República de Moçambique
Ministério dos Negócios Estrangeiros e Cooperação

INSTITUTO NACIONAL DE DESMINAGEM

THE FIVE-YEAR NATIONAL MINE ACTION PLAN

2002-2006

Instituto Nacional de Desminagem

iND

National Demining Institute

19 November 2001

TABLE OF CONTENTS

LIST OF ACROYNMS

ADP	*Accelerated Demining Program*
AR	*Area Reduction*
BoG	*Board of Governors*
DEPI	*Department of Research, Planning, & Information*
DESSOF	*Desminagem Sofala*
EOD	*Explosive Ordnance Disposal*
FADM	*Armed Forces of Mozambique*
HI	*Handicap International*
IMAS	*International Mine Action Standards*
IMSMA	*Information Management for Mine Action*
IND	*National Demining Institute*
MgM	*Menschen Gegen Minen*
MINSAU	*Ministry of Health*
MLIS	*Mozambique Landmine Impact Survey*
MMAS	*Mozambique Mine Action Standards*
MMCAS	*Ministry for Women and Coordination of Social Action*
MRE	*Mine Risk Education*
NMAF	*National Mine Action Fund*
NMAP	*National Mine Action Plan*
NPA	*Norwegian People's Aid*
PARPA	*Action Plan for the Reduction of Absolute Poverty*
PEPAM	*Program for the Prevention of Mine Accidents*
QA	*Quality Assurance*
QC	*Quality Control*
RBM	*Results Based Management*
SMA	*Suspected Mine Area*
SVA	*Survivor and Victim Assistance*
T2	*Technical Survey II*
UXO	*Unexploded Ordnance*

THE FIVE-YEAR NATIONAL MINE ACTION PLAN
2002-2006

1.0 BACKGROUND & RATIONALE

The objective of the **National Mine Action Plan** (NMAP) is to reduce the risk of injury or death caused by landmines and to contribute to the Government of Mozambique's poverty reduction strategy **– Plano de Acção para a Redução da Pobreza Absoluta** (PARPA) which calls for a 20 percent reduction in the number of Mozambicans living in absolute poverty by 2010. Based on these two inter-related humanitarian and developmental aims, the long-term vision of the Government is to work towards a **Mine Free Mozambique**.

The NMAP is drafted in accordance with the role and responsibilities assumed by the Government of Mozambique when it signed and ratified the **Ottawa Treaty** calling for the destruction of all of Mozambique's stockpiles by 2003 and the removal of all landmines by 2009. It is therefore also under the Articles of the Treaty that Mozambique is seeking support from the international community in striving to meet these internationally agreed to deadlines.

Presently, it is estimated that 70 percent of the Mozambican population lives in absolute poverty, which the Government defines on the basis of *access* to both material and social services needed for the attainment of a 'set of basic minimum conditions necessary for subsistence and well-being.' PARPA identifies six key priority areas for reducing poverty, namely; i) Education, ii) Health, iii) Agriculture and Rural Development, iv) Infrastructure, v) Good Governance, and vi) Macro-Economics and Financial Management.

In keeping with these national priority concerns, the NMAP adopts a **'development orientated'** approach that seeks to maximize the socio-economic impact and benefit of Mine Action in Mozambique by integrating its program framework into the overall PARPA strategy. A second function of the Plan is to provide operators with a rationale **set of national priorities** that will more effectively target Mine Action in the country over the next five years. By providing greater guidance in this area the Government will also be in the position to measure and report to the donors on the outputs and outcomes brought about through investments in Mine Action in Mozambique. Thirdly, the NMAP will act as the blueprint for all future **detailed Annual Workplans** prepared by the National Demining Institute (IND) who are responsible for the overall management and administration of Mine Action in the country. Ultimately, the NMAP is intended to provide the Government's Mine Action partners with a clear **global vision** of how it systematically intends to address the problem of landmines in Mozambique.

1.1 Mine Action's Link to Development in Mozambique

Mine Action is about eliminating exposure to the dangers posed by the presence of landmines and freeing-up the social-spaces in which daily human activity takes place. In Mozambique the importance given to work in this area is captured in the *UN Development Assistance Framework 2002-2006* in which the Government and the **United Nations** have identified Mine Action as one of the key strategic tasks to be tackled in their joint efforts in

providing an environment in which personal security is ensured for all citizens of Mozambique. Similar conclusions were found in the recently published **UNDP Study on the Socio-Economic Impact** of Mine Action that included Mozambique as one of the case study countries.

In this regard, it is anticipated that the NMAP will directly affect the ability of rural populations to better access planned Government initiatives described in the ministerial responsibilities in the PARPA. For example, to improve access to **educational** and **health** infrastructure key secondary and tertiary transportation routes will be prioritized for clearance. The removal of landmines will also have a significant impact on health and sanitation as **food security** and the **access to potable water** sources will improve. There will be an indirect extra benefit for girls and women as they will potentially need to spend less time on the collection of food and water for the household and perhaps will be able to devote more energy towards furthering their education or small scale economic activities.

Broadly-based, Mine Action also supports the need for increased communication and mobility of people, ideas, services, and resources. This expanded human geography can take many forms, for example, by easing the transportation of surplus goods markets much needed rural monitized **economic activity** is stimulated. Its contribution can also be viewed from a governance perspective, whereby populations that are presently isolated will be in a better position to receive a wide-range of existent or planned Government social services.

There are five related components to Mine Action, namely: i) Mine Risk Education, ii) Surveys & Mine Clearance, iii) Victim Assistance, iv) Stockpile Destruction, and v) Advocacy. An objective in the designing of the NMAP was to integrate and operationalize all five of these elements. This approach will help ensure that a comprehensive and sustainable Mozambican Mine Action program is constructed. There is also a clear attempt at incorporating the planning and evaluation process into all activities.

In drafting the NMAP the IND has synthesized the **Mozambican Mine Action Standards** (MMAS) and the new **International Standards for Humanitarian Mine Clearance** (IMAS) into the basic framework for all operations. The IMAS, which were endorsed by the United Nations and came into effect on 1 October 2001, provide guidance on the scope and criteria on which a safe and effective national Mine Action program and standard operating procedures should be structured. In adopting this approach it can be assured that the NMAP meets both the internationally agreed upon regulations for Mine Action, while maintaining an appreciation for the local Mozambican conditions in which Mine Action takes place.

1.2 General Mine Action Assessment

Although Mozambique has successfully moved from a state of conflict to one of political stability and economic growth, many of the problems associated with the existence of landmines remain. Indeed, in some cases the impact of mines have actually become more acute as the increased economic and social activity that has accompanied the transition has also resulted in a greater proportion of the country's territory being utilized.

Based on the **Mozambique Landmine Impact Survey (MLIS)**, which was certified by the United Nations in September 2001, it is estimated that more than 10 percent of the population are facing direct threats to their lives and livelihoods. The MLIS is an critical step forward

for Mine Action in Mozambique as it provides the first general overview of the scope and impact of landmines in the country and acts as one of the key sources of information for the NMAP.

The MLIS confirmed that the distribution of landmines and unexploded ordnances (UXOs) in the country is large, geographically diffuse, and random. The Survey measured in very basic terms the socio-economic 'blockages' presented by this irregular pattern of contamination and calculated that more that **1.7 million** people are directly affected by the existence of landmines.

As **Appendix A** illustrates in map form, the Survey helped to identify **791 villages** that are still living with one or more **Suspected Mined Areas** (**SMAs**) in their vicinity. The total estimated number of SMAs in the country – which range in size from one square meter to over several square kilometers – is **1,374.**

The data collected through the Survey process has been deposited in the **Information Management System for Mine Action (IMSMA)** database at the IND and provides a central point of departure for future Mine Action planning and management in Mozambique.

To re-cap some of the original findings from the Study:

- Landmines and UXOs are found in all 10 Provinces (123/128 Districts)
- At least 558 km^2 are suspected of having some degree of contamination
- There have been 172 known accidents in the past two years
- The most frequently *reported* blockages were:
    - **Agricultural Land** (464 communities, 950,000 persons, 369 square kilometers)
    - **Roads** (231 communities, 369,000 persons)
    - **Non-Agricultural Land** used for hunting, gathering firewood, and other economic and cultural purposes (180 communities, 291,000 persons, 137 square kilometers)
    - Blocked access to **Drinking Water** is less frequent (55 communities, 87,000 persons)

The MLIS provides the names and coordinates of the 791 villages and their corresponding SMAs. The IND has built on this information, and the mine impact score which ranks villages as either **High, Medium**, or **Low Impact**, to develop a set of specific targets for the 2002-2006 NMAP.

It must be remembered that the **exact size** of each SMA needs still to be determined as this was not part of the Survey's terms of reference. Therefore, the NMAP priority list is driven by the rationale that there is an urgent need to quickly undertake area reduction of the 1,374

SMAs through further **Analysis** and **Technical Surveys** followed by comprehensive **Explosive Ordnance Disposal (EOD), Mine Clearance,** and **Mine Risk Education** (MRE) programs.

1.3 NMAP Milestones

The **mission** of the NMAP is to move Mozambique towards the intermediate goal of being **Mine Impact Free** within **10 years**. Thus, at the end of the first Five-Year NMAP the following milestones will have been reached:

Impact Free Milestones 2002-2006

- All High and Medium Impact Sites Cleared
- All UXOs Destroyed
- All Existing Stockpiles Destroyed
- Remaining Low Impact Areas Surveyed and Marked
- Fully Operational National Mine Risk Education/Marking Program
- Long-term Survivor and Victim Assistance Programs Established

Impact Free, as defined here, includes the elimination of impediments to fundamental socio-economic activity and significant reduction in the risk of encountering landmines. Adopting this goal, the NMAP concentrates on development orientated priority-setting criteria that balance the needs of the local communities with those of the nation as a whole. Secondly, on the issue of decreasing the number of mine related accidents, there is an emphasis on area reduction, mine awareness, and developing a comprehensive marking system.

The NMAP should be seen as a **'living' document** that will be reviewed annually to ensure that targets are being met, and if need be, programming modifications contemplated in consultation with key partners. This will allow the IND to react to new trends, technological advancements, or requests from stakeholders in best delivering Mine Action programming.

2.0 MINE ACTION RESOURCES

2.1 National Demining Institute

The **legal framework** for the creation of the IND was laid down in Government of Mozambique Decree 37/99 and 38/99 of 10 June 1999. Decree 37/99 authorizes the establishment of the IND, spells out the institutional framework, and defines the IND's mandate. Decree 38/99 determines the national priorities and strategy for the execution of Mine Action activities in Mozambique.

Provisions are made for the establishment of coordination mechanisms at national, regional and provincial level. These will include the following:

- An Inter-Ministerial Standing Committee chaired by the Director of IND to ensure

that Mine Action efforts are directed towards achieving the national objectives for reconstruction and socio-economic development.

- Regional Coordination Offices to ensure that all Mine Action activities in the regions and provinces are executed within the national priorities.

The mandate of the IND is clearly defined:

> *To successfully establish and develop a co-ordination, supervision and management mechanism, in close co-operation with all other relevant organizations and agencies, to ensure the cost-effective execution of a National Mine Action Plan.*

According to the national priorities for Mine Action, which are identified in Decree 38/99, resettlement of the population in areas where it has access to public sector investments such as education centers, hospitals, commercial centers and other vital infrastructure is deemed to have primary importance. The Decree goes on to identify specific socio-economic objectives with special reference to areas already identified as high potential agricultural land, roads and bridges, railway lines, energy and industry.

Furthermore, the Government has determined the National Strategy for Mine Action in Mozambique concentrate on the following eight goals:

- Create national capacity to ensure sustainable Mine Action program management
- Create mechanisms to meet the needs of communities and to create participation by civil society at sub-national, provincial and district levels
- Promote an integrated approach for the support of socio-economic reconstruction and development
- Promote the use and development of technology to improve safety and efficiency
- Collect, verify, classify and disseminate all information related to the five pillars of Mine Action
- Coordinate Mine Awareness to prevent future accidents
- Coordinate assistance to Mine Victims and Survivors
- Facilitate Mine Action, with special reference to Quality Assurance Management

IND Strategy

IND's role is to facilitate Mine Action, establish national priorities, ensure technical and safety standards to safeguard its citizens, and keep the overall Mine Action efforts in line with national priorities, which include:

- Acting as focal point and co-ordination mechanism for all Mine Action activities
- Coordinating Mine Action support to humanitarian relief and resettlement programs, keeping the recent and possible future natural disasters in mind for contingency purposes
- Coordinating Mine Action support for the reconstruction and socio-economic development

- Developing a sustainable comprehensive and integrated National Mine Action Plan (NMAP)
- Facilitating the development and maintenance of an indigenous Mine Action capability
- Upgrading the existing database to an Information Management System for Mine Action (IMSMA), in order to supply user-friendly information to all agencies involved in mine and to other interested partners
- Developing, implement and distribute technical and safety standards for Mine Action activities
- Developing criteria and procedures for the accreditation of all Mine Action operators (commercial entities, NGOs, local and international) in Mozambique
- Developing and implement a quality assurance system for verification of Mine Action activities in conformity with the international standards for humanitarian and commercial Mine Action
- Participating actively in resource mobilization for the support of Mine Action;
- Leading Mine Risk Education initiatives
- Providing leadership in the area of Survivor and Victim Assistance
- Completing the Article 7 Reporting tasks as part of the Ottawa Treaty obligations

2.2 Humanitarian Operators

Mozambique has been fortunate to have strong and long-standing working relationships with several internationally known humanitarian operators, including the Accelerated Demining Program (ADP), HALO Trust, Norwegian People's Aid (NPA), Handicap International (HI), and Menschen Gegen Minen (MgM). Historically, based on the need to rapidly deploy mine clearance assets as part of the overall peacebuilding process, HALO Trust was tasked with working in the north of the country, while NPA and ADP began operations in the center and south respectively. HI and MgM arrived later on the scene and are both operational in the southern third of the country.

Funding for humanitarian operators is normally received via donor governments and is allocated on a multi-year basis and targeted in most cases for work in a specific province. In 2000 over $10 million was pledged to these 5 operators who employ over 1,000 Mozambicans. Since 1992 the humanitarian operators have cleared or destroyed:

- 8,129 km of roads
- 1,852 km of high-tension electrical wiring
- 90 km of railroad
- 61,068,551 m^2 of land
- 72,209 mines
- 34,406 UXOs
- 495,136 small arms and munitions

Most of the operators utilize a 'clearance mix' or 'tool box approach' that includes, manual, dog, and
mechanical demining capabilities. This allows for the increasing of productivity based on exploiting the best technical tool for the job. In many instances the different techniques are

used in combination. Based on this methodology, it is estimated that the humanitarian operators will clear approximately 8.6 million square meters in 2001.

HUMANITARIAN OPERATORS

OPERATOR	PROVINCE	CLEARANCE MIX			Projected Clearance for 2001	DONORS
		Manual	Dog	Mechanical	m^2	
Accelerated Demining Program	Maputo, Gaza and Inhambane	X	X	X	2,000,000	UNDP/SWT/SWE IRL/GER/NZL
Norwegian People's Aid	Sofala, Manica and Tete	X	X		2,800,000	NRW/SWE/HOL DNK/USA
Handicap International	Inhambane	X	X		1,100,000	HOL/FNL SWE/HOL/USA
HALO Trust	Zambézia, Nampula C.Delgado, Niassa	X			1,200,000	UK/SWT
Menschen Gegen Minen	Gaza	X	X	X	1,500,000	GER
Total					**8,600,000.00**	

2.3 Private Contractors

There are several joint venture commercial contractors active in Mozambique. Initially the commercial operators represented almost exclusively foreign companies but over time this sector has come to include a substantial number of Mozambican enterprises. Collectively, these operators normally undertake smaller focused clearance tasks, such as power lines, dams, highway expansion, industrial development, and commercial agricultural investments.

There are presently 12 commercial joint venture Mine Clearance contractors and 2 Quality Assurance companies authorized to work in Mozambique. The majority are Mozambican registered and included: Empresa Moçambicana de Desminagem (EMD), Associação Africana para a Desminagem e Desenvolvimento (Afrovita), Mozambique Mine Action (MMA), Necochaminas, Xibulukwa, JV Desminagem, Lince, Canadian International Demining Corps (CIDC), Qualitas, and Companhia de Garantia, Controle de Qualidade e Consultoria de Desminagem (CCQ). Foreign operators include: Mechem, Mine-Tech, Ronco, and the International Demining Alliance.

The annual output of this group is difficult to judge and predict as in some cases they are directly requested to perform a task, except when the donor funds are managed by the IND who are required to launch an open-tender competition process in such cases. In either case, it is difficult to calculate how much work a commercial contractor will obtain from one year to the next. Similar to the humanitarian operators, the contractors with the financial wherewithal use a mix of methods when conducting operations. It is fully expected and required that the private operators will continue to play an important role in future Mine Action in the country if the objective of becoming Impact Free by 2012 is to be reached.

2.4 Mozambique Armed Forces

The Armed Forces of Mozambique (FADM) play an important role in the area of mine clearance and stockpile destruction. As part of Mozambique's obligations under the Ottawa Treaty it must destroy its remaining stockpile of mines (minus a small cache for training purposes) by 2003. The first such destruction was held in September 2001 and events will be carried out until the end of 2003.

In the area of clearance, FADM has approximately 70 deminers posted in each of the countries three regions. So far they have removed landmines from high economic installations such as the Maputo - Ressano Garcia powerline; CFM extension between Goba-Salamanga; and the towers for the cellular telephone network line in the south of the country. In the north and center the emphasis has also been on power lines and railroad infrastructure. FADM is also responsible for the destruction of Mozambique's existing landmine stockpiles.

It should be noted that the IND and FADM have a close working relationship and it is anticipated that as the size of the mine problem is reduced that FADM will provide the long-term national mobile clearance capacity.

3.0 INPUTS & TRANSITION

The development of the NMAP is predicated on extensive consultations with key members of the Mine Action community, donors, provincial level authorities, government line-ministries, and approximately 7,000 people who were interviewed for the MLIS. The IND firmly intends to continue this open process of consultations in future development of annual work-plans and iterations of the NMAP.

The Plan is built on the **standard operational procedures** outlined in the Mozambique and International Mine Action Standards. The structure of the NMAP follows a simple **Results Based Management (RBM)** methodology that is a common organizational tool utilized in development planning, monitoring, and evaluation. The IND will manage, administer and use the NMAP as the framework for its annual operational and resource mobilization planning efforts.

Based on a deeper analysis of the original MLIS outputs several further **strategic assumptions** have been calculated and form the basis for the operational component of the NMAP found below in Section 4.0. It must be stressed that there will be a **period of transition** during the first year of the Plan when the focus will be primarily on Technical Surveys designed to exactly define the boundaries and characteristics of the SMAs. Once this process is completed then it is expected that all future mine clearance tasks will be drawn from the IND database. However, during the interim period when the Surveys are being completed, mine clearance plans devised by the NGOs for 2002 will remain in place.

To meet the goal of a Mine Impact Free Mozambique by 2012, the following **minimum inputs** are required over the period ending in 2006:

Core Inputs 2002-2006

- Create and Maintain **3 IND Quality Assurance Teams** by 2002
- Clear **245 UXO** sites by the end of 2003
- Destroy **Existing Stockpiles** of 37,500 Landmines by 2003
- Complete all Technical II Surveys by 2006
- **Increase** annual Mine Clearance to 10 million m^2 by 2006
- Deliver **National** Mine Risk Awareness Program to **3 million people** by 2006
- Reduce landmine accidents by **80 percent** by 2006

4.0 MINE ACTION ACTIVITIES 2002-2006

This section gives an overview of the major Mine Action initiatives planned for Mozambique over the course of the next five years. As is illustrated in the **Mozambique Mine Action Framework** on the following page, most of the activities are mutually supporting and dependent on the existence of a strong organizational and management capacity at the IND. The Framework helps demonstrate IND's core strategic position within the overall management of Mine Action in Mozambique.

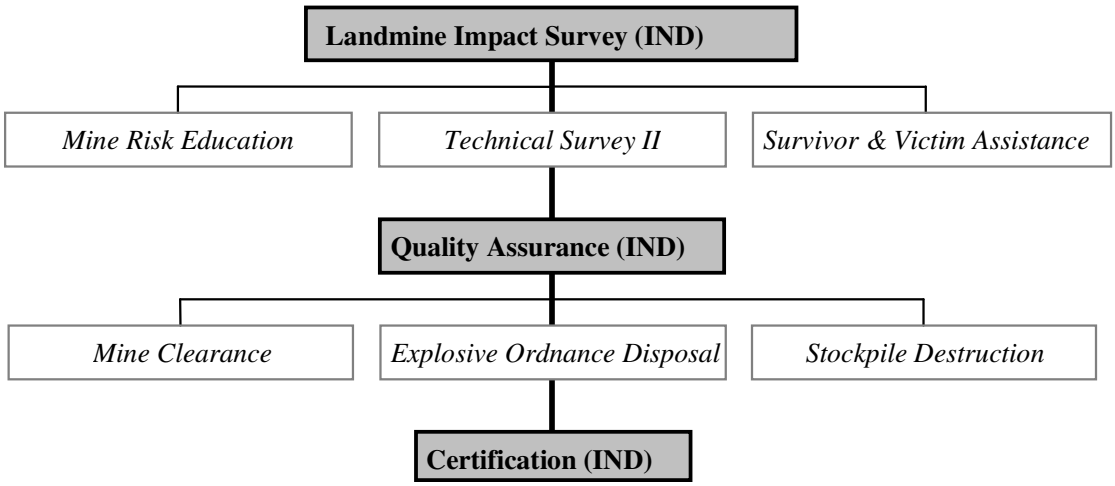
As will be explained in detail, there are several **technical activities** that will be executed by the IND, namely, additional Landmine Impact Survey, Quality Assurance, and Certification. While other undertakings such as MRE and SVA will require more of a coordinating role on-behalf of the Institute. There are also several IND internal operations, in particular: Research, Monitoring and Evaluation; Capacity Building; Information Management; and Resource Mobilization outlined in the NMAP.

In some areas there are overlaps between IND's coordinating responsibilities and actual program delivery by the Mine Action partners. This is the case for MRE and SVA where IND will have a limited facilitator role, while Mine Action partners will actually be responsible for program deliver at the field level.

The circumstances related to Technical Surveys, Mine Clearance, Explosive Ordnance Disposal, and Stockpile Destruction are more clear-cut in that they will be carried out by either FADM, private, or humanitarian organizations accredited by the IND.

Based on the Mine Action Framework each of the core activities in the NMAP are described in terms of: i) objectives, ii) activities, iii) inputs, iv) outputs, and v) outcomes. Budgets are included for IND inputs, however the process of costing all partner executed activities will be based on further consultations and joint program development. As stated earlier, the objective for now is to provide a global overview of the priorities of the Government and their expected impact and duration.

MOZAMBIQUE MINE ACTION FRAMEWORK



.

4.1 Mozambican Landmine Impact Survey

Given that over 30 percent of the communities in the MLIS were reported as **'false-negatives'** – in other words they were indeed impacted when expert opinion had indicated there was no problem – there is a need to conduct a limited amount of further MLIS work in order to strengthen the planning and priority-setting accuracy of the IND. It is envisioned that there will be a need for in-house LIS capacity for at least the first 18 months of the NMAP.

4.1.1 **Objective:** Supplement findings of MLIS with limited further Survey activities designed to broaden the geographic coverage area of the original findings.

4.1.2 **Activities:** Conduct a thorough analysis of all the current MLIS data to determine the cause of the high rate of false-negatives as well as visit areas not reached by the Survey Teams due to logistical complications but still suspected of being contaminated. Additionally, closely cross-reference MLIS with on-going Survey activities conducted by the four major humanitarian NGOs and undertake follow-up surveys to address shortfalls in coverage in the original Survey.

4.1.3 **Inputs:** This activity will benefit greatly from the existence of a range of LIS equipment donated by the Government of Canada. The key input requirement would be the creation of a **4 person mobile team** based at IND in Maputo. The Unit would fall under the direction of the **Department of Research, Planning and Information** (DEPI).

4.1.4 **Outputs:** Accurate and complete coverage of all SMAs; their location; physical geography; socio-economic impact on the communities at risk. This information will be deposited in the IND - IMSMA database and serve to better orientate Technical Survey II and Area Reduction described in detail in Section 4.2.

4.1.5 **Outcomes:** Improved coordination, priority-setting, monitoring, and evaluation capacity.

4.2 Technical Surveys & Marking

Technical Surveys and Marking represent two of the most important activities within the NMAP. A **Technical Survey II (T2)** follows a Landmine Impact Survey and provides more detailed technical information on known or suspected hazardous areas. It should be remembered that the MLIS concentrated on trying to measure the socio-economic impact of landmines, and, in crude-terms, establish the location and size of a given SMA.

Specifically, T2s provide exact size and location of the area to be cleared, as well as information on depth of clearance, soils, and vegetation. All of these pieces of data are factored into the final **terms of reference** for the designing of an accurate and safe operation. The process of eliminating land that was considered to be contaminated, but in actuality is determined to be free of mines, is known as **Area Reduction.** Area Reduction is a quick and very cost effective way of returning suspected areas to its inhabitants without actually deploying costly Mine Clearance assets. In Mozambique Area Reduction of SMAs can be as high as **70 percent** of the original total suspected areas.

It is therefore critical that a rigorous T2 process is lunched as soon as possible so that a more exact picture of the size and nature of the mine problem in the country can be obtained. This refined analysis will provide more **accurate timelines** and **costs** for clearance over the next five years. It is only after an SMA has been precisely demarcated that **Mine Clearance** operations will take place. After the clearance operation is completed a **Technical Survey III** will be conducted by the IND to certify the land free of landmines: thereafter the land will be returned to the local community.

In the case of Mozambique where the total area under suspicion is considerable, the T2 process provides the additional benefit of being able to direct **Marking** efforts that in some instances can be done at the same time as the T2.

4.2.1 **Objectives:** To significantly, and accurately, **reduce** the **number** and **size** of all Suspected Mined Areas **within 5 years**. Secondly, to use this information to task Mine Clearance, Marking, and Mine Risk Education initiatives.

4.2.2 **Activities:** Based on the provincial data breakdown in **Appendix B**, the focus of the Technical II Surveys will be to concentrate on the following priorities:

4.2.2.1 **High & Medium Impact SMAs over 1 km^2**. This cohort alone represents **20.6 percent** of the national total area of 558,348,588m^2, accounts for **3.2 percent** of the SMAs, and **8.9 percent** of the population at risk.

4.2.2.2 **High & Medium Impact SMAs between 10m^2 – 1km^2.** This cluster constitutes **27 percent** and **6.0 percent** of the total area and SMAs respectively. The population at risk is estimated at **23 percent** of the national total.

4.2.2.3 There are **3 SMAs** in the Low Impact category that contain a very disproportionately large **34 percent** (187,370,000 m^2) of the total national suspected area under threat and are therefore viewed as needing an immediate re-assessment.

4.2.2.4 **Remaining Low Impact communities**, representing **approximately 56 percent** of the population, **10.5 percent** of the landmass, and 753 of the total SMAs, will receive a T2 starting in year 3 of the NMAP.

4.2.2.5 Develop a **Marking System** that incorporates a combination of markers, signs, and physical barriers in all recognized minefield locations which clearly identify the boundaries of the zone. A Marking maintenance schedule will also be established

4.2.3 **Inputs:** In keeping with the IMAS, it will be necessary to perform T2s on the **1,129** out 1,374 SMAs that IND has determined are minefields (as opposed to the 245 UXO sites described in Section 4.3). The total area contained in the **1,129** SMAs is **558,348,588m^2**. Presently the humanitarian operators possess T2 capacity, however given the scale and urgency of the problem it is anticipated that in some cases the resources dedicated to this exercise will have to be increased. In order to meet the five-year target of T2 surveying the entire country by 2006, the IND estimates there will be a need for at least **50 (4 man) T2** teams working in the country on annual basis.

4.2.4 **Outputs:** The T2 process will provide documented reports pinpointing the exact size and location of the 1,129 minefields highlighted in the MLIS. On average the T2 can be expected to reduce the SMAs by between 50-70 percent. A second crucial output of the T2s will be a guide to where Marking and MRE should be targeted in-lieu of Mine Clearance which is some instances could be delayed for several years due to priority rankings.

4.2.5 **Outcomes:** Sound tendering, resource mobilization, and tasking framework.

4.3 Explosive Ordnance Disposal (EOD)

EOD involves the detection, identification, recovery, and disposal of a UXO. Of the 1,374 SMAs 18 percent (245) were discovered to be UXO tasks. This is a large proportion, and from a clearance perspective, is easier to deal with then actual minefields that require more time, as well as larger human and financial inputs. Occurring concurrently with the T2 activities there will be an intensive campaign to eliminate UXOs within the first two years of the NMAP.

Traditionally EOD has been undertaken on an *ad hoc* or emergency response basis with no systematic approach to addressing this resolvable problem. At present, the humanitarian operators do not have dedicated EOD teams, and thus, there is a need to build a short-term small devoted capacity in this area.

4.3.1 **Objectives:** Destroy all UXOs in Mozambique by 2004.

4.3.2 **Activities:** The creating and deployment by the major regional humanitarian operators of specially trained EOD Teams expert in UXO removal to all provinces in Mozambique. Given the anticipated pace of removal, the IND Department of Operations would assign one person to assist in the coordination and timely reporting of completed tasks.

4.3.3 **Inputs:** Based on the provincial distribution of the UXO problem in the country and the capacity of the Operators involved, the creation of the requisite small number of 4 person mobile teams to clear all known UXOs by 2004. The teams would normally consist of at least a supervisor, deminer, driver, and medic.

4.3.4 **Outputs:** An 18 percent reduction in the number of SMAs within 2 years of launching the NMAP.

4.3.5 **Outcomes:** UXO contamination affecting **280,000 people** (16 percent of impacted population) removed allowing for unencumbered pursuit of basic human development activities.

4.4 Mine Clearance

Without completed T2s it will be difficult to judge the exact size and cost of Mine Clearance over the next five years. For example, if the MLIS data is to be used without any further analysis, area reduction, or T2 work, the minimum total cost to clear the entire country would be approximately $380 million. Clearly this number does not accurately represent the resources required to rid Mozambique of its landmine problem. At this early juncture in the planning process it is therefore not possible to establish reasonable estimates for the size, cost, and clearance outputs for the period ending 2006.

Given this unrealistic estimate, due diligence compels that in the first 6 months of 2002 the operators continue with current clearance tasks with the objective of completing these targets

by June 2002. After this time it is expected that the first T2s will have been completed and will from that point forward form the basis on which mine clearance will be tasked. This 6 month **transition period** will also provide the IND and the operators the time to synchronize the sharing of information and individual provincial planning prospectuses based on the NMAP objectives.

Nevertheless, several strategic assumptions can still be offered at this early stage that will help provide direction and establish a general framework in which the High and Medium priority tasks can be addressed.

4.4.1 **Objectives:** To safely and cost-effectively clear all High and Medium Impact SMAs by 2006.

4.4.2 **Activities:** Based on the MLIS the current SMAs in the High and Medium Impact cohort totals **146,804,320m^2.** Building on the more definitive T2 findings (which could conservatively reduce this number by 50 percent), the Mine Impact Score, input from provincial authorities, and operators, a list of exactly defined tasks will be produced within the first 6 months of 2002. This priority list will form the basis for all future mine clearance assignments. Lastly, the IND will conduct all **post-clearance certification** through the Technical Survey III process.

4.4.3 **Inputs:** There will be a need to maintain the present minimum annual **8.6 million square meters** clearance capacity – which should include an appropriate combination of manual, canine, and mechanical clearance assets. Given the desire to be Impact Free within 10 years it is fully expected that there will be a continued need to involve private contractors to augment this annual output.

4.4.4 **Outputs:** Based on this measured approach, all of the High and Medium Impact SMA affecting more than **530,000** people and at one time consisting of **146,804,320m^2** of unproductive land will be cleared by 2006.

4.4.5 **Outcomes:** Eliminating the risk to **304 communities** of the most effected populations in Mozambique that will provide them the basic living environment in which they can freely pursue, and be supported, in their own material and human development quests.

4.5 Quality Assurance & Certification

As an integral component of Mine Clearance, **Quality Assurance (QA)** involves the accreditation of all operators prior to the commencement of operations, and, the monitoring of all operations **during** the clearance process to ensure that management and operational standards are being achieved. The purpose is for the Government to be confident that operations are carried-out in a safe, effective, and efficient manner. Therefore, QA in the

Mozambican context will also include on-going formal discussions with managers and deminers based on reports and records submitted to the IND.

The QA process also includes an important sub-activity known as **Quality Control (QC)**. QC is a final physical inspection that takes place at the end of the clearance procedure but prior to the official handover of the land to the local community. It should be noted that the communities will be informed as to the progress of mine clearance so that they become part of the process and will help ensure a necessary degree of trust need when eventual handover takes place.

Based on the QA/QC reports the final component of Mine Clearance, the **Technical Survey III Post-Clearance Sampling** and **Certification** process, takes place. If an area is found to contain no mines, UXOs, residue, or fragments it is then certified as 'cleared,' returned to the community or local authorities, and the coordinates entered into the IND Database.

4.5.1 **Objective:** Compliance with all MMAS and IMAS Mine Clearance operating procedures, including adopting appropriate clearance procedures that are deemed by the IND to be effective, efficient, and safe.

4.5.2 **Activities:** Undertake close monitoring throughout the mine clearance process; certify compliance with procedures; and, sample cleared areas as part of the final inspection process prior to turning-over the land to the local community.

4.5.3 **Inputs:** Three Regional QA Teams created consisting of 5 persons each and overseen by a QA manager based at IND in Maputo. There will be one team based in Nampula, Beira, and Maputo respectively.

4.5.4 **Outputs:** In following a rigorous QA/QC and Post-Clearance set of procedures the Government will be able to declare, and document, all lands safely cleared of landmines.

4.5.5 **Outcomes:** Beneficiaries will be **confident** that their lands are **safe** from hazards associated with landmines and re-occupy the territory. This outcome will have a meaningful humanitarian and developmental impact as communities will finally be able to put the legacy of landmines behind them.

4.6 Mine Risk Education

There is an urgent need for an aggressive and sustained Mine Risk Education and Marking campaigns to be re-launched. Over the past several years it has become well understood that Mine Clearance and MRE must be more closely linked if the optimum desired impact of reducing risk and accidents is to be achieved. The **proposed UNICEF standards** for MRE advance the view that a comprehensive approach to MRE should include joint planning and information sharing process with partners from within, and outside of, Mine Action. In particular, this means that the impacted communities must be involved in the design and

maintenance of MRE and Marking initiatives in their areas. Involving the communities will help make sure that the appropriate response and resources are allocated to the particular problem from a local perspective.

There are a number of different communication and educational techniques and materials presently in use in the area of MRE, including: i) posters, ii) radio, iii) theater, iv) leaflets, v) audio tapes, vi) photographs, and, vii) games. As noted in Section 4.2, Marking must go hand-in hand with MRE and both should be systematized, culturally sensitive, and locally relevant in terms of materials used and messages broadcasted to be effective. Both of these efforts are designed to raise public awareness and change behavior in all communities at risk in Mozambique. Since there are over 1,000 communities who will not have the SMAs in their vicinity cleared until the Technical II Surveys are completed and Mine Clearance assets dispatched thereafter, a MRE/Marking process must be put in place as soon as possible.

Until recently Mozambique benefited from the **Program for the Prevention of Mine Accidents (PEPAM)** that was executed by **Handicap International (HI)** in concert with the Government between 1995-2001. PEPAM was designed to deliver MRE and build national capacity to take over the program after its conclusion. In total there were 500 fieldworkers responsible for delivering locally produced Mozambican MRE and Marking materials to districts in the country that were suspected of being heavily impacted by mines *(this was done without the benefit of the MLIS).* It is estimated that at least 2.7 million people have received some form of MRE through the project. However, as the MLIS points out, there have been 172 reported victims in the past two years, which is a positive reduction in the numbers which followed the Civil Conflict when there were between 50-60 accidents per month, but still represents an unacceptable human toll.

PEPAM also collected information on the general character of the landmine problem and data on the nature and number of accidents per annum. This information was placed into a database and then transferred to IND in August 2001 when the projected ended.

The main PEPAM partners included the IND, and its predecessor, the National Demining Commission, the Ministries of Education, Health, Agriculture, Social Action, Provincial authorities, and the Police. Furthermore, there was a network of 84 NGOs and CBOs which included the Mozambican Red Cross.

It is now the desire of the Government to re-kindle PEPAM. In an effort to preserve the momentum and capacity created through the project, there is a need to promptly re-establish the networks of people and organizations that worked on PEPAM. IND currently possesses **3 MRE teams** of 8 persons each working in the flood impact areas in south and central Mozambique as part of the emergency response effort launched in 1999 and expected to conclude at the end of 2001. The IND plans on retaining some of this capacity and have it form the core of a managerial-coordinator team in the new national MRE/Marking program to be based at IND in Maputo.

4.6.1 **Objectives:** Re-launch a comprehensive Mozambican Mine Risk Education and Marking program based on the original tenants of PEPAM.

4.6.2 **Activities:** Utilizing in-house capacity and building on existing PEPAM and MLIS data, the IND would conduct a systematic MRE/Marking needs assessment of the population under threat and what further steps in the area of coordination, data, information, methodologies, and materials would be required to deliver a national program. Further detail on the nature and number of recent accidents would also be an imperative to help engineer a program that would successfully stimulate a lasting behavior change. Continuing to develop Mozambican pedagogical approaches would be central to success and therefore predicates the involvement of a wide network of actors working in tandem with the IND. At the intra-governmental level the IND will work closely with counterparts that would be based at the Ministries of Health, Education, Women and Social Action, and Agriculture to ensure a Government-wide effort. The permanent inclusion of MRE in the primary school curricula and developing a sustainable Marking system will be pursued.

4.6.3 **Inputs:** It is expected that 5 core staff from the emergency flood project would be retained to form the nucleus of the IND MRE Unit. The Unit would be under the direction of the Department of Operations. There would be a requirement to hire a nationally recruited MRE Technical Advisor for the initial two-year start-up phase.

4.6.4 **Outputs:** Nationally coordinated MRE database and information collection and exchange; development and inclusion of updated MRE materials included in all primary school curricula; extensive and sustainable Marking system; contact with 3 million persons per year.

4.6.5 **Outcomes:** An effective MRE/Marking program which continues to help decrease in the number of victims on an annual basis. Secondly, a population that is informed and able to recognize, report, and negotiate the environmental hazards poised by landmines while awaiting Mine Clearance will be materially and psychologically better off.

4.7 Survivor & Victim Assistance

As part of an integrated response to Survivor and Victim Assistance (SVA) a decision was taken in 1998 at the First Meeting of States Parties to the Ottawa Treaty in Maputo that SVA would become the general responsibility of Ministries of Health in affected countries. In the case of Mozambique, this responsibility is to be shared between the **Ministry of Health (MINSAU)** and the **Ministry for Women and the Coordination of Social Action (MMCAS)**.

The Treaty adopts an all-inclusive definition of Survivors and Victims which consists of the individual(s) involved in a mine incident, their immediate families, and the mine impacted communities in which they live. It goes on to state in more specific terms that these efforts should include the "assistance for the care and rehabilitation, and social and economic

reintegration, of mine victims." Thus, it is widely held that programs should be designed to support the long-term shared responsibility of SVA within all three of these affected groups.

The main sub-parts of SVA are:

- Disability Policy and Law
- Health and Social Welfare Research & Data Collection
- First Aid & Primary Health Care
- Hospital-Medical Care
- Rehabilitation (Physical & Physiological)
- Social and Economic Reintegration (skills & vocational training, income generation activities, social/sports associations)

4.7.1 **Objectives:** To develop a coherent and coordinated national SVA policy and program which adopts an integrated long-term approach to the plight of victims and survivors**.**

4.7.2 **Activities:** Working closely with MINSAU and MMCAS, the IND will draw upon international Mine Action standards and techniques to assist the Ministries to help develop appropriate strategies and methodologies for providing **long-term assistance** to Survivors and Victims. The IND will also share all accident information gathered through its regional networks and act as a resource mobilization focal point. Within the NMAP, IND's role will concentrate on coordination and information dissemination. It is foreseen that an integrated and detailed Governmental response will be tabled by mid-2002 at which time a global budget and plan of work for this activity will be added to the NMAP.

4.7.3 **Inputs:** There will be a need for one full-time SVA coordinator to be based at the IND. The Coordinator will be responsible for working closely with the MINSAU and MMCAS and co-developing a national SVA response.

4.7.4 **Outputs:** Needs of Survivors and Victims are addressed in Government national policy, accurate and timely data collection and analysis produced, adequate multi-year funding raised, and practical programs delivered at the District Level.

4.7.5 **Outcomes:** With socio-economic vulnerabilities reduced and self-reliance enhanced – and by extension other disabled persons who would also benefit directly or indirectly from the Government action on SVA – there would be a significant improvement in the individual quality of life for all persons suffering from a mine incident in Mozambique.

4.8 Stockpile Destruction

As part of its obligations as a signatory to the 1997 **Ottawa Treaty,** Mozambique has begun the process of destroying its stockpiles: the first demolition took place on 18 September, 2001. As **Article 4** of the Treaty notes, all stockpiles in the possession or under the jurisdiction of the State Party must be destroyed not later than five years after ratification: which in the case of Mozambique is 2003. The Government of Mozambique will rely on the **Armed Forces of Mozambique (FADM)** for this important task. Once the destruction has taken place all data related date will be included in the **Article 7 Transparency Reports** that the Government will submit to the United Nations on an annual basis.

FADM has submitted a detailed workplan and budget for the destruction of the existing 37,500 mines in its possession. The demolition will be coordinated from Maputo and carried out under the command of the Regional Military base structure.

4.8.1 **Objectives:** Destroy all of Mozambique's stockpiled antipersonnel mines by 2003.

4.8.2 **Activities:** FADM will conduct safe and public destruction of the country's remaining stockpiles.

4.8.3 **Inputs:** In the case of Mozambique the Open Detonation (OD) process is the preferred option. FADM will require budget support for training, transportation, explosives, and ground preparations.

4.8.4 **Outputs:** Destruction of all remaining stockpiled landmines and compliance with Ottawa Treaty obligations.

4.8.5 **Outcomes:** Although the remaining stockpiled mines pose no immediate threat to the general population, their destruction does guarantee that the will not be used in Mozambique, or elsewhere in the future. It is also a powerful statement to other post-conflict countries regarding demilitarization process which Mozambique is still undergoing years after the Peace Accords were signed in 1992.

4.9 Research, Monitoring & Evaluation

Central to IND's role in managing the NMAP will be to conduct Research, Monitoring & Evaluation (RM&E) on the impact that Mine Action is having on reducing poverty and physical risk. Unlike QA, which focus on the technical work of Mine Clearance, RM&E will concentrate on the **broader process** of Mine Action and its **measurable socio-economic impact**.

4.9.1 **Objectives:** To better understand and explain the link between Mine Action and Poverty and Risk Reduction in Mozambique.

4.9.2 **Activities:** Under the direction of DEPI, the IND will undertake three thematic socio-economic impact studies per year exploring the development consequences of mine action. In year one, the three research projects under consideration include: a) socio-economic reintegration of victims, b) mine risk education as a long-term public health initiative, and c) relevance to decreasing food systems under stress in post-clearance communities. In following years issues of children, gender, and the psychological impact of living long-term with landmines are potential topics.

4.9.3 **Inputs:** The IND will be responsible for organizing and managing the 3 annual studies. In some instances it would team with local research partners such as Desminagem Sofala (DESSOF), University Catolica, University Eduardo Mondlane, or other line-ministry. DEPI will be required to hire a additional staff members for each of the two regional offices plus one more to be based in Maputo to help facilitate the studies.

4.9.4 **Outputs:** Three formal impact studies per year disseminated to all relevant national and international partners. Internationally, the studies will add to the literature and methodologies on best practices in this new sub-field of development. Meanwhile, new management and policy recommendations will be produced at the national level to better target mine clearance interventions.

4.9.5 **Outcomes:** A more formal and articulated approach to integrating mine action into the larger PARPA process.

4.10 Coordination & Information Management

The heart of IND's reporting and information management structure is the **Database Unit**. With the completion of the MLIS, the introduction of the IMSA database system, and the co-development of a new Mine Action interface software program known as **'Pathway'** with **Cranfield University**, the IND is now positioned to begin to **accurately** and **timely** provide information to all stakeholders and partners regarding most aspects of Mine Action in Mozambique. Traditionally, information and data have been poorly collected, archived, and disseminated due in large part to the lack of a firm system and capacity at the IND to receive, report, and monitor operations.

Indispensable to the successful execution of the NMAP is the ability to coordinate and register Mine Action activities as they are planned, tasked, and completed. The information flows need to be two-way in nature with the IND acting as the central repository of information sent to Maputo to be included in the IMSMA database. The IND in-turn, must be able to supply this information in publishable GIS/Map formats.

4.10.1 **Objectives:** Provide precise and timely information to the Government, Operators, Donors, Stakeholders to facilitate better

planning, management, and reporting of all Mine Action activities in Mozambique.

4.10.2 **Activities:** Meet internal information demands from the IND Departments of Planning and Research and Operations in their quest to develop and monitor priority lists and demining tasks. Externally, share data with partners and stakeholders regarding specific material requests. Maintain physical and logical data base architecture for maximum retrieval efficiency; review and approve databases to ensure the storage, security, selection and retrieval of information is in a logical, orderly manner. Train, equip, and link through the Internet to the Maputo headquarters with data collection in the regional offices of Nampula and Beira.

4.10.3 **Inputs:** Based on funding received from Canada the primary inputs for the Unit have been covered until the end of the first quarter of 2003. The support includes budgets for headquarter and regional office staffing, technical assistance, and the purchasing of hardware and software.

4.10.4 **Outputs:** The outputs would include:

- Maps and Reports (Hard-Copy and Digital)
- Location and Impact of Minefields: surveyed & cleared
- Present and future Operational Targets (LIS, T2, Clearance, etc)
- Plotting of all Accidents
- Planned and On-going Mine Risk Education Programs
- Planned and On-going Survivor & Victim Assistance Programs

4.10.5 **Outcomes:** At a national level, a fully functional Database Unit will readily allow the Government to portray the Mine Action situation in textual and graphical from which will be highly useful in the quantification and qualification of the landmine and UXO problem in the country. On a more operational plain, the data and information streams that are established via the Unit will allow for the partners and Government Ministries responsible for delivering Mine Action program activities in the country to ensure they are properly targeting and reporting their location and status to one central information node.

4.11 Capacity Building

The **UNDP Support for Capacity Building to the National Demining Institute Project** has been fully operational since June 2001 when the entire complement of 5 Technical Advisors began working at the IND. Presently the project is funded through contributions from Denmark, Canada, and Sweden. An over-riding concern of the initiative is to make sure that the interventions made at the IND are sustainable and **process orientated.** Therefore, the primary aim is for the transfer and utilization of technical expertise to take place within well-defined **operational systems** and

broader **knowledge networks**. In support of these goals the Project is addressing the current 'capacity gaps' from three integrated perspectives: i) individual training needs ii) IND's strategic planning and management requirements, and iii) global Mine Action trends.

4.11.1 **Objectives:** To build sustainable human and organizational national capacity at the IND that will allow for the accurate definition, formulation, management, and monitoring of all future Mine Action in Mozambique.

4.11.2 **Activities:** Develop Mine Acton systems and training packages that will strengthen institutional performance and individual skill levels in the areas of: i) organizational and financial management, ii) strategic planning, policy formulation, coordination, and execution iii) surveying iv) quality assurance, iv) mine risk education, v) research, monitoring and evaluation, vi) information management/GIS mapping, and, vii) resource mobilization.

4.11.3 **Inputs:** Continuation of the work of the Chief, Operations, and Finance technical advisors until the end of 2004. The Information and Database advisors will be required until the end of 2003.

4.11.4 **Outputs**: Trained, qualified, and experienced managerial and operational staff capable of forwarding the Government's stated objectives and obligations as outlined in its Decrees, NMAP, and the Ottawa Treaty.

4.11.5 **Outcomes:** On completion of the project it is expected that IND will be in the position to visibly lead a nationally coordinated Mine Action effort utilizing modern management and technical approaches. It is anticipated that the IND will be held-up as a **model** for how the Mozambican **civil sector** can, with adequate financial and technical support, perform in a highly efficient and professional manner.

5.0 Resource Mobilization & National Mine Action Fund

Rationale & Objectives

Mine Action in Mozambique is highly dependent on **Resource Mobilization (RM)**. In the past RM was normally conducted on a bilateral basis between operators and donors. To assist in streamlining RM efforts and coordinating them with priority activities on the ground the Government outlined its vision of the creation of a **National Mine Action Fund (NMAF)** in the original Decrees establishing the IND. The Fund is seen as an essential tool for ensuring that all future Mine Action operators and donors coordinate their efforts based on the priorities spelled-out in the NMAP and therefore its creation is seen as crucial to the success and sustainability of Mine Action in Mozambique. It is expected that the centralization of donor funds will allow for more efficient use of resources and improve the

ability of the Government to coordinate and report on issues related to progress, impact, and future resource mobilization requirements.

Operationalization of Funds

Based on priorities established in the NMAP, operators will submit formal proposals to the IND to undertake a specific activity in a given locale. Once the activity is approved by the IND the funds will be released from the Fund. On completion of the work a full report will be produced by the IND and submitted to the Board of Governors (BoG) of the Fund.

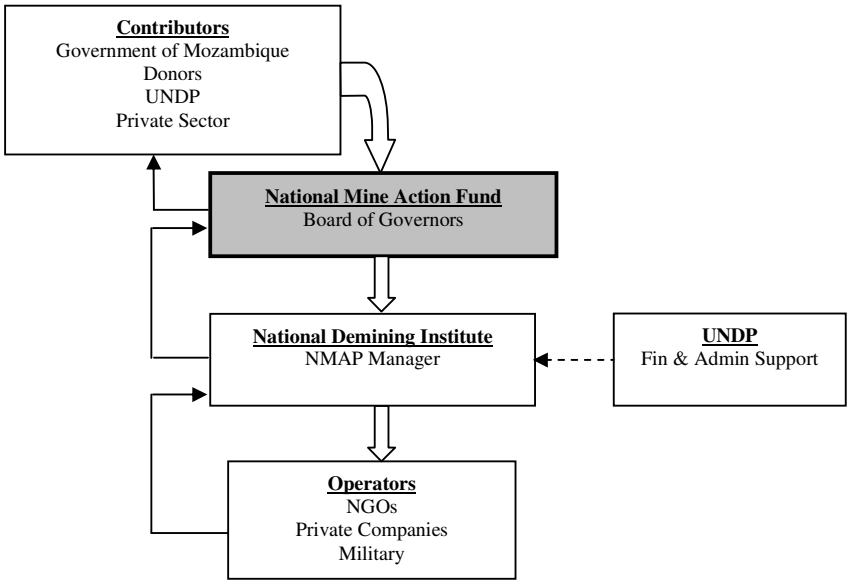
Structure

Financial resources earmarked for Mine Action would be deposited in a locally administered account overseen by the BoG. The BoG would be made up of the Ministry for Foreign Affairs and Cooperation, Donor Community, and UNDP. IND would be *ex efficio* to the BoG and act as the Fund Managers. To ensure transparency and accountability, UNDP will provide technical assistance to the IND on the day-to-day execution of the Fund through the Capacity Building Project, while the UNDP Country Office will review all quarterly financial disbursements and requests for further funding.

Administration & Reporting

The Fund will be subject to internal and external auditing procedures provided for in the financial rules, regulations and procedures of the Government of Mozambique and UNDP. The IND will report to the BoG quarterly on incomes and expenditures of contributions to the Fund. On request, individual donor reports will be produced.

NATIONAL MINE ACTION FUND



Contribution & Disbursements

Contributions to the Fund, in cash or kind, would be accepted by the Fund Managers, from governments, specialized agencies, inter-governmental or non-governmental organizations, and/or private sources. Contributions in support of the NMAP will be possible through a number of different measures:

a) Voluntary contribution with limitations to a specific activity and/or partner organization;
b) Voluntary contribution without limitation to a specific activity.

These options will allow donors to maintain current working relationships with a specific operator or sub-theme within Mine Action. It will also allow for the provincial channeling of funds if desired by a given donor.

APPENDICES

A. PROVINCIAL SMA DISTRIBUTION & IMPACT

B. OPERATIONAL PRIORITIES BY PROVINCE

APPENDX B: **OPERATIONAL PRIORITIES BY PROVINCE**

HIGH & MEDIUM IMPACT SMAs 10m^2 -- 1 million m^2

	Province	Villages	SMA's	Population	Area
1	Niassa	3	6	7,078	137,000
2	Cabo Delgado	12	24	34,070	2,653,149
3	Nampula	15	25	23,747	4,889,026
4	Zambezia	18	34	34,088	2,684,650
5	Tete	15	18	36,032	3,052,188
6	Manica	15	30	19,778	1,630,851
7	Sofala	15	33	48,178	3,136,964
8	Inhambane	31	53	145,873	6,768,252
9	Gaza	12	18	15,186	1,610,900
10	Maputo	36	63	37,455	5,230,671
	Totals	**172**	**304**	**401,485**	**31,793,651**

HIGH & MEDIUM IMPACT SMAs +1 million m^2

	Province	Villages	SMA's	Population	Area
1	Niassa	0	0	0	0
2	Cabo Delgado	2	2	3,149	17,560,000
3	Nampula	4	4	9,351	9,750,000
4	Zambézia	6	6	8,668	18,536,784
5	Tete	3	4	2,154	9,000,000
6	Manica	1	1	824	1,275,000
7	Sofala	2	2	604	2,273,885
8	Inhambane	4	5	97,552	10,415,000
9	Gaza	4	4	5,944	34,200,000
10	Maputo	7	8	1,110	12,000,000
	Totals	**33**	**36**	**129,356**	**115,010,669**

APPENDX B: **continued…**

SMAs + 40 million m^2

	Province	Villages	SMA's	Population	Area
1	Nampula	1	1	3,569	73,500,000
2	Cabo Delgado	1	1	4,979	68,000,000
3	Zambezia	1	1	879	45,870,000
	Totals	**3**	**3**	**9,427**	**187,370,000**

LOW IMPACT SMAs BY PROVINCE

	Province	Villages	SMA's	Population	Area
1	Niassa	28	37	39,159	3,711,012
2	Cabo Delgado	53	80	106,858	5,837,156
3	Nampula	60	88	115,030	11,826,481
4	Zambézia	82	128	114,713	6,114,493
5	Tete	30	36	31,870	3,203,371
6	Manica	34	53	52,457	2,853,273
7	Sofala	31	51	54,979	6,542,554
8	Inhambane	110	168	166,151	10,054,578
9	Gaza	24	33	66,144	3,495,860
10	Maputo	51	79	69,435	4,965,800
	Totals	**503**	**753**	**816,796**	**58,604,578**

APPENDX B: **continued…**

UNEXPLODED ORDNANCE BY PROVINCE

	Province	Villages	SMA's	Population	Area
1	Niassa	13	15	21,931	15
2	Cabo Delgado	33	53	55,913	70
3	Nampula	8	8	8,029	8
4	Zambézia	21	28	32,480	92
5	Tete	19	28	24,695	69
6	Manica	14	20	25,484	47
7	Sofala	11	14	21,942	28
8	Inhambane	23	33	51,406	121
9	Gaza	11	13	15,225	34
10	Maputo	22	33	22,973	81
	Totals	**175**	**245**	**280,078**	**565**