

DISASTER REVIEW 1997 (Series VI)



His Majesty's Government of Nepal
Ministry of Water Resources

Water Induced Disaster Prevention Technical Centre
DPTC

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INTRODUCTION:

**NATIONAL ACTION PLAN
ON
DISASTER MANAGEMENT**



IN NEPAL

Nepal is characterized by its rugged topography with high relief, complex geology, concentrated rainfall and a high population density. The country faces several natural hazards and larger part of the country is vulnerable to earthquake, landslide, debris flow, flood, drought and other forms of hazards. Natural disasters occur year after year causing immense damages of public properties and human lives. Sometimes the extent of damage is enormous as we experienced during the earthquakes of 1980 and 1988 and flood of July 1993. Apart from these events, there are several natural calamities, which struck the country in past, the earthquake of 1934 was one of the serious disaster, the country ever faced.

The natural disasters may not be stopped, but efforts can be made to reduce the impact of disaster. Considering this fact, the United Nation General Assembly in its resolution 44/236 of 22 December 1989 decided to launch a far reaching global undertaking for the decade of 1990s to save humanity and reduce the impact of disaster. To initiate a process toward global culture of prevention, the United Nations declared the decade of 1990-2000 as an International Decade of Natural Disaster Reduction (IDNDR). Responding the global call of prevention, Nepal constituted IDNDR National Committee under the chairmanship of Honourable Minister of Home. The National Committee met several times to undertake preventive measures so as to reduce the impact of disasters. The National Committee felt the need of preparing a practical and effective action plan on disaster management as previous efforts were concentrated basically on the rescue and relief operations.

1996

In this connection, four core groups, comprising of experts, administrators, security personnels, academicians, were formed to prepare a National Action Plan on Disaster Preparedness, Disaster Response, Rehabilitation and Reconstruction. The preliminary National Action Plan was prepared and also presented in IDNDR World Conference, 1994. The World Conference, after assessing the outcome of the efforts made by member countries, declared the strategy for remaining period of the decade and also accepted a plan of action for disaster reduction.

The preliminary Action Plan on Disaster Preparedness, Disaster Response, Disaster Rehabilitation and Reconstruction as well as Disaster Mitigation which was presented in world conference, were prepared by different core groups separately. Due to this fact these Action Plans lacked consistency and inter-relationship. The

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drafted Action Plan tried to cover every aspect of disaster management with more attention on theoretical and procedural aspects rather than prevailing situation of disaster management in the country. Similarly it recommended estimated cost of each activities irrespective of the national capacity and available resources. So, preliminary Action Plan appeared to be difficult for proper execution.

Despite these deficiencies, it must be remembered that the preliminary Action Plan was prepared prior to the World Conference, 1994, the strategies and plan of action adopted by the World Conference were not incorporated.

Keeping these shortcomings in mind, the IDNDR National Committee in its meeting on 27 April 1995, felt the need of incorporating "Yokohama Strategy" in National Action Plan and simplifying the preliminary draft in order to adopt a more practical and implementable Action Plan on Disaster Management. Hence, IDNDR National Committee, Nepal, finally prepared an Action Plan on Disaster Management in 30 July 1995 and submitted it to HMG/Nepal for its approval. Later, in 18 Feb. 1996 HMG/Nepal had principally accepted this plan as the "National Action Plan on Disaster Management in Nepal".

A. NATIONAL ACTION PLAN ON DISASTER PREPAREDNESS

The suggested national action plan on disaster preparedness is presented in the form of a matrix indicating priority item group, activities, the time schedule and the executing agencies with specific co-operating agencies.

The priority item group includes following preparedness activities,

1. Measures related to national policy and planning for making institutional arrangement, providing legal framework, adopting national policy and plan on disaster management.
2. Measures related to geological, hydrological and meteorological hazard assessment and environmental engineering studies.
3. Infrastructure specific and hazard specific preparedness measures.
4. Measures related to strengthening fire fighting capabilities in fire prone areas.
5. Measures related to awareness raising, training, rehearsal, simulation activities.
6. Measures related to establishment of disaster management information system and stockpiling of emergency supply materials.

The activities involves the formation of appropriate institutional arrangements in terms of National Disaster Management Council at policy level, a National Disaster Management Centre at the central executive level and various disaster management committees at regional, district and village level for effective implementation. The activities also include the enactment of appropriate legislation with specified responsibilities to concerned agencies.

The action plan also proposes the incorporation of disaster management as a multi-sectoral activities in next five year development plan. The emphasis is given to the preparation of hazard assessment and mapping of the recurring disasters in Nepal like earthquake, flood, landslides, GLOF etc. The activities further specify the selected areas in this concern so as to attain the objectives in the remaining part of the decade.

Several arrangement has been recommended in the context of capacity building at local level. Public awareness programmes, rehearsals, drills, stockpiling of emergency relief materials are included in the action plan. The environmental, geological studies have been prioritized. The measures related to strengthening the vital infrastructures for reducing the impact of disasters have been proposed.

DISASTER PREPAREDNESS ACTION PLAN MATRIX

S.S.N.	Priority Item Group	Priority Item and Activities	Year of Completion	Executing Agency (Co-operating Agency)
A	Measures related to National Policy and Planning:	<p>A1. Making institutional arrangements</p> <p>a) Study on constituting National Disaster Management Council</p> <p>b) Finalize organisational structure for disaster Management Committees at central, regional, district and village levels.</p> <p>c) Finalize organisational structure and system for disaster management operation unit/agency.</p> <p>A.2. Providing legal framework</p> <p>a) Review existing laws</p> <p>(b) Identify and finalize changes needed</p> <p>c) Prepare draft of amendment of new laws and by-laws on disaster management</p>	Mid 1996	MOH
		<p>A3. Adapting National Policy and Plan</p> <p>A3-1. Incorporate Policy on Disaster Management in 9th 5 Year plan as a multisectoral activities.</p> <p>A3-2 Review of National Comprehensive Plan on Disaster Management</p> <p>a) Prepare TOR for task force for reviewing existing National Comprehensive plan for Disaster Management and prepare updated draft</p> <p>b) Appoint consultant/task force for the task</p> <p>c) Consider and finalize draft plan</p> <p>d) Adopt and publicize plan</p> <p>B1. Earthquake Hazard</p>	1996	MOH (NPC)
D.	Measures Related to Geological, Hydrological and Meteorological Hazard Assessment			MOH

B1.	B1.1 Collect compile and disseminate Earthquake hazard map	Start now and to be continued	DMG
	B1.2 Training support to National Seismological Network Of DMG	1996	DMG
	B1.3 Technical support for microseismic zonation study on selected geographical locations	Start now and to be continued	DMG
	B1.4 Establish and operate National Accelerometer Network,	2000	DMG
	B1.5 Vulnerability assessment of selected public buildings (eg. Hospitals, Schools etc) and infrastructure (eg. power stations, bridges etc)	1998	MHPP(DMG)
	B1.6 Active fault inventory and monitoring	2000	DMG
	B2. Landslide hazard assessment	1996	MOFSOCCTU, DFTC, DMG
	B2.1 Landslide hazard mapping of selected areas		
	a) Identify priority areas		
	b) Establish standard for landslide hazard mapping		
B2.	c) Assess existing data on landslides		
	d) Introduce remote sensing techniques for landslide detection		
	e) Collect, compile, produce and disseminate landslide hazard maps and reports		
	B3. Planned Engineering and Environmental Geological Studies	1995	DMG
	B3.1 Engineering and environmental geological mapping		
	a) Kathmandu valley		
	b) Pokhara valley		
	B4. Hydrological meteorological hazard Studies		
	B4.1 Preparation of flood hazard map	1996	DOI(DPTC, DIBA)
	a) Koshi, Bagmati, Tinsu, Mahakali	2000	DOI (DPTC, DHM)
B3.	○ B.4.2 Preparation of debris flow hazard map	1995	DPTC(DTU)
	○ a) Bagmati (Palung Khola) Trishuli (Agra, Belkhu, Malekhu)		

			E. Awareness	E1. Raising awareness through mass media (Television, newspapers, radio bulletin etc) E2. Distribution of pamphlets, posters and other materials E3. Preparation of documentary film, slides for public show E4. Inclusion of disaster management course in secondary school syllabus E5. Poetry, debate and essay competition (Every Year) E6. Regional workshop, and national conference (GO, NGOs, INGOS) every year	Start now and to be continued	MOIC (MOH)
			F. Training/ Rehearsals/ Simulations	F1. Community leaders training programme at local level (Every Year) F2. Training on disaster management at various level F3. Conduct rehearsals and simulations in vulnerable areas	Start now and to be continued	MOHC(NASC), NRCS(DDRC)
			G. Disaster Management Information System	G1. Establish and maintain a communication system in all 75 districts (HFV/HFH/MHR-Tranceiver System) with access to centre G2. Encourage, support and expand local communication practice. G3. Establish a National Disaster Management Information System For disaster information collection, and dissemination.	Start now and to be continued	DDRC (Local NGOs), MOIC (MOH, RNA, Police Headquarter etc), MOIC
			H. Stockpiling Emergency Relief Supplies and equipments and personnel	H1. Establish/manage emergency supply warehouses in 5 development regions at accessible location H2. Provide regular supplies of relief materials in warehouses H3. Establish stations with minimum rescue equipments and rescue personnels in all 75 districts. H4. Training on warehouse management and supply of relief materials	Start now and to be continued	MOH (NRCS, NGOs, INGOs), MOH (RNA, Police, NCC, Scout, NGOs) DDRC

C.	b) Bagmati (Marin) B4.3 Preparation of glacier lake location map B4.4 Preparation of rainfall intensity map Start now and to be continued	1995	DPTC(TU) WECS DHM			
C.	a) Bagmati b) Kamala, East Rapti	1996	DOI(DPTC DIM) DOI(DPTC DHM)			
C.	B4.6 Improvement of hydrometeorological observation network B4.7. Collect, compile and disseminate flood hazard maps	1997	DHM			
C.	CL Preparedness measures Roads and Bridges C1.1 Identify disaster prone sections of highway	2000	DOI(DPTC DHM)			
C.	Infrastructure Specific and Hazard Specific	1996	DOR (DMG)			
D.	Strengthening Firefighting capabilities	1997	DOR(DMC) DOR MOLD			
D.	C1.2 Assess vulnerability of disaster prone sections C1.3 Implement suggested measures D1. Institutional development of fire brigades D2. Strengthening of fire fighting service in Kathmandu, Lalitpur and Bhaktapur. a) Improve the fire fighting facility in Kathmandu valley b) Relocate fire brigade stations to suitable places c) Provide additional equipments to fire brigades d) Training of fire fighters. D3 Strengthening of fire fighting facilities in Municipalities.	1997 1997 1997 1998	MOH (MOLD) MOH (MOLD)			

B. NATIONAL ACTION PLAN ON DISASTER RESPONSE

DISASTER RESPONSE ACTION PLAN MATRIX

As the activities of disaster response starts only after a disaster has struck in certain area, the Action Plan is prepared as a part of preparedness for actual response operations . This action plan is prepared with the assumption that about 15000 families (with an average of 6 members in a family) will be affected by disaster every year. Considering this size, the items and activities included in this action plan should be carried out so as to build the capability of disaster management by the end of 2000 A.D. In this context equipments necessary for disaster response activities has been recommended and the list of it is included in the Annex A-C

The disaster response action plan includes following activities:-

1. Evacuation, Search and Rescue:-

The main objective of the action plan is to strengthen the capability of the agencies involved in rescue and evacuation operation. Identification of dead bodies, need and damage assessment, supply of necessary equipments needed for rescue operations, appropriate training for the rescue personnel and preparation of emergency evacuation site plan are the main activities recommended in this part.

2. Communication and Transportation:-

As the means of communication and transportation should be procured not only for disaster response operations, there is a need for preparing inventory and updating it. Communication equipments should be supplied and necessary transportation vehicles including aircrafts, helicopter should be procured for carrying out efficient operations.

3. Temporary Settlement:-

The temporary settlement sites should be identified. For this purpose road side land, community land, unused government land, public buildings like schools can be taken into consideration. There should be a definite plan of settlement sites which can be used during the disasters.

4. Health, Nutrition, and Sanitation:-

For this propose a disaster unit with minimum facilities should be established in every hospital for emergency operations. The health offices at district headquarters should have necessary emergency medicines.

As the response activities are purely managerial functions, regular trainings and exercises should be carried out at local level every year.

S.N.	Priority Item Group	Priority Item and Activities	Time of Completion	Executing Agency (Co-operating Agency)
A.	Evacuation, Search and Rescue	A1. Preparation of evacuation plan of public buildings and areas a) Bi-annual drills exercise A2. Identification of emergency evacuation sites at local level A3. Formation of a permanent search and rescue team at district and local level A4. Training for rescue personals	1997 2000 1996 Start and continue	MHPP (MOH) DDRC MOH (DDRC) MOH (RNA, Nepal Police, Scout, NCC, SWC, Local NGOs) DDRC
B.	Emergency Need Assessment	B1. Formation of a permanent need assessment team at district level B2. Preparation dissemination of standard format on need assessment B3. Training and orientation on need assessment	1996 1996 Start and continue	MOH DDRC
C.	Communication and Transportation	C1. Establishment of emergency and information operation centre at district level with access to centre C2. Equip the centre with necessary communication facilities C3. Preparation of communication network at the local level C4. Preparation of inventory on transportation facilities and updating it C5. Procurement of appropriate transportation vehicles for rescue and relief operations	1999 1999 Start and continue Start and continue Start and continue	CDRC (RNA, Nepal, Police, Experts) CDRC (RNA, Nepal Police) DDRC (RNA, Nepal Police) CDRC (DDRC)
D.	Temporary Settlement	D1. Include open spaces in urban planning for post disaster temporary settlement sites D2. Prepare settlement plan at local level D3. Establish warehouses and stockpile light shelter materials (Plastic sheets, tents etc) at district level	1996 Start & continue Start and continue	MHPP MHPP (MOH)

**C. NATIONAL ACTION PLAN ON DISASTER RECONSTRUCTION
AND REHABILITATION ACTION**

E. Survivor Response, Coping and Security	E1. Health and Nutrition	<p>a) Formation of medical assistance team b) Storage of emergency medicines and medical instrument at local level c) Setting up of mobile hospitals with necessary manpower (predetermined) d) Establish disaster unit in each public hospitals</p> <p>E2. Sanitation and drinking water a) Storage of bleaching powder for chlorination of water in temporary resettlement sites b) Storage of polythene pipes in necessary numbers at local level</p> <p>E3. Training for manpower involved in coping mechanism</p> <p>E4. Establish temporary police post at the affected area</p>	<p>Start & continue Start and continue Start and continue 2000</p> <p>MHPP</p> <p>Start & continue Start and continue Start and continue According to the need</p>	<p>MOHe MOHe (INGOs) MOHe (INGOs) MOHe</p> <p>MHPP</p> <p>DDRC (NRCs) local NGOs)</p> <p>MOH (Nepal Police)</p>
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The action plan calls for the development of standard damage assessment format for all types of natural disaster with formation of a permanent damage assessment team at central as well as local level. There is also recommendation on compiling and disseminating the information on extent of damages.

The action plan also includes rehabilitation and reconstruction planning with emphasis on creating permanent committees for such activities centrally and locally. A sector wise expert group for different types of disasters should review the information of damage assessment and should prepare guidelines for rehabilitation and reconstruction works.

For sustainable rehabilitation, income generating programmes should be implemented for which a feasibility study should be conducted to find out the local trends and availability of local resources. A special directives for loans to the disaster victims with subsidized interest rates is also recommended.

The action plan also emphasizes the need of carrying out regular capability assessment and inventory preparation at various level including the resources of local community and NGOs.

**DISASTER RECONSTRUCTION AND REHABILITATION ACTION
PLAN MATRIX**

D. NATIONAL ACTION PLAN ON DISASTER MITIGATION

The action plan recommends the identification and recognition of the major natural hazards by the government for proper management and also for the direction of mitigation measures effectively for rest of the decade.

S.N.	Priority Item Group	Priority Item and Activities	Date of Completion	Executing Agency (Co-operating Agency)
A.	Damage Assessment	A1. Preparation of standard damage assessment format for recurring types of disasters A2. Orientation training for damage assessment format users A3. Formation of permanent team for damage assessment at district level A4. Collect, compile and disseminate information on extent of damage B1. Formation of permanent committee for rehabilitation and reconstruction planning at district level	Mid 1996 1997 & continue Start & continue	MOI(MBPP, DOR, DOSC, DMG, DOI) MOH (DDRC) CDRC, DDRC MOH, DDRC MOH
B.	Rehabilitation Planning Reconstruction Programme	B2. Setup permanent sectorwise expert group for different types of disaster to review of damage assessment report. B3 Prepare guidelines for resettlement rehabilitation and reconstruction (eg low cost disaster resistant housing, low cost sanitation measures etc)	Mid 1996 1999	MOH (MBPP DOR, DOI, DPTE, TU)
C.	Income Generating Activities	B4. Develop manuals for rehabilitation and reconstruction operations. B5. Formulation of rehabilitation plan for victims (disabled and orphan) encouraging social institutions C1. Feasibility study of local income generating activities in each district	1996 1997 2000	MBPP MOEC MOI (DOAD, DOI)
D.	Capability Assessment	C2. Design special directives for loan with subsidized interest rate to disaster victims and other. D1. Capability assessment of GO, NGO a) Regular capability assessment b) Inventory preparation c) Feed back	1997 Start and continue	MOF CDRC, DDRC

DISASTER MITIGATION ACTION PLAN MATRIX

S.N.	Priority Item Group	Priority Item and Activities	Time of Completion	Executing Agency (Co-operating Agency)
A.	Mitigation Strategies	A.1 Identification of major types of natural hazards A.2. Recognise and disseminate the results B.1. Allocate financial resources for disaster management and mitigation programme for each disaster actor in National Fiscal Budget B2. Encourage international donor agencies (bilateral, multilateral and NGOs) for the financial resources to manage and mitigate disaster activities. C1. Formulation of National Land Use and Land cover Plan	1996 1996	CDRC CDRC
B.	Financial Strategies	B1. Allocate financial resources for disaster management and mitigation programme for each disaster actor in National Fiscal Budget B2. Encourage international donor agencies (bilateral, multilateral and NGOs) for the financial resources to manage and mitigate disaster activities. C1. Formulation of National Land Use and Land cover Plan	Start and Continue 1996	MOF MOF (MOFA, SWC)
C.	National Land Use and Land cover Plan	C2. Implementation of plan D1. Formulation of building code and by-laws D2. Approval and implementation of building code D3. Formulation of relevant national legislation D4. Implementation of national law on relevant measures prepared for increasing resistance	1998 and Continue 1995	MOFSC (MOWR) MOFSC (MOWR) MHPP
D.	Construction of Earthquake resistant Building	D1. Formulation of building code and by-laws D2. Approval and implementation of building code D3. Formulation of relevant national legislation D4. Implementation of national law on relevant measures prepared for increasing resistance E1. Develop risk assessment programme for all types of disasters. E2. Incorporate the results of risk assessment in development activities on disaster reduction	1996 1995 1996 Start and Continue Start and Continue	MHPP (MOLI) MHPP MHPP CDRC (Various line agencies) HMG line agencies.
E.	Risk Assessment	F1. National Disaster Reduction Programmes: a) Landslides and debris floods b) Floods	1998	MOWR (DMG) MOWR
F.	Policy on Disaster Reduction Measures	F1. 1. National Disaster Reduction Programmes: a) Landslides and debris floods b) Floods	1998	MOWR (DMG) MOWR

		(c) Earthquake d) Drough e) Epidemics P2. National Programme on developing fire fighting capabilities F2. Approval and implementation of programmes on disaster reduction as mentioned in F.1 F3. Adoption of integrated policies for prevention and preparedness	1998 1998 1998 1998	DMG MOA (MOLD) MOI MOLD (MOI)
		P3. Adoption of integrated policies for prevention and preparedness G1. Formulation of national plan on involvement of NGOs, reduction on following areas G2. Policies on NGOs, Private Sector and Communities on disaster	1999 2000 1998	CDRC (NPC) CDRC (NPC, SEC, FNCCI)
		G3. Policies on NGOs, Private Sector and Communities on disaster	1999	Sectornal Ministries
		H. Environment and Indigenous Technology Disaster Reduction	1997	CDRC (NPC)
		H1. Incorporation of Environmental Impact Assessment for disaster reduction in development planning. H2. Application of traditional knowledge, practices and values of local community for disaster reduction a) Study on Indigenous technology b) Preparation of reports and disseminatrica c) Adoption of the results in development planning H1. Setup bilateral or multilateral Joint Committees on disaster reduction	1998 1999 2000	CDRC (DDRC) CDRC (DDRC) CDRC (DDRC, NOFA (MOWR, MOI))
		I. Promotion of Regional and Sub-Regional Cooperation between Countries Exposed to same Natural Hazards (like Floods and Earthquakes) I2. Exchange information and share experiences for disaster reduction issues I3. Implement disaster reduction strategies	1997	MOFA (MOWR, MOI) MOWR, MOI MOH
		J. Establishment of Documentation Centre on Disaster management J1. Establish documentation centre for compiling collecting, publishing and disseminating information on disaster management.	1998	Start and Continue 1997

Supplement

ANNEX-A

While implementing the plan, with a view to make it easier & more effective, some amendments were made by IDNDR, National Committee on 29 Sept. 1996 which are as follows:-

1. The executing agency for (i) Flood Hazard Mapping, and (ii) the establishment of Flood Forecasting & Warning System is to be the Department of Hydrology & Meteorology instead of Department of Irrigation.
2. As a part of Disaster Mitigation Action Plan :-
 - (A) the policies on - (i) prevention & preparedness,
(ii) participation of NGOs, private sector & local communities
and (iii) incorporating environmental impact study in development plan, have to be carried out by Ministry of Population and Environment instead of CDRC.
 - (B). Ministry of Land Reform & Management has to be the co-operating agency for (i) the preparation of land use plan, (ii) rehabilitation plan and (iii) reduction programmes.
3. Regarding the amendments in the specified time frame, if it is needed, the concerning agencies are requested to inform the IDNDR National Committee.
4. To monitor the execution of the action plan, a Monitoring and Evaluation Committee comprised of representatives from Ministry of Home, National Planning Commission, Ministry of Finance, Ministry of Water Resources, Ministry of Industry (Department of Mines and Geology), Nepal Red Cross Society and Royal Nepal Army has been constituted.

EQUIPMENT AND MATERIALS FOR RESCUE AND EVACUATION

1. AIR CRAFTS:
 - (a) C-130 (Hercules).....1 (one)
OR
CASA -212.....4 (four)
 - (b) Super Puma Helicopter.....4 (four)
 - (c) Alouette/Bell/Equirell Helicopter.....4 (four)
2. TENTAGE
 - (a) Stores Tents (80 X 40).....5 (five)
 - (b) Stores Tents (40 X 40).....10 (ten)
 - (c) 50 Men Tents.....10 (ten)
 - (d) 30 Men Tents.....10 (ten)
 - (e) 10 to 15 Men Tents.....50
3. COMMUNICATION EQUIPMENT
 - (a) HF Radio Set Complete Stations.....10 (ten)
 - (aa) Frequency 2-30 MHz
 - (bb) RF Power output 100 to 150 watt PEP
 - (cc) Power input 220 volt AC, 50 Hz
 - (b) Hand Held VHF/FM Radio
 - (aa) RF Power output 5 watt
 - (bb) Frequency 30.88 MHz
 - (c) Mobile VHF/FM Radio Stations Complete.....10 (ten).
 - (aa) RF Power output 50 watt
 - (bb) Frequency 30.88 MHz
 - (cc) Input voltage 12 volt DC

4. TRANSPORTS

5 MISCELLANEOUS EQUIPMENT AND MATERIALS

(a) Bailey Bridges	10 (ten) sets	20 (twenty)
(If required to erect two 80/100 M.) Bridges		
(b) Rubber Boats	50 (fifty) sets	39 (thirty nine)
(with Accessories)		
(c) Boat Assault (Universal type).....	10 (ten) sets	100 (hundred) sets
(Capacity 10 persons)		
(d) Life Jackets.....	100(hundred) sets	50 (fifty) sets

ANNEX-B

MATERIALS FOR TEMPORARY SILENT ELEMENT

- | | | |
|---------------------------------------|----------|--|
| (f) Mini Dumpers..... | 10 (ten) | 1. Tarpaulin Polythene Base Blue Sheet
100 sft. per family |
| (h) Tipper Trucks (4 WD)..... | 10 (ten) | 2. Other building materials : (stones, bricks, partition mats, nails, wooden frames, etc.) |
| (i) Dozer (D-50 ND-8)..... | 10 (ten) | 3. Other items : (Lanterns, jerkins, bedding materials, etc.) |
| (j) Wheel Loader (125 to 145 HP)..... | 4 (four) | 4. Toilet blocks. |

ANNEX-C

LIST OF MATERIALS AND MEDICINES

1. Vehicles
2. Ambulances, stretcher
3. Cardiopulmonary resuscitation set
 - Ambu bag
 - O2 cylinder
 - ECG Machine
 - O.T. tubes
 - Airway tube
- drugs : Dexona i.v. fluids
Avil, Hydrocetrizine, Astropine
Morphine
Ethidine
Fortwin
Sod. bicarbonate
4. Suture sets
5. Crash injury set
6. Antibiotics, oral, local, parenteral
7. Rehydration fluids
8. Vit A,D,B 12 and Vit C
9. Folic Acid, Iron
10. Antiparasitic/Antihelminthic drugs
11. Chlorine/bleaching powder
12. Water container, safe with small mouth
13. Milk powder
14. Nutritious and proteinous flour