has progressed relatively well but five months after the start of work, the second half of the road has been barely touched. EBMA has never done work of this magnitude and is having difficulties completing the forty-one kilometers in this contract.

The production of construction material has also fallen behind schedule, in particular gravel for the road surface. While the firm stated in their proposal that they had two rock crushers available for this work, they decided to not transport them to the work site. As a result of requests by the local authorities and given the lack of employment opportunities in the local economy, EBMA decided to hire local labor to break, sort and place the gravel by hand on the roadbed. However, due to the slow progress of the manual laborers, the non-respect of their contractual engagements, and the potential cost reductions that they may incur, they have been ordered to bring the rock crushers to the work site and have them operational before the resumption of work after the rainy season.

In their defense, more than fifteen hundred cubic meters of landslide clearing was added to their contract and Tony Carvahlo, who examined progress at the work site at

the end of January for the USAID mission, stated that a local firm would need at least eight months to complete work of this magnitude. He stated that the quality of the work was very good and that they had made a good effort despite their delay. Mr. Carvahlo stated that an international firm would need at least six months to complete the forty-one kilometers of the RNT 14.

At the suggestion of Ken Rikard, who also reported on the progress of work in January, EBMA was granted a temporary stop work order during the rainy season. It was determined that it would be difficult for EBMA to continue to progress on the road work and earth moving during the rainy season, therefore they were asked to stop work on those two items and continue work on the others. At the end of the rainy season in April or May, EBMA will be granted a two-month extension in order to complete the remainder of the work. After that delay, the contractually mandated penalty will be imposed. The partial break during the rainy season will also allow EBMA to repair their broken down, aged equipment and catch up on the production of rock material, the repair of bridges and the construction of drainage canals. Once work resumes they are to concentrate on the road surfacing and earthwork. EBMA is scheduled to complete the work on Lot 1 by June 30th, 2002.

Table 2: Status of work on January 31, 2002, Lot 1, RNT 14, EBMA

Description of Work	Budget	Total	Percent Completed
Worksite Installation	347,360,830	185,186,727	53.31
Earthwork	862,243,770	695,897,528	80.71
Drainage	1,121,725,701	359,936,280	32.09
Road Surface	2,239,366,679	1,291,981,584	57.69
Bridges/Causeways	91,190,216	0	0.00
Protection	588,529,295	147,148,717	25.00
Equipment	63,471,663	0	0.00
Total	5,313,888,154	2,680,150,836	50.44

b. EGECORAM - Lot 2, PK 46 to PK 93

The EGECORAM subcontract was also signed on August 10th but the Service Order was issued a week later than EBMA's, on September 12th, 2001. EGECORAM's heavy equipment was transported on the FCE rail line to Manapatrana from Fianarantsoa because they would be unable to cross over the structurally weak bridges on the RNT 14 between PK 41 and 46. While the transportation of the equipment went well at first, there were significant delays during the months of October and November due to the frequent breakdown of the FCE locomotives and the limited availability of railcars.

While Lot 2 is longer than Lot 1 (46 versus 41 km.) the contract value is thirty-two percent less and the average cost per kilometer is \$13,430 compared to \$19,939 for Lot 1.

Work started slowly due to the delays in transporting the heavy equipment to the site. At one point, there was a shortage of trucks and the firm was forced to transport them along the road and across the hazardous bridges. Once most of the equipment was on site, work progressed smoothly and by the end of January, they were approximately

seventy five percent complete. The firm asked for and was granted a one-month extension in order to complete the work during the month of February but the heavy rains made that task impossible. Work on Lot 2 will also be partially suspended during the rainy season and will resume in April or May to be completed by the end of June.

Table 3: Status of work on January 31, 2002, Lot 2, RNT 14, EGECORAM

Description of Work	Budget	Total	Percent Completed
Worksite Installation	500,000,000	270,000,000	54.00
Earthwork	500,609,883	367,901,807	73.49
Drainage	1,270,673,640	456,863,392	35.95
Road Surface	897,282,815	480,287,271	53.53
Bridges/Causeways	129,725,310	17,923,613	13.82
Protection	650,346,420	262,288,142	40.33
Equipment	67,006,552	0	0.00
Total	4,015,644,620	1,855,264,225	46.20

Note: The actual amount of work completed amounts to 75%

c. RN 12 - Sahasinaka - Bekatra Tertiary Road, RP 1102F and RP 1103F

The Task Order did not specify the Tertiary roads to be rehabilitated. However, the project had to choose tertiary roads in Fianarantsoa and Tamatave province in function of the general criteria put forward by USAID and the specific criteria defined by the project. The final choice was made in consultation with the local authorities and development organizations after analyzing specific road rehabilitation requests that were received. Below are the selection criteria.

<i>Tertiary Road Selection Criteria</i>
<p><i>To be eligible for consideration, a road must:</i></p> <ul style="list-style-type: none"> • <i>Have sustained cyclone-damage.</i> • <i>Be in one of USAID's priority conservation zones.</i> • <i>Be linked to a more major road in good condition or to the FCE railroad.</i> <p><i>If a road meets all of the required criteria, it then will be scored according to the criteria shown below.</i></p> <ul style="list-style-type: none"> • <i>Value of agricultural production.</i> • <i>Possibility of a rapid increase in marketed goods.</i> • <i>Willingness of local authorities to contribute to maintenance.</i> • <i>Capacity of the beneficiaries to organize themselves to carry out maintenance.</i> • <i>Proximity to other ReCAP activities to maximize impact and facilitate logistics.</i> • <i>Possibility of synergies with partners' programs, especially USAID programs.</i> • <i>Coherence with national, provincial, and regional priorities.</i> <i>These include those of the Ministry of Public Works as in the February 2001 strategy paper and multi-criteria analysis, the provincial CMP (comites multi-local de planification), and regional GTDR (groupes de travail pour le developpement rural).</i> • <i>Feasibility of doing high quality work given the budget and time period.</i> • <i>Enough control over elements of the work to leave a usable, durable road in place.</i>

The mayor of the commune of Sahasinaka submitted a request to LDI/Fianarantsoa to rehabilitate the road from the town of Sahasinaka to Vinantelo (33 km.). Following a visit of the road with Ken Rikard and Tony Carvahlo in April, another request was made to rehabilitate the access road from the National Road 12 to the town of Sahasinaka, and from Viantelo to Bekatra. These two additional sections will provide an additional outlet for the production in the region (besides the FCE) and make the area more accessible. In addition, a network of roads from Bekatra to Lokomby was also rehabilitated during the CAP project.

The studies were completed at the end of July and the bids for the three lots of the Sahasinaka road rehabilitation work was launched on August 13. Nine pre-selected firms submitted proposals for all three sections of work. Section One, from the RN 12 to the town of Sahasinaka (12 km.) was awarded to Tahina for a contracted amount of 825,303,500 FMG. Section Two, from the town of Sahasinaka to PK 26.5 was awarded to Tolotsoa for 1,402,247 FMG and Lot 3, from PK 26.5 to PK 44 at Bekatra was awarded to ARR for a contract amount of 1,155,999,600. Following the approval of the Environmental Screening Form (ESF) by USAID, the subcontracts were signed on October 15th and the Work Orders were issued two days later on October 17th.



Figure 1: Sahasinaka Road, Lot 2, Tolotsoa

While the work started slowly and by the end of December Lot 1 was at 40 percent completion, Lot 2 at 33 and Lot 3 at 62 percent, significant progress was made during the month of January, especially on Lot 2. During that month, Tolotsoa completed fifty percent of their work and was eighty-two percent completed at the end of January. Lot 1, Tahina was at 62 percent and Lot 3 stood at 79 percent completion. Consequently, by the end of January 2002, approximately seventy-four percent or the equivalent of forty-three kilometers of the Sahasinaka road has been completed. The work plan called for the completion of 60 to eighty kilometers of Tertiary roads and seventy-one percent of that target was met. Work along the Sahasinaka road should be completed by the end of the fifth quarter of project activities.

d. AUPs

Thirteen AUPs were created during the first year of the project: eight along the RNT 14 and five in the Sahasinaka region.

Training sessions started in April 2001 along the RNT 14. ReCap socio-organizers based in the field worked alongside the local population providing training on the functioning of AUPs. The organizations were formed during the months of July and August 2001. The table below shows the AUPs created along the RNT 14.

Table 4: AUPs along the RNT 14

Commune	Name of AUP	Date Created	Number of Members in Bureau	Section of RNT 14
Ifanadiana	Taratra	8/1/01	6	PK 0 - 10
Ifanadiana	Miara – Mandroso	8/16/01	6	PK 10 - 28
Ambohimisafy	Amoron'I Faraony	7/26/01	6	PK 28 - 41
Tolongoina	Fivoarana	8/17/01	5	PK 41 - 54
Manapatrana	Manapatrana Miray	8/23/01	19	PK 54 - 64
Maromiandra	Zoto Soa Lalana	8/21/01	6	PK 64 - 71
Ambatofotsy	Vonona	8/17/01	11	PK 71 - 77
Ikongo	Tokin'Ikongo	8/20/01	6	PK 77 - 92

Along the Sahasinaka road, five AUPs were created and another pre-existing AUP created during the CAP project was reinforced and given additional responsibilities. The AUP creation process started in August in Sahasinaka and the first AUPs were created in November 2001. Table 5 shows the AUPs created along the Sahasinaka road.

Table 5 : AUPs created along the Sahasinaka road

Communes	Name of AUP	Date AUP created
VINANITELO	Tari-dalana	11/12/01
AMPASIPOTSY	Ampasipotsty Miray	11/15/01
AMBORONDRA	Amborondra Liam-pivoarana	11/17/01
SAHANAMBOHITRA AMBOHITSARA M.	Miara-dia	11/22/01
SAHASINAKA	Avotra	12/1/01

e. Port of Manakara Rehabilitation

Work at the Port of Manakara did not start in 2001 as stated in the first Implementation Plan. Our revised estimates for the repair of both the wharf and warehouses were far greater than the amount budgeted. Consequently, additional funding had to be found or the level of repair had to be reduced. Frantz Joseph, the Road/Bridges Engineer, recommended a partial rehabilitation rather than a complete reconstruction would be possible for the wharf. It was also decided, in consultation with the Port Authority, that only the most important warehouses could be repaired. The earlier studies for the repair of eight warehouses were revised and two

warehouses were chosen for repair. The RFP was launched in December and bids are due in February. The subcontract will be signed in April.

For the wharf repair work, the firms will complete detailed technical studies and the RFP will be launched in March.

f. Short-term Assignments

A number of short-term assignments took place last year with the majority consisting of engineering consultancies to advise the COP and the local staff. Ken Rikard's Value Engineering assignment during the early months of the project allowed us to find \$500,000 in savings in our road design. Tony Carvahlo, who was also in Madagascar at that same time provided the project with expertise on the choice of tertiary roads and options for bridge designs. Later that year, Frantz Joseph provided recommendations on how the work can be managed more effectively in order to reduce delays. Finally in January, Ken Rikard returned to report on the actions that were taken based on Mr. Joseph's recommendations. Others, such as H. Schar, provided assistance during the start-up phase of the project before the arrival of the COP at post. The table below lists the short-term assignments during the first year of the ReCap project.

Table 6: Short-term assignments, ReCap project, 2001

Dates	Name	Position
January - February 2001	H. Schar	Start-Up Advisor
February - March 2001	Sally Cameron	Project Director
March - April 2001	Ken Rikard	Value Engineer
March – April 2001	Tony Carvahlo	Road/Bridges Engineer
August 2001	Sally Cameron	Project Director
October 2001	Criss Juliard	Vetiver expert
October – November 2001	Frantz Joseph	Road/Bridges Engineer
January 2002	Ken Rikard	Road/Bridges Engineer

5. Expenses

Thirty-four percent of the total budget, or \$1,834,358 was spent during the first year of the project. The first construction invoice was processed in November and January was only the third full month of billing for construction work.

Table 7: Project Expenses by Line Item

Line Items	Budget	Total Expenses to 1/31/02	Remaining Funds	Percent Remaining
Work days Ordered	846,990	453,975	393,015	46
Material	4,297,394	1,318,217	2,979,177	69
General and Administrative	205,416	62,166	143,250	69
Total	5,349,800	1,834,358	3,515,442	66

The total value of subcontracts signed to date is 13,142,932,600 FMG or \$ 2,021,988 US at an exchange rate of 6500 FMG/\$1.

Table 8: Construction Subcontracts (as of January 15, 2002)

Date Signed	Firm	Title	Amount in FMG	Amount in US (6500 fmg /1)
June 19	LNBTP	Geo-Technical Study of the RNT 14	91,187,960	\$14,029
August 10	EBMA	Rehabilitation of the RNT 14 from PK 00 to PK 41	5,313,888,154	\$ 817,521
August 10	EGECORAM	Rehabilitation of the RNT 14 from PK 46 to PK 93	4,015,644,620	\$ 617,791
August 26	LNBTP	Geo-Technical Supervision of the RNT 14	338,661,400	\$ 52,102
October 15	Tahina	Rehabilitation of the RP 1103 F from the RN 12 to Sahasinaka, PK 0 to PK 12+500	825,303,500	\$ 126,969
October 15	Tolotosa	Rehabilitation of the RP 1102 F from Sahasinaka, PK 0 to Bebaka, PK 26+500	1,402,247,366	\$ 215,730
October 15	ARR	Rehabilitation of the RP 1103 F from Bebaka, PK 26+500 to Bekatra, PK 44+000	1,155,999,600	\$ 177,846
		Total Subcontracts to Date	13,142,932,600	\$ 2,021,988

6. Map of Project Areas

