

UNDP/CNIDAH
“MINE ACTION”

EVALUATION REPORT FOR INTERSOS
PROJECT ANG/03/005

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ANNEXES

1. INTRODUCTION.

The NGO INTERSOS developed a de-mining and Mine Risk Education project in Kuando Kubango and Huíla provinces with objectives to secure safe return of refugees and the internally displaced people as well as the demobilized from war to their homes. The aim of those projects was also to secure from mine and UXO threat the access of Humanitarian Organizations to the sites where their intervention would be priority. The basis to the de-mining control as carried out under this Evaluation is the accreditation, the monitoring and the post-evaluation (quality control) of the organizations that undertake de-mining activities. The International NGO INTERSOS was financed by UNDP' Thematic Trust Fund for Mine Action through the project ANG/03/005 and the donor of the fund was the Italian government. The aforesaid project was undertaken in Huíla and Kuando Kubango provinces from 5th August 2003 to 31st May 2004.

2. SCOPE

2.1. To assess “**in situ**” if the de-mining and mine risk education operations undertaken by INTERSOS were successful to achieve the objectives laid down for the project.

2.2. To analyse if the activities reported by INTERSOS as completed were effectively executed, if the quality of execution meets the internal standards of INTERSOS, and if these are in accordance with the National and International Standards.

2.3 To obtain the data and important information to respond to other questions posed in the TOR of this evaluation project and the result framework table (see annex A).

3. DEVELOPMENT.

3.1. The assessment team was comprised by the UNDP Adviser responsible for the Evaluation, Training and Quality Control of “Mine Action”, Joaquim Merca, and by CNIDAH Planning and Monitoring Officer, Manuel Buta.

3.2. The trip for Luanda-Menongue and Lubango-Luanda were by airlight. The visits between Menongue and Lubango were by road in a vehicle from INTERSOS.

3.3. We contacted the following entities:

- 3.3.1. Mr. Francisco Manjolo, Vice-Governor for Kuando Kubango province and Mr. Domingos Dala, Vice-Governor for Huila province;
- 3.3.2. General Eusébio, Commander of the 6th Military Region;
- 3.3.3. Mr. Jeremias Ndimuedi, Municipal Administrator of Jamba Mineira, and Mr. João Helofilo, Municipal Administrator of Cuvango;
- 3.3.4. Mr. Fernando Ernesto Nguvulo, Municipal Deputy Administrator of Kuchi;
- 3.3.5. Mr. António Adelino Cabinda, Traditional leader of Caculo, and Mr. Gabriel Dala, Traditional leader of Catala;
- 3.3.6. Mr. Makaia, the Police Deputy /Second Commander in Kuchi;
- 3.3.7. Mr. Zacarias Kapinguiça, World Food Program, Deputy Base Manager in Menongue;
- 3.3.8. Mr. Quintas Machi, Senior Field Clerk, and Ms. Flora Satwana, Administrator of UNHCR- United Nations High Commissioner for Refugees;
- 3.3.9. Mr. Moisés Chicasso, Provincial Director of INAD in Kuando Kubango;
- 3.3.10. Mr. Romano Japão, Physiotherapy Director of Orthopaedic Center in Menongue;
- 3.3.11. Ms. Cláudia Locher, Delegate of the International Committee of Red Cross in Menongue;
- 3.3.12. Mr. Domingos Lucas, UN Security Field Coordinator in Kuando Kubango, and Mr. Alfredo Roy, UN Security Field Coordinator in Huila;
- 3.3.13. Mr. Júlio Francisco Lucas, Administrator of a national NGO, Aliança Democrática Cristã, ADC,
- 3.3.14. Ms. Paula Gentil, Coordinator of an international NGO, Medicines sans Frontiers in Kuvango-Huila;
- 3.3.15. Dra. Lúcia de Oliveira, Project Coordinator of an international NGO, AMI;
- 3.3.16. Mr. Gianni Morelli, OCHA Coordinator in Huila;

3.3.17. Mr. Jon Telling, Project Manager for the Southern Region of Angola of an international NGO, NCR – Norwegian Council for Refugee;

3.3.18. Mr. Adérito Mundombe, Base Manager of an international NGO, Acção contra a Fome in Huila;

3.3.19. Mr. João Muhongo Manuel, Representative of a national de-mining organization, AJOSAPA;

3.3.20. Mr. Renato Raimundo, National Manager of the Mine Risk Education and effective member of ICBL, in Geneva, Switzerland;

3.3.21. Mr. Manuel Hossi e José Vingue, Section Commander of INTERSOS Manual de-mining;

3.3.22. Mr. Gian Paolo Tongiorgi, Program Manager of INTERSOS in Angola.

3.4. The trip of the Assessment Team to Menongue was on 19th September where the de-mining Program Manager of INTERSOS, Mr. Gian Paolo Tongiorgi, welcomed us. After our accommodation, Mr. Gian Paolo briefed us on the activities undertaken by his organization in the scope of the project ANG/03/005, as follows (see annex B):

3.4.1. The project started on 05th August 2003, with operational activities starting on 10th November 2003 and ending on 31st May 2004;

3.4.2. The training period of the personnel was from 25th August to 10th October 2003, with the following courses:

- De-mining Course/BAC, 3 weeks, from 25th August to 13th September 2003, with 20 trainees, of which 18 succeeded;
- EOD Team Leader, 3 weeks, from 25th August to 13th September 2003, with for 4 trainees, of which all of them succeeded;
- Site Supervisor, 3 weeks, from 25th August to 13 September 2003, with 3 trainees, of which all succeeded;
- Topographer, 6 weeks, from 1st September to 10th October 2003, with 7 trainees, of which 4 succeeded.

3.4.3. Intersos safely controlled/verified and opened 685 Km of road;

- 3.4.4. Intersos identified 14 minefields through survey, thus making a grand total of 512.300 m² and about 120 km of suspected road;
 - 3.4.5. Intersos marked 6.532 m² of contaminated area;
 - 3.4.6. Intersos manually de-mined 150.628 m² (fields and roads);
 - 3.4.7. Intersos Manual Team de-mined 25.339 m² on the road;
 - 3.4.8. Intersos de-mined mechanically 49.200 m² (in the field) by using SCUT;
 - 3.4.9. Intersos destroyed 340 UXOs/Mines during the period of the project;
 - 3.4.10. Intersos Mine Risk Education session reached 9.746 people in parallel with de-mining operations;
 - 3.4.11. Intersos bought 20 complete de-mining kits, detectors, visors and prodder;
 - 3.4.12. Intersos bought 2 heavy armoured vehicle Casper, 2 Toyota 'Pick Up' vehicles with ballistic protection and communication system and one ambulance;
 - 3.4.13. Intersos leased a SCOUT de-mining machine and its accessories;
- 3.5. The chronology of contacts with the authorities, UN agencies, NGO's and other entities, visits to the sites and technical evaluation, was the following:
- 3.5.1. 20SEPT04, UN Agency, WFP representative informed that INTERSOS de-mining activities enabled WFP's actions in the communal of CUTATO and in the municipality of KOUCHI, Kuando Kubango, and had almost 6.500 people in lack of food benefited from it. Likewise, INTERSOS has cleared the Kouchi airstrip, which is an important alternative route to the town, due to the bad conditions of the roads especially in rainy seasons;
 - 3.5.2. UN Agency, the representatives of UNHCR responsible for the repatriation process informed that it was possible to repatriate almost 7.000 refugees. UNHCR and INTERSOS have been working together in Mine Risk Education at KATUTI camp, Kuando Kubango, as well as in the areas of basic sanitation, food distribution and water supply;
 - 3.5.3. Provincial Vice-Governor of Kuando Kubango: he expressed his gratitude for the activities conducted by INTERSOS, as well as

expressed concern on what is still to be done to de-mine the province, especially close to the border with Namibia.

3.5.4. Menongue Orthopaedic Centre: In this centre a number of almost 40 physiotherapeutic sessions are conducted every month. 20 attendees of the sessions are internal patients in the Centre. INTERSOS has contributed with one therapeutic technician for the Centre;

3.5.5. ICRC, International Committee of Red Cross, Menongue: the representative in the province expressed her limitations in movements due to the security criteria for their movements established by their Headquarters. Subject to further discussion;

3.5.6. UN Security Coordinator in Kuando Kubango stated that INTERSOS "opened" some roads, which enabled the safe linkage between Huíla and Kuando Kubango provinces. He also requested better coordination and exchange of information within the provincial security sub-group;

3.5.7. Visit to the ammunition dump at Marcolino, Menongue, where INTERSOS team destroyed several ammunitions: BM-24, ZU-23, mortal shells, etc;

3.5.8. Interview with the representative of a national NGO (ADC), who confirmed that in the past, between 2001 and 2003, they worked with INTERSOS, especially in MRE;

3.5.9. 21SEPT04, Technical visit to Kouchi municipality, (Pedra Branca, Missão S. José, Malengue, Chinguanja etc), in which the team met with the local authorities and analysed the activities conducted by INTERSOS, which focused in the opening of surrounding roads and the clearance of the local airstrip;

3.5.10. Meeting with FAA Commander in the region, who appreciated the support from INTERSOS, especially in the destruction of ammunitions whenever requested;

3.5.11. 22SEPT04, Technical analysis with Quality Control by applying sampling method: the clearance conducted by the NGO in the province of Kuando Kubango, such as the access to the Kouchi Power Station, Mechanical Mine Clearance in Menogue, Road clearance of Cutato-Cauli, Vicungo and Galangue;

3.5.12. Meeting with the Municipal Administrator of Kuvango, who appreciated the work conducted by INTERSOS, but he also expressed concern on the areas that have not yet been cleared under his jurisdiction such as the road and railway bridges in

CUTATO. He also informed that there is an MRE team working in his municipality trained by INTERSOS;

3.5.13. Meeting with Project Coordinator of MSF Spain in Kuvango, where INTERSOS opened (cleared/verified) the roads to CATALA and CUTATO, which benefited almost 8.000 people in each of the referred communal, with health care provided by MSF that did not exist in the past (meningitis vaccination and a mobile health post). She also expressed her desire that it would be important to verify the road Kuvango-Mumba, as the population of Mumba do not have access to health care due to the inaccessibility of the road.

3.5.14. 23SEPT04, Technical visit to the opened roads in the area of Kuvango;

3.5.15. Meeting with Soba of Catala, who appreciated the work conducted by INTERSOS in road clearance, the village has more than 360 families;

3.5.16. Meeting with Municipal Administrator of Jamba Mineira, who expressed concern on the opening of the road DONGO-CUSSAVA, in order to relocate into CUSSAVA almost 7.000 refugees who are settled in Canjanguite camp, as well as the clearance of MUCOI, COLUI river and the clearance of the railway Jamba-Xamutete;

3.5.17. Meeting with representatives of the International NGO providing Health Care services, AML. They said that their NGO started working in Jamba in August of 2004, after the opening of the road by INTERSOS and they provide health support to almost 75.000 people;

3.5.18. Quality Control (sampling system, and application of the national standards) to demining operations already conducted at COLUI river;

3.5.19. Technical verification to demining operations already conducted (37km) on the road DONGO-CUSSAVA (42 km). This task is to be completed before the rainy season for the re-settlement of the afore mentioned refugees, while facilitating the health support and the provision of basic public services;

3.5.20. 24SEPT04, Meeting with the Base Manager (Accion Contra el Hambre) in Lubango, who stated that with the opening of roads by INTERSOS, especially in the areas of Sangueve, Chipindo and Galengue, they have been able to support almost more than 3.000 people.

- 3.5.21.** Meeting with a national de-mining NGO, AJOSAP in Lubango: their representatives are anxious for the signature of a memorandum of understanding with INTERSOS for the training of staff and the national capacity building;
- 3.5.22.** Meeting with Vice-Governor of Huila, who expressed concern on Survey Action Centre's Landmines Impact Survey project, as well as on the urgent need to demine the railway. He also reiterated the need to increase the donors support to de-mining NGO's;
- 3.5.23.** Meeting with OCHA representative in the province of Huila, who appreciated the positive work conducted by INTERSOS in the opening of roads for humanitarian assistance, especially the corridor, Chipindo-Galengue-Vikungo-Jamba;
- 3.5.24.** Meeting with UN security coordinator in Huila province, who stated that with the de-mining activities by INTERSOS, especially in the north of the province, there has been an increase in humanitarian agencies' activities, however, it is necessary and urgent to provide the humanitarian connection between Huila and Huambo provinces;
- 3.5.25.** Meeting with a national Mine Risk Education NGO in Huila, Club de Jovens, who stated that during the last years there has been a good relationship between INTERSOS and Club de Jovens, in training of staff and the national capacity building, which resulted in the decrease of mine incidents.

4. EQUIPMENT PURCHASED AND THEIR COSTS (INPUTS)

4.1 Intersos bought the following equipment with the budget funded for this project:

- 4.1.1.** 350.000 USD for salary of personnel, training and evaluation of the project;
- 4.1.2.** 30.000 USD for 10 metal detectors CEIA, 20 Visors and 20 prodders;
- 4.1.3.** 184.000 USD for 02 armoured CASPIR's for transport;
- 4.1.4.** 66.000 USD for 02 light vehicles Toyota "pick-up", with ballistic blankets;

- 4.1.5. 34.000 USD for 01 four wheel driver light vehicle as ambulance;
- 4.1.6. 20.000 USD for equipment of communication;
- 4.1.7. 175.000 USD for leasing a SCOUT machine, including costs of transportation, customs clearance and personnel;
- 4.1.8. 114.000 USD Sundry equipment, logistic support and maintenance;
- 4.1.9. 973.000 USD for total direct costs presented and justified (see annex C).

5. ACHIEVED RESULTS FROM THE PROJECT (OUTCOMES)

5.1 In accordance to the objectives of the project, the aim was to create conditions of security for the return of refugees, internally displaced people, and demobilised soldiers to 4 Municipalities of Huíla and Kuando Kubango, as well as for the general population in the areas; and also to create the same conditions for the safe access by humanitarian assistance. In this context we can point out the following:

- 5.1.1 According to what we confirmed “in situ” and as already explained in this report, **114.860** people benefited directly or indirectly from the tasks undertaken by INTERSOS;
- 5.1.2 Intersos cleared and opened **685** km of roads, which were unsafe;
- 5.1.3 **14 minefields (512.300 m²)** and 120 km of suspected roads were surveyed;
- 5.1.4 Intersos marked **6.532 m²** of contaminated area;
- 5.1.5 Intersos de-mined manually **150.628 m²**;
- 5.1.6 Intersos de-mined mechanically **49.200 m²**;
- 5.1.7 Intersos demolished **340 UXOs/Mines**;
- 5.1.8 Intersos Mine Risk Education sessions reached **9.746 persons**; and
- 5.1.9 About **10 humanitarian agencies** could execute their activities safely in assisting the most vulnerable target group.

6. PROJECT ACHIEVEMENT (OUTPUTS) AND COST EFFECTIVENESS

6.1 The benefits of the project to the most vulnerable target group, refugees, internally displaced people, demobilised and the needy is **unquantifiable**, because of the priceless safety and preservation of human life and because of thousands of beneficiaries;

6.2 The costs presented and justified were 973.000 USD from the gross value of the funding available for this project, 1.048.746 USD. The remaining balance, which is 7% of total budget, might have been spent and justified; this expenditure is acceptable because of the costs for fuel, insurances, emergency situations, Medvac, Mine Risk Education and other issues that were not verified by the evaluation team;

6.3 Comparing the costs of de-mining, verifying and controlling roads and fields with the average costs in Angola reveals that (2004 study, Technical Department of CNIDAH, annex D):

6.3.1 The cost of Mechanical De-mining was approximately **3,55 USD/m²** (= 175.000USD / 49.200 m²), which is above the average cost of mechanical de-mining in Angola. This cost does not include the additional costs spent to complete the clearance procedures (see Annex D);

6.3.2 Manual De-mining cost was approximately **5,20 USD/ m²** (= 748.000USD / 150.628 m²). 748.000 USD includes all the costs for de-mining, verifying and controlling fields and roads, but 150.628 m² reflects the only the fields de-mined, verified, and controlled, and roads de-mined, but not the roads verified and controlled due to the unavailability of data. Thus, this cost will be lesser if **the roads verified and controlled** are included. Even without the mentioned reduction, this value is within the average costs of manual de-mining in Angola (see Annex D);

6.4 The assessment team concluded that the budget was spent to achieve results expected from the project with an acceptable level of proficiency and applicability.

7. TECHNICAL ASSESSMENT OF THE PROJECT

7.1. Parallel to the activity of general assessment of the project and in the scope of optimising the use of resources available, the assessment team conducted a de-mining quality control through the sampling system; we concluded the following:

7.1.1. The workforce of the de-mining team is prepared and has enough skills and knowledge to execute the tasks, which they undertake.

7.1.2. Manual de-mining equipment used in this project as well as personal protection equipment were suitable for de-mining activities;

7.1.3. De-mined areas were under 8 sampling procedures (Kuchi and Colui task), with the conclusion that they were effectively de-mined in good technical conditions, since the ground had a high metal content;

7.1.4. With the mention above CNIDAH can give Operational Accreditation of INTERSOS Demining Team of MATALA/Colui river;

7.1.5. The prevention procedures in case of accident and evacuation were the correct;

7.1.6. MRE sessions were undertaken in parallel with de-mining operations, and complemented the desired integration and liaison of Intersos in the community.

8. CONCLUSIONS

8.1. During the assessment period Intersos supported the evaluation team with all necessary resources;

8.2. The constraints of weather, rainy season and elements in the environment had limited the development of the activities of the project, particularly in Kouchi, Kuando Kubango;

8.3. The established priorities were fulfilled, but they need to be complemented, the boarder of Angola with Namibia in Kuando Kubango, and the bridges in Cussava on the way to Bambi and Chipindo in Huíla;

8.4. The main roads were cleared and reopened, such as the stretch between Lubango (Huíla) and Menongue (Kuando Kubango);

8.5. With the opening of the main roads, the internally displaced people and refugees could return to their homes;

8.6. Meanwhile there are still more roads to be cleared and opened, specially secondary roads that are also important to the resettlement of people in their villages;

- 8.7. This project allowed INTERSOS to develop a new capacity for the clearance and opening of roads;
- 8.8. The transfer of “know-how” was realized through the training of about 30 new trainees at the courses with good curriculum for de-mining/BAC, EOD, Supervisor and Topographer and also through on-the-job trainings offered by the international Technical Advisors;
- 8.9. InterSOS achieved good institutional relationships with provincial and local Authorities, FAA, National Police, other NGO’s, UN agencies and local population;
- 8.10. Technically, manual and mechanical de-mining tasks in contaminated areas and specially in the opening of roads were executed according to the national and international standards;
- 8.11. InterSOS contribution towards humanitarian aid by NGO’s and UN agencies in Huila and Kuando Kubango was decisive to the success of these humanitarian tasks;
- 8.12. Mechanical de-mining is too costly for a project with financial limits such as this one;
- 8.13. In the sequence of the forecast activities for this project we identified that uncleared area and roads need to be de-mined;
- 8.14. Intersos showed technical, logistic and functional capacity to execute this project.

9. RECOMMENDATIONS

- 9.1. ***It is to be stressed that INTERSOS should have the possibility of more funds to undertake more tasks in Huila and Kuando Kubango, to complete the tasks identified as necessary to achieve the objectives of this project, taking into consideration the investment already made in terms of resources and equipments,***
- 9.2. *Based on the assessments mentioned above, the following tasks must be carried out in a later phase when the additional funds are made available to the NGO;*
- 9.3. *Clearance (demining) of identified 14 minefields (512.300 m²), as well as 120 km of suspected roads in the provinces of Kuando Kubango and Huila;*
- 9.4. *Demining of the already marked minefields, 6.532 m², in the same provinces;*

- 9.5. Establish partnership by concluding an agreement with an identified national NGO, AJOSAPA (Associação dos Jovens Sapadores da Huíla). Through training in Humanitarian Demining skills and logistics and operations, they will be able to perform demining and mine risk education chiefly in the province of Huila and Kuando Kubango;
- 9.6. As shown, INTERSOS is using mechanical demining SCAUT machinery that is not cost-effective with the present system. To be efficient in Angola, this machine must be modified of its motor heating system as well as soil beating system;
- 9.7. The use of armored heavy vehicles "CASPIR" should be optimized. The recommendation includes adaptation of the vehicle with a metal detecting system and, if possible with an explosive detecting system;
- 9.8. The period of a possible project extension, as mentioned above, should not begin before the rainy season, but at the end, for example starting from 15th January 2005 with the maximum duration of 8 months.

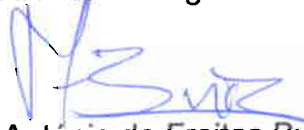
Luanda 29th September 2004

Training, Evaluation and Quality Control Adviser



Joaquim Manuel Lourenço Merca

CNIDAH Monitoring Officer



Manuel Antonio de Freitas Buta

ANNEXES:

- A. Terms of Reference and Result Framework Table
- B. INTERSOS Activities Data
- C. Project Cost
- D. Information about costs for de-mining in Angola
- E. Photographic Show of the Assessment trip

ANNEX A



Terms of Reference – UNDP Project Evaluation (ANG/03/005)

Project evaluation period: 05/08/2003 to 31/05/2004

Project title: Italian support to NGO mine action operational activities in Angola

Project number: ANG/03/005

Management arrangement: NGO execution

1. Introduction

According to the project document (ANG/03/005), an independent evaluation needs to be undertaken at the end of the project, as part of the implementation of the revised UNDP results-oriented monitoring and evaluation procedures. The terms of reference for the evaluation was prepared by UNDP in consultation with the designated execution NGO, INTERSOS.

2. Evaluation objectives

The first objective of the project evaluation is to review the results achieved and lessons learned in the NGO's operation since the beginning of the project. The evaluation exercise will critically examine the overall accomplishments of the project, assess the extent to which the targeted outcome has been achieved, and the appropriateness and effectiveness of the NGO's partnering.

The second objective is to identify the limitations and constraints in producing project outputs and affecting performance towards the intended outcome, and recommend the improvements needed to maximise outputs and ensure the achievement of outcome.

The third objective is to measure the relevance of the executed project to the mine action sector today in Angola and its contribution to the accomplishment of Angola's development objectives and UNDP's capacity building objectives in the country, and assess the extent to which an extension or replication of the project is needed or recommended, and in what timeframe and conditions.

3. Report requirements

At the end of the project evaluation, the evaluators will produce an evaluation report containing the following sections:

1. Brief executive summary;
2. Main findings, including the extent to which the intended outputs were produced and targeted outcome was achieved by the project, the obstacles that adversely affected the progress towards the achievement of outcome, and the appropriateness and effectiveness of the NGO's partnerships with national authorities, in particular the mine action authority (CNIDAH) and provincial governments, and Italian donor government, as well as other national and international organizations (Feedback from end beneficiaries and other partners should be presented);
3. Lessons learned in producing outputs, linking them to outcomes, and using partnerships strategically, and suggestions for future corrective actions; and
4. Assessment on the relevance of the executed project to Angola's national mine action plan, as well as its contribution to the achievement of Angola's development objectives and UNDP's capacity building objectives, and recommendation on the possible extension or replication of the project, including corrective actions necessary to be taken by the NGO when implementing another project in future.



The evaluation report is to be prepared in English and Portuguese.

4. Time frame for evaluation process:

September the 19th to the 30th, 2004. (Preparation, field visit and production of reports)

5. Evaluation team:

CNIDAH Monitoring, Evaluation, and Quality Control Team for mine action consisting of:

- 1 CNIDAH Evaluation, Training and Quality Control Advisor responsible for overall planning and implementation of the evaluation, including the finalization of the report.
- 1 CNIDAH National Monitoring Officer.

RESULT FRAMEWORK TABLE

Goal	Contribute to the re-establishment of acceptable living condition standards for IDPs, refugees, demobilized soldiers and residents population living in Huila and Cuzco Cuzango Provinces and, in particular, in the areas of Dongo, Jumbá, Kuvango and Cuch										
Subgoal	Facilitate the process of return of IDPs, refugees and demobilized soldiers to their areas of origin/settlement, reducing/minimizing the risk caused by the existence of mine/UXOs, through the implementation of activities of survey, permanent marking of dangerous areas and demotion of mine UXOs. Mine awareness programs will accompany the process of return										
Strategic Area of Support	Human Security										
Intended Outcome:	Free and safe movement of IDPs, refugees and demobilized soldiers to their areas of origin, resettlement granted; Communities educated on the risks caused by the presence of mine and UXOs; Conditions for social, commercial and economic development created; Conditions for humanitarian assistance made possible; Mine technical and operational capabilities improved; Mine safety standards improved by acquisition of protected transport assets removed/demolished; Number of population assisted; Number of population/communities educated on the risk of mine/UXOs; Surface of land made available for agriculture; Increased presence of Int Organizations and NGOs										
Outcome Indicators:	Kms of roads checked and/or opened to movement; Number of new location surveyed; Number of water sources made available to population; Square meters of land marked/removed/cleared; Number of mine/UXOs removed/demolished; Number of population/communities educated on the risk of mine/UXOs										
Partnership Strategy:	Intersector strategy partnership will focus mainly on MRE activity. It is intersector intention to implement a process of Capacity Building of two local NGOs, namely " Club de Jóvenes" and ADC, that are active in the Huila and Cuzco Cuzango Provinces. Both NGOs are partners of UNICEF. If feasible, a similar Capacity Building process will be implemented with local demining NGOs										
Project Title:	Mine Action in support to Humanitarian Assistance / Reintegration in Huila and Cuzco Cuzango Provinces										
Project Number:	ANGL03/005										
Intended Outputs	Output Target						ref.	Activities	Budget Line		
	Description	1	2	3	4	5				6	
1. Improve access and security of main roads	Safe connection between Huila and Cuzco Cuzango Provinces established to support repatriation and resettlement and free movement of persons and goods							1	Roads from Cuch to Dongo, via Cuzango		
	Safe connection between Huimbó/Bé and Curime provinces /Mambisa border established to support repatriation and resettlement and free movement of persons and goods							2	Road from Kuvango to Cuzco, via Castañeda		
	Educational projects starting safely							3	Road from Cuzango to Vezango		
	Agriculture productive activities starting safely around Cuch							4	Road from Chibambo to Chibambo		
	Agriculture productive activities starting safely around Cuzango							5	Road from Cuch to Jumbá de Cuzco, via Jumbá		
	Educational projects starting safely							6	Roads in Cuch Municipality		
	Agriculture productive activities starting safely around Dongo							7	Roads in Cuzco Municipality	3.2.6	
	Agriculture productive activities starting safely around Dongo							8	Roads in Dongo Municipality		
2. Improve access and security of secondary roads	Ensure safety for critical constraints to humanitarian operations							9	Survey, strategic demarcation, demining, UXOs elimination and installed clearance.	3.2.8	
3. Emergency and priority demining activities	Expansion of international staff technical capacity							10	Recruitment and support of international staff	1.2.1 to 1.2.4 and 7.1	
	Building teams training finished.							11	Refinement courses for 2 existing manual demining teams	1.1.1, 1.1.2	
	New teams training finished.							12	Recruitment, selection, training and deployment of 2 new manual demining teams	1.3.1, and 7.2	
	Integration of new national staff							13	Integration of existing and new manual demining teams in 4 teams		
	Modernization of standard manual demining equipment							14	Procurement of new metal detectors and standard manual demining equipment	3.2.1	
	Expansion of survey and safety capacity							15	Procurement of 2 mine proof vehicles (Casper), 2 pickup with ballistic shields, 1 Ambulance and communication equipment.	3.1.2, 3.1.3, 3.1.5, 3.2.2, 3.2.6, 3.2.9, and 3.2.10	
	Expansion new capacities in mechanic equipment							16	Rental and support of a demining mechanic equipment (Soak)	4.3	
	Expansion of camp bases and offices							17	Procurement of Field support materials, Office equipment and Office rental	3.2.3, 3.2.4, 3.2.5, 3.2.7, and 4.2.1	
4. Expand and support mine action capacity in Huila and Cuzco Cuzango Provinces	Deployment of equipment and staff							18	Project equipment transport and travel of personnel	2.1.2.2.2.3	
	Sustainability of the operations ensured							19	Procurement, support and maintenance of office materials and operative equipment.	3.10, 4.1.1, 4.1.2	
	Internal quality control							20	Programme manager and supervisors permanent monitoring, evaluation and corrective action		
5. Quality management	External quality control and Project evaluation							21	INTEROSOS Headquarters Chief of Technical Unit visit to completed tasks	7.3	

ANNEX B

MINE ACTION ACTIVITIES IN ANGOLA

Project ANG/03/005 – Italian Support to the Operational Activities of Mine Action in Angola.

Donor: Italian Government through UNDP

Budget amount: USD 1.048.746

Start of contract: 5 August 2003

End of contract: 31 May 2004.

Locality: Provinces of Huila and Kuando Kubango

Start of operational activities: 10 November 2003

1. Statistics for year 2003.

1.1.a Training Courses

Course	Duration	Period	Attendees	Licensed
Demining Operator/BAC	3 weeks	25.8 – 13.9	20	18
Team Leader/EOD	3 weeks	25.8 – 13.9	4	4
Local Supervisor	3 weeks	25.8 – 13.9	3	3
Topographer	6 weeks	1.9 – 10.10	7	4

1.1.b Level 1 or 2 Survey: quantity 14

1.1.c Kilometers of controlled and opened roads

Road	Kilometers controlled/opened
Cuchi – Casa Branca	25
Cuchi - Tchinguadja	52
Casa Branca – Malengui	12
Malengui – Muila (Vissati)	45
Cuchi -Menongue	93
Cutato - Chiengo	44
Matala - Kuvango	180
TOTAL	451

1.1.d Number of mine fields encountered

Locality	Distance to Nearest Municipality	Type/Dimensions
Bairro Pedra Branca	27 Kms W of Cuchi	AT/AP 40.000 sqm
Bairro Malengui	39 Kms W of Cuchi	AP? 20.000 sqm
Cuchi	2 Kms E of Municipality Site	AT/AP 250.000 sqm
Cutato	50 Kms NE of Cuchi	AP? 80.000 sqm
Cutato	50 Kms NE of Cuchi	AT/AP? 80.000 sqm
Tchinguadja	42 Kms S of Cuchi	AP 2.500 sqm
Tchamutete	95 Kms S of Jamba	AP 8.000 sqm
Campulo	100 Kms SE Jamba	AP/AT 5.000 sqm

1.1.e Square Meters of Fenced Area

Locality	Area of Intervention	De-limited Area
Bamba	Bridge	1900 sqm
Cuvunge	Bridge	2600 sqm

TOTAL	4500 sqm
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1.1.f Square meters of area controlled/cleared

Locality	Area of Intervention	Cleared Area
Bamba	Bridge	370 sqm
Cuchi	Water Reservoir/Water pipeline	3.000 sqm
Cuchi (#)	Airport	70.000 sqm
Pedra Branca	Minefield	2.069 sqm
TOTAL		75.439 sqm

(#) Airstrip has been marked with concrete pillars

1.1.g Level 3 Survey: quantity 3

1.1.h UXOs Encountered, Collected and Demolished

Designation	Quantity
Mina AT tipo 72/A	5
Mina AP tipo 72/A	6
Rockete tipo 7	16
Projectil de 57 mm tipo Castor	8
Bomba de morteiro de 60 mm	4
TOTAL	39

1.1.i Persons Educated on the Risk of Mines

Locality	Number
Casa Branca, Pedra Branca, Cahota	3780
Chiengo	750
Canona, Peco, Ndumba	1.000
TOTAL	5.530

2. Statistics for year 2004.

2.1.a Level 1 or 2 Survey: quantity 12

2.1.b Kilometres of controlled and opened roads (Survey level I/II)

Road	Kilometres controlled/opened
Cuchi - Missao S. Jose'	14
Malengui - Cutato	24
Catala - Tchivango	120
Cutato - Desvio Cahuli	28
Desvio Cahuli - Rio Chidombe (Cahuli)	29
São José - Mungamba	14,7
São José - Vissati (Ate Rio Luassenha)	4,8
TOTAL	234,5

2.1.c Kilometres of controlled and opened roads (manual de-mining) (Survey level III)

Road	Kilometers controlled/opened
Cuvango - Catala	25.81
Cuchi - Power Station of Cuchi	0,258
TOTAL	25,339

2.1.d Sqm cleared by mechanical de-mining (Scout vegetation cutter)

Location	Area cleared sqm	Mine/Úxos neutralised
Malengue	49.200	4

After the intervention of the vegetation cutter, the area as been checked, on its totality, by manual demining, to insure compliance with UN standards.

2.1.e Number of Mine Fields Encountered

Locality	Distance from the nearest Municipality	Type/Dimensions
Vissati	80km NE of Cuchi	UXO
Bairro S. José* (velha Missão)	14Km NE of Cuchi	AP/800m2
Senge: Road S.José* –Mungamba	14Km NE of Cuchi	AT-AP/8Km
Bairro Capoco (Comuna Tchinguanja)	48Km S of Cuchi	AP/ca. 6000m2
Estrada Longa – Baixo Longa	60Km SE of Menongue	AT/90Km
Longa – estrada Longa - Punho	60Km SE of Menongue	AT/19Km
Área esquerda na rua Longa - Mupeco	60Km SE of Menongue	AT-AP/20.000mq

2.1.f Square Meters of Fenced Area

Locality	Intervention area	De-limited area
Malengue	Road	2032 sqm
Total		2032 sqm

2.1.g Square meters of area controlled/cleared

Location	Intervention area	Cleared area
Rio Senje	Residential area	2 sqm
Road Cuchi – Power Plant	Road	1908 sqm
Malengue	Vicinity road Malengue-Cuchi	2390 sqm
Cuvango	Road Cuvango - Catala	66889
Total		75.189 sqm

2.1.h Level 3 Surveys: quantity 3

2.1.i UXOs Encountered, Collected and Demolished

Type	Quantity
A/P VS – Mk 2	4
A/T mine TM 57 fabrico Russia	2
Granada de mão F-1	1
Granada de mão de tipo F 2 fabrico Sul Africano	1
Bomba RPG -7	17
Projétil de 76 mm HE de fragmentação	11
Projétil 85 mm HE	46
Projétil de 85 mm HEAT	15
Projétil de 122mm HE FRAG – BM-21	3
Projétil de 100mm HE FRAG	20
Projétil de 100mm HEAT	1
Munições ZU 23	146
Bomba de Morteiro de 82 mm	17
Bomba de Morteiro de 60 mm	14
Booby traps	2
TOTAL	301

2.1.k Persons Educated on the Risks of Mines

Locality	Number
Malengue, Vissati e Missão São José	973
Mungamba, Tomás	1773
São José	818
Cahuli	662
TOTAL	4216

Luanda, 29.8.2004

INTERSOS MAU PROGRAMME MANAGER IN ANGOLA
Gian Paolo TONGIORGI

ANNEX C

Goal	Contribute to the re-establishment of acceptable living conditions standards for IDPs, refugees, demobilized soldiers and resident population living in Huila and Caucho Cuzango Provinces and, in particular, in the areas of Congo, Jumbá, Auzengo and Cuchi					
Subgoal	Facilitate the process of return of IDPs, refugees and demobilized soldiers to their areas of origin/settlement, reducing/minimizing the risks caused by the existence of mines/UXOs, through the implementation of activities of survey, permanent marking of dangerous areas and demarcation of mine UXOs. Mine awareness programs will accompany the process of return					
Strategic Area of Support	Human Security					
Intended Outcome:	Free and safe movement of IDPs, refugees and demobilized soldiers to their areas of origin, resettlement granted. Communities educated on the risks caused by the presence of mines and UXOs. Conditions for social, commercial and economic development created. Conditions for humanitarian assistance made possible. Mine awareness and operational capabilities improved. Mine safety standards improved by acquisition of protected transport assets					
Outcome Indicators:	Kind of roads checked/analyzed for movement. Number of water sources made available to population. Source means of land transportation/demarcated. Number of mines/UXOs removed/demarcated. Number of population/communities educated on the risk of mines/UXOs. Status of land made available for agriculture. Increased presence of I/O Organizations and NGOs					
Partnership Strategy:	Intensive strategic partnership will focus mainly on MIE activity. It is intensive intention to implement a process of Capacity Building of two local NGOs, namely "Club de Jóvenes" and ADOC, that are active in the Huila and Caucho Cuzango Provinces. Both NGOs are partners of UNICEF. If feasible, a similar Capacity Building process will be implemented with local demining NGOs					
Project Title:	Mine Action in support to humanitarian Assistance / Rehabilitation in Huila and Caucho Cuzango Provinces					
Project Number:	ANOD03006					
Intended Outputs	Output Target					
	Description	1	2	3	4	5
1. Improve access and security of main roads	Safe connection between Huila and Caucho Cuzango Provinces established to support migration and resettlement and free movement of persons and goods					
	Safe connection established with Caucho Cuzango provinces Huila and Caucho Cuzango provinces to support migration and resettlement and free movement of persons and goods					
	Education projects safety safety					
	Agroecological production activities starting safety around Caucho Cuzango					
	Agroecological production activities starting safety around Caucho Cuzango					
2. Improve access and security of secondary roads	Agroecological production activities starting safety around Caucho Cuzango					
3. Emergency and priority demining activities	Ensure safety for critical connections to humanitarian operations					
	Expansion of humanitarian staff technical capacity					
	Emergency training systems					
	New teams training systems					
	Integration of new national staff					
4. Expand and support mine action capacity in Huila and Caucho Cuzango Provinces	Modernization of standard manual demining equipment					
	Expansion of survey and safety capacity					
	Establishment new capacities in mechanic equipment					
	Expansion of camp bases and offices					
	Deployment of equipment and staff					
5. Quality management	Sustainability of the operations analyzed					
	Internal quality control					
	External quality control and Project evaluation					
Activities	Budget Line					
	ref.	1	2	3	4	5
1. Roads from Cuchi to Congo, via Caucho	1					
2. Road from Auzengo to Congo, via Caucho	2					
3. Road from Caucho to Yumbá	3					
4. Road from Caucho to Yumbá	4					
5. Road from Congo to Jumbá, via Jumbá	5					
6. Road from Congo to Jumbá, via Jumbá	6					
7. Road from Caucho to Yumbá	7					
8. Road from Caucho to Yumbá	8					
9. Survey, strategic demarcation, demining, UXOs demarcation and demarcated clearance	9					
10. Recruitment and support of international staff	10					
11. Recruitment courses for 2 existing manual demining teams	11					
12. Recruitment, training and deployment of 2 new manual demining teams	12					
13. Integration of existing and new manual demining teams in 4 teams	13					
14. Procurement of new mine detecting and standard manual demining equipment	14					
15. Procurement of 2 mine probe vehicles (Caterpillar), 2 pickup with radios, 1 Ambulance and communication equipment	15					
16. Rental and support of a demining mechanic equipment (Bosch)	16					
17. Procurement of field support materials, Office equipment and Office rental	17					
18. Project equipment transport and type of personnel	18					
19. Procurement, support and maintenance of office materials and operating equipment	19					
20. Program manager and supervisors permanent mobilization, evaluation and corrective action	20					
21. INTERSOS Headquarters Chief of Technical Unit and to coordinated teams	21					

ANNEX D



COMISSÃO NACIONAL INTERSECTORIAL DE DESMINAGEM E ASSISTÊNCIA ÀS VÍTIMAS
GRUPO TÉCNICO PERMANENTE
INFORMAÇÃO

INF. Nº 00/04
Pº.:
Data: 29JUN04
Página: 1

Assunto: CUSTOS DE DESMINAGEM
Ref:

PARECERES

DESPACHO



COMISSÃO NACIONAL INTERSECTORIAL DE DESMINAGEM E ASSISTÊNCIA ÀS VÍTIMAS
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FINALIDADE

1. Submeter à consideração superior uma proposta sobre os custos de desminagem em Angola, como por exemplo os custos por m² da desminagem mecânica, manual e combinada.

SITUAÇÃO

2. A CNIDAH é o órgão a nível nacional que tem exclusiva responsabilidade de coordenar, avaliar, supervisionar toda a Acção de Minas em Angola, Desminagem, Educação sobre o risco de minas-EMR e Assistência às Vítimas. Assim como efectuar todas as diligências para o cumprimento da Convenção de Ottawa.

PROBLEMA

3. Com o objectivo de avaliar os custos da desminagem em várias vertentes tais como;

- **O seu custo por m² quer seja Desminagem Mecânica, Manual e/ou combinada;**
- **Determinar um valor aproximado do custo global para desminar uma mina;**
- **Avaliação dos custos tendo em conta o sapador, custo mina/homem;**
- **Avaliação dos custos tendo em conta o beneficiário dos programas de Desminagem;**

DISCUSSÃO

4. Angola tem uma tipologia de contaminação com minas e UXO's que é impar a nível mundial. Em virtude do longo tempo de guerra, mais de 30 anos, como também da diversidade de intervenientes com "modus operanti" bem distintos, implantando no terreno de forma convencional e maioritariamente não convencional uma diversidade de minas e armadilhas.

5. Outro problema causado pelos longos anos de conflito é a estado de conservação em que se encontram as vias, degradadas, e os campos com um mato (capim) muito denso que dificulta e aumenta a morosidade das operações de desminagem.



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6. A miscelânea de minas Anti Pessoais-APM, com as minas Anti Tanque-ATM e por vezes a sua conexão conjunta com outros Engenheiros Explosivos-EE na mesma área aumenta consideravelmente o risco e consequentemente o seu custo para desminar.

7. Os trabalhos de levantamento das áreas suspeitas também devem ser levados em consideração porque uma avaliação precisa e concisa da sua amplitude implica muitas vezes a trabalhos de desminagem para a marcação das áreas e a implementação de corredores de acesso.

8. Outro factor a ser levado em consideração será as condições atmosféricas em Angola, que limitam a rentabilidade do sapador e também as condições de trabalho, por exemplo na altura das chuvas é praticamente impossível trabalhar em segurança nas áreas minadas.

9. A variedade de solos em Angola também será um factor que poderá influenciar muito os custos a apresentar.

10. Os custos apresentados pelo “Mine Action Information Center-MAIC” a nível mundial fazem a sua caracterização, tanto para a desminagem manual como para a desminagem mecânica, em duas premissas, “baixo limite” e “alto limite” envolvendo o factor humano e mecânico e a sua capacidade de trabalho, como se pode contactar nos exemplos abaixo descritos;

a. Desminagem Manual.

(1) Baixo Limite $4 \text{ m}^2 / \text{hora} \times 1500 \text{ horas/ano} = 6.000 \text{ m}^2 / \text{homem/ano}$ (Croácia)

(2) Alto Limite $7 \text{ m}^2 / \text{hora} \times 2600 \text{ horas/ano} = 18.000 \text{ m}^2 / \text{homem/ano}$
(Afeganistão/Camboja)

(3) Baixo Limite $(\$10.000 / \text{homem/ano}) (6.000 \text{ m}^2 / \text{homem/ano}) = \$1.70 \text{ USD} / \text{m}^2$

(4) Alto Limite $(\$10.000 / \text{homem/ano}) (18.000 \text{ m}^2 / \text{homem/ano}) = \$ 0.57 \text{ USD} / \text{m}^2$

b. Desminagem Mecânica.

Entre $3.000 \text{ m}^2 / \text{hora}$ a $5.000 \text{ m}^2 / \text{hora}$ a trabalhar 12 horas por dia com 250 dias de trabalho por ano

(1) Baixo Limite $3.000 \text{ m}^2 / \text{hora} \times 3.000 \text{ horas/ano} = 9.000.000 \text{ m}^2 / \text{ano} = 9 \text{ km}^2 / \text{ano}$

(2) Alto Limite $5.000 \text{ m}^2 / \text{hora} \times 3.000 \text{ horas/ano} = 15.000.000 \text{ m}^2 / \text{ano} = 15 \text{ km}^2 / \text{ano}$



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11. Os custos apresentados pelas Organizações de Desminagem que operam ou pretendem operar em Angola são os seguintes:

a. Ajuda Popular da Noruega-APN. Custos baseados na sua experiência em Angola e referentes a custos directos;

- (1) Desminagem Manual, de 3 e 4 USD / m².
- (2) Desminagem Mecânica, de 1 a 2 USD / m².
- (3) Grupo de Desminagem composto por 80 sapadores = 600.000 USD / ano
- (4) Desminagem Mecânica (2 máquinas) = 300.000 USD / ano
- (5) Desminagem Mecânica Caspir (2 máquinas) = 200.000 USD / ano
- (6) Desminagem Mecânica Hydrema/Ardvaak = 400.000 USD / ano
- (7) Equipa EOD (3-4 elementos) = 50.000 USD / ano
- (8) Equipa de Reconhecimento, "Survey" (2-3 elementos) = 40.000 USD / ano

b. INTERSOS

- (1) Desminagem Manual, de 7 a 8 USD / m².
- (2) Desminagem Mecânica, 2 USD / m² = 0,70 USD (desminagem) + 1,30 USD (QC)

c. REAseuro

- (1) Desminagem Manual, 2,80 USD / m².
- (2) Desminagem Mecânica, 2,50 USD / m².
- (3) Desminagem Canina, só o cão 0,50 USD / m², cão com sapador 2,50 USD / m².
- (4) Sistema REST, amostras de vapor para redução da área, 0,20 USD / m².
- (5) Sistema VAMIT, só usado em áreas abertas, estradas, caminhos-de-ferro, linhas eléctricas, não utilizar em áreas cultivadas, 0,20 / m²



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(6) Verificação da área, por exemplo novas linhas de eléctricas, 0,15 USD / m².

(7) Desminagem de Estradas, combinação dos métodos anteriormente referidos. A largura prevista é de 7 metros (1km = 14.000 m²), preço por Km = 5.000 USD

d. MAMBOJI.

(1) Desminagem Comercial, 5 USD / m²

(2) Desminagem Humanitária, 3,75 USD / m²

CONCLUSÕES / PROPOSTAS

12. Após monitorização das organizações de desminagem conseguiu-se apurar o seguinte rácio entre Sapador/Capacidade de trabalho/Financiamentos/Custo por m²;

a. Sapador = 25 m² / dia, ordenado mensal 400 USD

(1) Sapador x 8 Horas /dia x 240 dias = 1.920 horas de trabalho por ano.

(2) Sapador x 25 m² / dia x 240 = 6.000 m² por ano.

(3) Sapador x 400 USD x 12 meses = 4.800 USD por ano.

b. Nesta premissa temos o seguinte valor de desminagem por m², custos directos;

(1) 4.800 USD : 6.000 m² /ano = 0,80 USD / m²

c. No ano de 2003 foram desminados em Angola 3.391,890 m² e foram obtidos financiamentos na ordem aproximada de 30.000.000 USD

(1) 3.391,890 m² x 0,80 USD = 2.713,512 USD (custo directo da área desminada)

(2) 30.000.000 USD: 3.391,890 m² = 8,84 USD / m² (custo global da desminagem por m²)

(3) 30.000.000 USD : 15.771 (minas AP e AT) = 1.902 USD por mina (custo para desminar uma mina).



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(4) 30.000.000 USD : 87.367 (minas AP, AT e UXO's) = 343 USD por mina/UXO
(custo para desminar/destruir/inactivar uma mina ou um UXO)

13. O cenário demonstrado no ponto anterior dá um intervalo de custos, entre os 0,80 USD / m² (custos directos exclusivamente do sapador em operação de desminagem) e os 8,84 USD / m² (custos envolvendo toda a abrangência do programa de acção de minas no país).

14. O intervalo de valores apresentado enquadra-se e é fundamentado por toda a problemática, discussão e valores apresentados na presente informação. Pois temos o custo básico (0,80 USD) e o custo abrangente (8,84 USD) onde estão contabilizados custos de implementação dos projectos e programas, formação, monitorização, avaliação, assim os custos logísticos e burocráticos.

15. No referido contexto e tirando a mediana ao intervalo de custos apresentado propõe-se que o valor do custo da desminagem em Angola seja de 4 USD / m².

16. Propõe-se também os seguintes valores para a desminagem manual e mecânica (consensualmente com um custo médio igual à metade do custo da desminagem manual):

- (1) Desminagem Manual, de 3 e 4 USD / m².
- (2) Desminagem Mecânica, de 1,5 a 2,5 USD / m².
- (3) Desminagem de Estradas, com verificação e desminagem combinada manual/mecânica/canina, para uma largura média de 7 metros (1km = 14.000 m²), 0,50 USD / m².
- (4) Verificação de áreas por exemplo para implementação de linhas eléctricas, 0,25 USD / m².

16. À consideração superior.

O CHEFE DO GABINETE TÉCNICO PERMANENTE

José Domingos Roque de Oliveira

ANNEX E



Fig. 1 Assessment Team with Intersos Program Manager



Fig. 2 Contact with UN Agencies



Fig. 3 Visit to Menongue Orthopaedic Center



Fig.4 Contact with International Committee Red Cross



Fig.5 Visit to old ammunition dump



Fig.6 Contact with beneficiaries



Fig.7 Contact with beneficiaries



Fig.8 Controlled/Verified now safe to drive, Kuchi, K. Kubango



Fig.9 Contact with Local Authorities, Kuchi, K. Kubango



Fig.10 Controlled Road (safe) and marking of mined areas



Fig.11 Access to Kuchi power station, manually de-mined by Intersos



Fig.12 Verification of INTERSOS de-miners' working conditions



Fig.13 Quality Control Activity



Fig.14 Open road after being de-mined by Intersos, Jamba Mineira



Fig.15 Contact with an NGO working in health care (AMI), Jamba Mineira, Huíla



Fig.16 Marking of mined areas (mine warning withdrawn by unknown)



Fig.17 Social Support due to the opening of roads



Fig.18 Quality Control in the task of Colui River



Fig.19 "Caspir" vehicles purchased in the project



Fig.20 SCOUT Mechanical Mine Clearance Machine (leased)



Fig.21 Contact with Governmental Authorities (Lubango)



Fig.22 Contact with OCHA (Lubango)



Fig.23 Reopening of roads, development of the country



Fig.24 Children: the future of Angola