

**UNITED NATIONS DISASTER ASSESSMENT
AND COORDINATION TEAM**

UNDAC MISSION TO LAGOS, NIGERIA

31 JANUARY – 7 FEBRUARY 2002

**MUNITIONS DEPOT EXPLOSION
ENVIRONMENTAL AND HUMANITARIAN
ASSESSMENT**

REPORT





ACKNOWLEDGEMENTS

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I. EXECUTIVE SUMMARY

1. An ammunition dump situated in the main Ikeja military cantonment in Lagos started exploding on Sunday 27 January 2002 at about 18:00, reportedly caused by a fire which spread from a nearby market. Large explosions continued throughout the night and into the next day, resulting in massive damage to the principal blast area covering approximately 1.5 km². The impact of the blast caused secondary damage in the heavily populated areas surrounding the cantonment with resultant casualties from shells and other ordnance that landed randomly in a radius of up to approximately five kilometres from the centre of the ammunition dump.
2. The majority of fatalities occurred not from the actual explosion, but due to the subsequent panic which followed the incident. Many hundreds perished when fleeing crowds spilled over into the Oke-Afa canal, with small children being trampled down the slopes. Due to the panic many families became separated in the confusion, resulting in some two hundred children being left at various locations in the city. To date over 1,000 people are known to have been killed, but local sources suggest that this figure could range as high as 2,000. It is estimated that up to 20,000 people were directly affected by this incident, but because of the urban location, and the fact that many people prefer to stay with friends and relatives, it is difficult to gauge the precise number of displaced. At least 4,500 people, the majority of whom are military dependants, are currently staying in a temporary accommodation camp in Lagos.
3. At present it is considered that the humanitarian situation resulting from the ammunition blast is largely under control. Because of the general lack of reliable information it is difficult to assess the resources already at the disposal of the authorities. However, it is considered that immediate relief needs can be met for the most part, without significant additional international support. The outstanding needs at present include shelter in the newly established camps and for support to normalise educational opportunities for children, and teachers in populations affected by the incident.
4. It should be noted that the general humanitarian situation in Lagos resulting from the ammunition dump explosion has been complicated by the recent ethnic violence in the city, which broke out approximately one week later. Some of the resources made available for blast victims have been diverted to cope with the sudden influx of wounded and displaced.
5. There is a very significant problem with unexploded ordnance (UXO), which is highly unstable and will be both costly and time-consuming to clear up. It is considered that this task is beyond the current capacity of the Nigerian armed forces and would require substantial international (military) expertise. There is also a problem with UXO in the secondary blast zone, which is still being inhabited by both soldiers and civilian dependants. Any operation to clear this area of UXO will exacerbate the humanitarian situation in the short-term.
6. This disaster is a typical example of a technological, or man-made, incident when hazardous materials are located in densely populated areas without the necessary prevention and preparedness arrangements for surrounding populations. The humanitarian impact of this event was made more severe by the lack of clear information, warnings or guidance from the authorities at the outset. Certain aspects of the relief operation reflect weaknesses in co-ordination between the various agencies involved and there is clear evidence of a lack of disaster management capacity and contingency planning.



II SUMMARY OF RECOMMENDATIONS

Humanitarian Situation

7. Based on an assessment of the humanitarian situation in Lagos and an analysis of the institutional capacity in-country, the UNDAC team recommends the following:
8. **Immediate Action:** The UN Country Team should continue to proactively monitor the humanitarian situation, with particular attention to the expansion of the current “exclusion zone” within the cantonment. Potentially interested donors may wish to consider funding particularly for the provision of up to 500 tents, preferably sourcing in-country and support for the rehabilitation of normal education services for displaced children.
9. **Recommendations for Longer-term Action:** support to the relevant Federal and State authorities is necessary to carry out an environmental impact assessment in connection with the incident, including assessment of structural damage resulting from the initial blast. The introduction of the UN Environment Programme’s “Awareness and Preparedness at Local Level” (APELL) process, especially focussing on various potential hazardous sites in the country, would also be advisable.
10. Improving the overall disaster management capacity in Nigeria is also of fundamental importance in order to mitigate the impacts of future events. Work in this area has already been started by a recent joint UNEP/UN-Habitat mission, with a focus on the National Emergency Management Agency.

UXO Clean-Up Operation

11. Based on input provided by UK and US military ordnance experts, the UNDAC team recommends the following activities with regard to making safe the UXO situation in the immediate term and also to address longer-term ordnance issues in Nigeria:
12. **Reducing the Immediate Threat from UXO:** the exclusion zone within the cantonment must be enlarged and made much more secure; in addition an operations centre should be established to co-ordinate all UXO activities in civilian areas outside the cantonment. Support should be urgently provided for information and awareness campaigns, especially aimed at children, about the dangers of touching or handling of UXO and what to do in case of finding UXO in civilian areas.
13. **Cantonment Site Clean-Up:** This will be a major operation and would require multiple teams of trained clearance personnel working in a co-ordinated and intensive manner. Depending on the level of effort provided, it is estimated that this task would take between six months to one year and is likely to cost several million US dollars.
14. **Proactive Measures:** it is strongly recommended that the relevant Nigerian military personnel be trained (or given refresher courses) in UXO and ammunition management. It is also very strongly recommended that technical support be offered to make an immediate review of all existing munitions sites in Nigeria which are considered to pose a potential threat, in order to prevent any similar incident happening in the future.



III. BACKGROUND

15. An ammunition dump situated in the Ikeja military cantonment in Lagos started exploding on Sunday 27 January at about 18:00, reportedly caused by a fire which spread from a nearby market. Large explosions continued throughout the night and into the next day, resulting in massive damage to the principal blast area at the centre of the cantonment covering approximately 1.5 km². The epicenter of the blast, including an area of approximately 400 m², was completely obliterated and is heavily contaminated with unexploded ordnance (UXO). A total of 33 ammunition warehouses were completely destroyed, and the adjacent army barracks suffered severe damage with the three and four story accommodation blocks taking the brunt of the destruction. Several blocks of flats were completely destroyed and up to 100 blocks of flats partially damaged. The cantonment area also contained a total of nine schools, three of which were heavily damaged or destroyed.
16. It would appear that whilst some casualties were caused by the munitions exploding, many more were caused by the subsequent panic and mayhem which followed from rumours that a military coup was underway. As the explosions continued and the area affected increased, still more people joined a rush to escape in darkness and without guidance on where to go. Many perished when crowds spilled over into the Oke-Afa canal some three kilometres from the cantonment; many small children were pushed into the deep mud in the canal and drowned. Others were injured because of jumping from height or being trampled underfoot, and some were killed or injured by heavy traffic whilst trying to cross the main Ikeja dual carriageway. There have been reports of casualties from unexploded ordnance scattered widely over the area. Many families became separated in the confusion, resulting in some two hundred children being left at various locations in the city.
17. The impact of the blast caused secondary damage in the heavily populated areas surrounding the cantonment with resultant casualties from shells and other ordnance that landed randomly in a radius up to approximately five kilometres from the ammunition dump. This secondary damage included broken windows, holes in roofs, collapsing ceilings and walls and caused numerous minor injuries. There is concern about the structural integrity of bridges and taller buildings resulting from the initial blast; so far these concerns have not been verified by any technical assessments on the ground. More minor damage has been reported from random shells hitting buildings in areas up to 18 km away. The Commissioner for Education reports that a total of 27 schools have been affected, with damage ranging from complete destruction in the cantonment, to more minor cosmetic damage to sites further away from the blast.
18. The two Local Government Areas surrounding the cantonment, Ikeja and Oshodi-Isolo have a combined population estimated at 2 million. The Ikeja military cantonment was home to approximately 4,500 military families and although many were evacuated at the first sign of the fires spreading, there were an unknown number of fatalities.
19. To date over 1,000 people are known to have been killed, but local sources estimate that this figure could range as high as 2,000. People were killed in two main areas, with around 800 bodies pulled from the canal site so far and more bodies are suspected to be in the deep mud at the bottom of the canal. An unknown number of people died in the direct blast area, but unconfirmed reports suggest that there were approximately 300 people killed. At present it is impossible to get any closer to the devastated area to verify these numbers because of the massive amounts of UXO littering the ground. The mortuary facilities in Lagos have been stretched to the limit with three main facilities being used: the Ikeja military hospital, Ikeja



hospital and Lagos General hospital. Some of the unidentified bodies are piled, uncovered and waiting to be reclaimed by relatives. As of one week after the incident, bodies were still being pulled from the canal.

20. It is estimated that up to 20,000 people were directly affected by this incident to varying degrees of severity. The military report that at least 800 families have been displaced and forced into temporary centres. The official figure for military dependants is contested, with the military claiming an average of four per soldier, and others (principally the NRCS) working on an average closer to ten per soldier. Whatever the precise figure, it is clear that the vast majority of those people who have been displaced by this incident were soldiers and their dependants, irrespective of how many are official recognised by the military authorities.
21. It is difficult to assess the precise numbers of people displaced as many thousands fled on Sunday night and Monday morning. Many of these people reported that they were leaving the area on a semi-permanent basis, taking belongings with them, and going to stay with friends and family in other parts of Lagos or outside of the state completely.

IV. CURRENT HUMANITARIAN SITUATION

22. At present the humanitarian situation resulting from the ammunition dump blast is largely under control. Immediately after the incident the military authorities established a temporary centre at a school site inside the cantonment in conjunction with a number of agencies including the Lagos State Government (LSG), the National Emergency Management Agency (NEMA) and the Nigerian Red Cross Society (NRCS). Up until Saturday 2nd of February between 5,000 to 6,000 people were being serviced by various agencies at this temporary reception centre. People were being registered and provided with basic relief items and food. Health care services and water and sanitation facilities have been well covered. There is no overall shortage of food, but food preparation and distribution has not been well co-ordinated with at least four or five separate agencies all providing a mixture of cooked and un-cooked rations.
23. Working under a common agreement, the military authorities and the LSG established two main camps for displaced people: one for military dependants at the Abati Barracks Yaba Grounds, and one for civilians at the Ikeja Police College. Both of these sites are at a distance of several kilometres from the cantonment.
24. On Sunday 3rd of February the military authorities closed down the temporary centre inside the cantonment, and organised transportation for military-related people to Abati. This “military” camp is well organised, with more than 50 large tents provided by the army. A lot of people are already accommodated there, and continue to arrive. Latest estimates given directly from the Nigerian military cantonment commanders indicate that there at least 800 families displaced with an average of 5 dependants. The number of military dependants arriving at this camp may increase if the military expands the exclusion zone around the blast site.
25. The civilian camp at the Ikeja Police College grounds has remained completely empty one week after the incident. It is likely that any civilians displaced by the blast would have come forward in this time. There are suggestions that civilians are apprehensive about seeking shelter within a police facility, which may partly explain why none of the displaced made their way to this site.
26. On Monday 4th of February several thousand people started to arrive into the Police College



camp, but these were ethnic Hausa who have been displaced by the clashes with Yoruba groups occurring in the Idi Araba district of Mushin Local Government Area of Lagos. These ethnic clashes started late in the evening of Friday 1st of February, resulting in at least 50 deaths, many dozens of injured and the displacement of several thousand people. Sporadic disturbances continue in the same areas and NEMA has re-located these people to the Police College camp which was originally meant for the bomb blast victims. At present the Police College camp does not contain any displaced people from the bomb blast incident.

27. The UK and US military ordnance experts have given an initial and strong recommendation that the current exclusion zone within the cantonment should be immediately increased, with the result that more military dependants will be displaced. It is not known exactly how many people are living in this area close to the blast zone, but it is probably several hundred of families.

V. CURRENT UNEXPLODED ORDNANCE (UXO) SITUATION

28. There is an extremely dangerous and concentrated saturation of unexploded ordnance in the immediate blast area, which is estimated to be of approximately 400 m². There are also large numbers of UXO in the secondary zone within the cantonment and still more, unknown concentrations lying in civilian areas within a radius of approximately five kilometres from the blast centre. There have already been reports of children setting off bombs and shells resulting in deaths and injuries.
29. There appeared to be a wide mixture of ordnance stored at the dump, including tank rounds, artillery shells, anti-personnel and anti-tank mines, anti-aircraft ammunition, small arms rounds etc. Much of the ordnance appears to be old and of differing makes, brought back from various Nigerian army peacekeeping exercises (e.g. Sierra Leone, Chad etc.), with some even dating to the Nigerian civil war, which ended in 1970. There are unconfirmed reports that there were no chemical weapons or depleted uranium ammunition amongst the munitions stored at the site. There has been no in-depth assessment of the actual, or potential, environmental impact of this incident.
30. The main blast site area is extremely unstable with small fires still smouldering and ordnance “cooking off”, or exploding spontaneously, every 20 to 30 minutes. The Nigerian military has cleared one road up to about 500 metres into the area and set up danger flags. However, there are no check-posts and to date control of the site is very lax with people seen entering the area at will to re-claim possessions from partially damaged blocks of flats and to look at the remains of the blast site.
31. The initial opinion of the international UXO experts is that the clear-up job of the main site will take many months, if not more than one year to complete. This incident raises serious concerns about other munitions dumps all over the country, which can be assumed to contain ordnance stored in similarly unsafe conditions and also located in heavily populated centres.

VI. NATIONAL RESPONSE

Nigerian Federal Government

32. Although the National Emergency Management Agency is a Federal body, it has been directly



involved in responding to this incident at the state level and sent staff to work on the ground together with the military authorities. However, it is apparent that there is a lack of co-ordination and information-sharing between NEMA and the state authorities, which is hampering the efficiency of the relief operations.

33. NEMA has so far released Naira 15 million (US\$140,000) in cash for use by other government agencies and has provided food and non-food relief items worth Naira 65 million (US\$600,000) directly to displaced people.
34. The Federal Government has established an emergency relief fund, which reportedly has now grown to a figure of approximately Naira 0.5 billion (US\$ 4.4 million), with donations from the Federal Government itself, para-statal agencies and private sources. This money is to be administered by a national steering committee, including representatives from the UN and the Nigerian Red Cross Society. These funds are to be used for medium to longer-term rehabilitation activities, including paying compensation to civilians who lost property in the blast.
35. NEMA has been primarily working with military authorities to establish the Abati Barracks camp and has also worked, in a reduced capacity, with the LSG in establishing the Police College site. As of Saturday 2nd of February NEMA has also been involved in responding to the ethnic clashes in Lagos.

Lagos State Government (LSG)

36. This incident is primarily viewed as a state-level problem and as such the LSG is the principal actor from the government side. They have established an emergency co-ordination committee, chaired by the Commissioner of Health. This committee includes all principal state line ministries, representatives from the military, the Nigerian Red Cross Society and other relief agencies. The state committee has formed three sub-groups to address specific areas of interest, these are an assessment committee to look into damage to private properties and compensation, a communication committee and a fund mobilisation committee to administer relief and rehabilitation funds at state level.
37. So far the LSG has not been able to provide much in the way of concrete information about what has been done, what specific inputs have been made by various ministries and what they plan to do in the short-term. This is indicative of a general lack of transparency and management capacity, logistical resources and any meaningful operational standards or procedures.

Military Authorities

38. The military authorities have been involved in all aspects of the response to this incident. They took steps for the early evacuation of people in the cantonment as the fire spread, surveyed the area and assessed the situation, carried out initial clearance work in some parts of the cantonment and cordoned off the contaminated area.
39. The military, together with LSG, NEMA, IFRC and some NGOs, initially established a registration and distribution centre inside the cantonment at one of the large school compounds not destroyed by the blast. After a decision had been taken to close down this centre, the military authorities ensured transportation of military dependants to a camp at Abati Barracks,



put up tents in the camp and installed the necessary infrastructure and services.

40. The military authorities have provided the UNDAC team with access to the disaster site and the camp at Abati Barracks. They have also fully co-operated with British and US UXO experts in their assessment work.

Nigerian Red Cross Society (NRCS)

41. The NRCS has been the principal non-government actor involved in the operations to provide relief assistance to people affected by the blast, both in immediate trauma assistance and in providing services at the temporary centre in the cantonment. The NRCS has also been involved in carrying out surveys of the affected civilian population outside of the cantonment, registration and in efforts to reunite children who were separated from their families.
42. According to the distribution of tasks as agreed by the State co-ordination committee, the NRCS was mainly working on food and non-food relief distribution in the temporary centre. Now that this has been closed down and access to the cantonment has been restricted, the focus of the NRCS has shifted to assisting those affected people who are staying with friends and relatives in the area (i.e. those who have not sought shelter in formal camps). The NRCS reportedly has a sound reputation and is considered to be an effective relief organisation, with good linkages with government at various levels. However, regrettably there have been strained relations with the military authorities during the first phase of the relief operations.

Corporate and Private Donations

43. There has been a significant outpouring of support from individuals and small and large businesses for victims of the blast. However, these resources have been delivered in an ad hoc manner and dropped off at a variety of locations including state government offices, the cantonment gates and at the temporary centre. The net result of this is that there has been little co-ordination or centralised recording of in-coming resources and relief items have been distributed in a random manner, without necessarily targeting the most needy.

VII. INTERNATIONAL RESPONSE

United Nations Agencies

44. The UN country team in Nigeria has established a co-ordinating body, the Emergency Preparedness and Response Co-ordinating Group, which is chaired by UNICEF, to bring together the UN response and to establish a common interface with government authorities and other agencies.

UNICEF

45. Within 24 hours of the event UNICEF undertook a preliminary needs assessment and outlined a number of areas of support, including, the provision of essential drugs, medical supplies (for up to 2,000 people), the distribution of 100 large water containers, cooking items, blankets and mattresses. UNICEF is also working on information and awareness activities concerning the dangers of UXO found in civilian locations.



WHO

46. The WHO provided a US\$5,000 cash donation ear-marked for support to health services to the special trust fund which was established by the LSG (e.g. petrol for ambulances, assisting in mortuary services etc.). In addition WHO provided five emergency medical kits for the temporary cantonment centre and five supplementary kits for local hospitals dealing with people wounded in the incident.
47. The UN agencies in Nigeria are also planning further support, both to relief activities and medium term rehabilitation. UNICEF has developed a proposed plan of action for the next three months (February to April 2002), which has a budget of US\$300,000 and includes support for the provision of potable water, education and counselling services, UXO awareness and reunification of displaced children.

OCHA

48. OCHA fielded a three-member UNDAC team that arrived in country early morning on Friday 1st of February and conducted an assessment. The UNDAC team was comprised of Mr. Vladimir Sakarov (Team Leader, OCHA), Mr. Harold Lockwood (UK) and Mr. Hubert Vetter (Austria). Mr. Stephan Micallef (UNEP) provided inputs for the UNDAC report. OCHA is ready to release an emergency grant to contribute towards relief efforts as appropriate.

International Federation of the Red Cross and Red Crescent Societies (IFRC)

49. The IFRC is working together with the NRCS and issued a first appeal on 31st of January for support to 2,500 families for a period of three weeks. The appeal is for a total of CHF 748,133 and is focused on three main activities: distribution of food and family packs; registration and family reunification and capacity building of the National Society. As events are changing daily, this appeal will be modified as the situation unfolds. Decisions by the military authorities will have major implications for the focus and scope of the IFRC/NRCS relief activities in the near future. A number of donor Red Cross Societies (British, Norwegian, Finish and German) are considering support to this appeal and are actively lobbying their respective governments.
50. The IFRC/NRCS has also been actively involved in responding to the more recent humanitarian crisis caused by the ethnic clashes in the centre of Lagos city.

Other Donors

51. A number of donors have already made contributions or pledges for support in relation to the ammunition dump explosion. These are as follows:
- **Spanish Red Cross:** 18,000 Euros to the IFRC appeal;
 - **France:** 20,000 Euros to the IFRC appeal;
 - **United States:** US \$25,000 to the IFRC appeal; provided and financed six UXO specialists for joint assessment with UK military and Nigerian military
 - **Netherlands:** has committed funding to IFRC appeal, but as of yet they have not specified the amount;
 - **Algeria:** sent a team of 23 doctors, nurses and relief specialists;
 - **Austria:** provided and financed one UNDAC team member;
 - **United Kingdom:** provided and financed one UNDAC team member; provided and



financed two UXO specialists for joint assessment with US military and Nigerian military and £50,000 to the IFRC appeal;

- **Norway:** provided a commitment of \$55,000 to UNICEF and is considering a further contribution through OCHA;
- **Shell Nigeria:** Naira 25 million (approx. US\$ 220,000) to the IFRC appeal;

VIII. NATIONAL DISASTER MANAGEMENT CAPACITY BUILDING

52. The UN Environment Programme and UN-Habitat have recently completed a mission to Nigeria to assess the state of disaster management mechanisms. The mission has formulated a strategy and support programme for improving the capacity of the National Emergency Management Agency. This programme includes such elements as policy development; vulnerability, risk assessment and early warning systems; information management; integration of disaster management into urban planning frameworks; training and capacity building; and regional co-operation.
53. The programme will be implemented through a partnership between NEMA, the Ministry of Environment, Ministry of Works and Housing, Ministry of Foreign Affairs, UN agencies and other relevant national counterparts within the region.
54. The UN Resident Co-ordinator commented that in 2000 OCHA fielded a mission to assist the UNCT in preparing a humanitarian contingency plan. A draft of this plan was subsequently presented to the UNCT for comments, but since then there has been no further action to finalise this document or realise any concrete actions.

IX. CONCLUSIONS

Immediate Humanitarian Needs

55. At present the humanitarian situation is largely under control and displaced people have been relatively well provided for with no major public health risks reported. However, there is a continuing need to provide assistance to approximately 6,000 people most affected by the incident. This figure is made up of approximately 4,500 military personnel and their dependants and the rest are civilians who are believed to be staying with friends and relatives in the greater Lagos area. The latter have not come forward to formal camps for assistance, but will require continued support such as supplementary feeding, replacement of possessions lost in the blast and help in repair or re-building of houses. The number of displaced may increase if the exclusion zone around the blast site in the cantonment is enlarged.
56. The majority of the displaced from the military cantonment will not be able to safely return back to the area until a more systematic UXO clearance operation has been conducted. Depending on the speed of the clearance operation this may be for a period of up to several months.
57. An accurate assessment of the relief goods available in Lagos to deal with the humanitarian situation is difficult, as government agencies have not been able to produce consolidated information in this regard. However, at present it is considered that immediate relief needs can largely be met without significant additional international support, given the resources made



available by the various state and federal government agencies, private donors and relief agencies. The only possible outstanding need at the present time is for shelter material for displaced people. If the situation were to continue for an extended period, or the numbers of displaced people, were to increase markedly, the need for international assistance would have to be re-assessed.

58. There has been a co-ordinated effort by UN agencies and a rapid, albeit limited, direct response to the immediate relief operations with material and financial donations. UN agencies have developed more detailed proposals for the continuing relief operations and stand ready to assist in any subsequent rehabilitation activities.
59. At present school children in badly affected areas have been given an extended holiday, therefore it is important that support is guaranteed in the short to medium term in assisting the construction of temporary facilities or repair to damaged school buildings in safe areas. Some funding from the government has already been earmarked for this purpose.

General Considerations

60. This disaster is a typical example of a technological, or man-made, incident when hazardous materials are located in densely populated areas without the necessary prevention and preparedness arrangements for surrounding populations. The majority of people were not killed in the massive blast at the munitions site, but in the panic which followed the explosion, generated by rumour, lack of clear information and guidance from the authorities.
61. If the population had been aware of an existing hazard and the associated risks and had been promptly informed by the authorities about the incident, it is likely that the loss of human life would have been greatly reduced. Several large munitions dumps remain in Nigeria, and it can be assumed that storage conditions are similar to those in the Ikeja cantonment prior to the blast. In addition there are numerous smaller ammunition compounds within army barracks scattered around the country.
62. In certain areas co-ordination efforts have been patchy and there is clear evidence of a lack of disaster management capacity and contingency planning. Co-ordination problems have been exacerbated by the involvement of three different government authorities (Federal, State and military), all of which had differing priorities during the emergency response.

UXO Situation

63. The problem faced by the Nigerian authorities and armed forces is not technically complex, but is exacerbated by its magnitude, and their lack of experienced personnel and equipment to deal with UXO. The site is intrinsically safe provided that people are kept out of the area. At present the exclusion zone set up by the military is not functioning effectively, with large numbers of people passing freely into and out of the contaminated area. The Nigerian armed forces must increase this zone, in quality and extent, and actively maintain the cordon sealing off the blast site. If this is achieved it would require displacing more people, placing greater pressure on humanitarian efforts, however UXO clean-up operations could not commence whilst these people remained on the site.



X. RECOMMENDATIONS

(a) HUMANITARIAN SITUATION

Immediate Phase

1. It is recommended that the UN Country Team (UNCT) in Nigeria proactively monitors the humanitarian situation in connection with this incident in the following weeks;
2. In particular, monitoring of the situation is needed in relation to a possible extension of the current exclusion zone within the cantonment related to UXO clearance operations, which may lead to a greater number of displaced persons;
3. Taking into account the possibility of an increased number of displaced persons, donors are invited to consider the provision of up to 500 tents, preferably sourcing in-country;
4. The Nigerian Red Cross Society, with support and guidance from the IFRC, is well placed to provide relief assistance in the particular context of Lagos. Should the humanitarian situation deteriorate, it is recommended that potential donors consider funding any revised IFRC appeal that addresses immediate relief needs;
5. Support should be considered for the rehabilitation of normal education routines for displaced children, which would include the provision of new temporary structures and/or the repair of more lightly damaged schools, assistance to displaced teaching staff, replacement of destroyed equipment, furniture and books;
6. UNICEF has prepared a project proposal which addresses some key areas of concern, including those outlined above in the education sector; therefore, it is recommended that potential donors consider the possibility of funding.
7. There are a number of very important and immediate activities relating to UXO (see below) which could be usefully supported by the OCHA/Norwegian emergency grants in the absence of any other immediate offers of financial assistance. The details of any grant allocations should be discussed with the relevant national authorities through the UNDP office in Lagos.

Medium- to Long-Term Phase

8. The relevant Federal and State authorities should carry out an environmental impact assessment in connection with the incident, as well as an evaluation of impact on structures and transport infrastructure which could have been affected by the blast.
9. It is strongly recommended to apply the UN Environment Programme's "Awareness and Preparedness at Local Level" (APELL) process to various potential hazardous sites (including other munitions dumps) in the country;
10. There should be a programme of support for improving the national disaster management capacity, as suggested by the recent joint UNEP/UN-Habitat mission, with a focus on the National Emergency Management Agency and to clarify roles and responsibilities and communication between NEMA, State governments and Local Government Authorities. This programme should take into account all aspects of disaster management, including contingency



planning, vulnerability mapping, early warning systems, information-sharing and communication.

(b) UXO CLEAN-UP OPERATION

Based on input provided by UK and US military ordnance experts, the following course of action is recommended with regard to making safe the UXO situation in the immediate term and also to address longer-term ordnance issues in Nigeria:

Immediate Action

1. Extend the existing exclusion zone around the main blast site at the centre of the cantonment by several hundred metres;
2. Evacuate all military and non-military personnel from the newly expanded exclusion zone;
3. Make the cordon physically effective by placing triple security wire and establishing proper patrols to prevent people re-entering the exclusion zone;
4. Prevent new movement of any UXO within the exclusion zone; i.e. unsupervised or random collection and transfer;
5. Establish an operations centre to co-ordinate all UXO operations in civilian areas outside the cantonment; i.e. to monitor reports of new finds of UXO by civilians and to co-ordinate response by Police Bomb Disposal squads;
6. Safe removal of UXO from civilian areas outside the cantonment, either by transfer and deposit inside the exclusion zone, or by controlled destruction *in-situ* by bomb disposal squads;
7. Establish sufficient medical services on-site which would be able to cope with the types of severe injuries and trauma potentially inflicted on military personnel dealing with UXO;
8. Support the on-going information campaign, with a special focus on children, to raise awareness about the dangers of touching or handling of UXO and what to do in case of finding UXO in civilian areas. This would include the development of non-literary awareness messages through radio, television etc.
9. In order to achieve the above, it is considered that there is the need for continued international military specialist support for the Nigerian army. One relatively small team, whose members could act in the capacity of technical advisors to the military and police bomb disposal squads, could achieve these tasks. It is likely that such an operation would take two to three months to carry out and that there would be additional costs for certain key items, which are likely to require funding in the order of several hundreds of thousands of US dollars.

Longer-Term Issues

10. **Cantonment Site Clean-Up:** once the immediate phase has been completed the threat to human life will be greatly reduced. However, the main blast site will still require clearing to make the area completely safe again. This would be a major operation and would require multiple teams of trained clearance personnel working in a co-ordinated and intensive manner. Depending on the level of effort provided, it is estimated that this task would take between six



months to one year. Without a much more detailed site assessment it is impossible to give an accurate indication of how much this type of operation may cost. However it is likely that very significant financing would be required, running into several millions of US dollars.

11. **Proactive Measures:** it is strongly recommended that the relevant Nigerian military personnel be trained (or given refresher courses) in UXO and ammunition management; this could take place either in Nigeria or in any sponsoring nation. It is also very strongly recommended that technical support be offered to make an immediate review of all existing munitions sites in Nigeria which are considered to pose a potential threat, in order to prevent any similar incident happening in the future.

7 February 2002