



World Health Organization

**The Government of the Islamic Republic of
Iran and WHO Joint Project for:**

“Reconstruction of Health Services in Bam”

Part I

Background

and

immediate

response

1.Introduction

During the last two decades Iran has experienced its lion share of natural disasters: four major earthquakes, a number of devastating floods and the worst draught in the last thirty years. The Bam earthquake is the 3^d earthquake in Kerman Province in the past 25 years.

On Friday 26th of December 2003 at 5:27 a.m. an earthquake with the magnitude of 6.7 on the Richter scale hit the city of Bam. To date more than 31,000 people have been buried, 22,000 are injured, 7,400 seriously injured. In total, the earthquake has destroyed approximately 20,000 homes of the 90,000 inhabitants.

As the result of the earthquake the lifelines in Bam, including public health services, totally broke down in the first 24-48 hrs. The town had no water and electricity, however safe distributing bottled water provided drinking water. The Iranian authorities responded swiftly and organized an immediate massive relief operation, nonetheless, due to enormity of the disaster, appealed to the international community for assistance. In a colossal rescue action by the: Army, Ministry of Interior, Ministry of Health and Medical Education and the Iranian Red Crescent Society, more than 12,000 injured people were airlifted to hospitals in other cities throughout the country. Search and rescue teams from 40 countries arrived and started to look for survivors under the rubbles. Provision of blood, resuscitation of victims, and a huge number of complicated surgeries and medical life saving support activities created a massive demand that consumed the capacities of the hospitals and health care facilities in Kerman and its neighboring Provinces.

WHO responded immediately to a request for support from the Ministry of Health and Medical Education (MOH&ME) of Iran. Emergency funds, released within hours of the earthquake by WHO's Director General and the Regional Director for WHO Eastern Mediterranean Region and made available to the MOH&ME to purchase urgently needed supplies. Up until to now WHO has spent approximately US \$ 400,000 for local and external purchase of drugs, supplies and equipment trauma Kits (A and B), and purchase of burn dressing kits and serum. A team of six highly qualified staff members were fielded immediately to Iran and remained there till the acute phase of the disaster was contained.

The very acute phase of the response has ended. The urgent needs for health sector is being incorporated in the overall flash appeal launched on 8th January 2004 by OCHA. The present framework has been developed with the aim of in depth assessment of needs for medium-term rehabilitation of health as an integral component of the overall reconstruction. The other objective is to use this opportunity for expanded Government/WHO collaboration on development of Joint Country Cooperation Strategy for an in-depth review of the health sector and applying innovative approaches in health and health technologies in line with

the health sector reform. As an applied model these new innovations will be implemented in Bam District as a model to be further refined and expanded in the whole country. This will be achieved by ensuring the presence and operational capacity of WHO and other stakeholders in the field in order to strengthen coordinated public health response. The mid-term component focuses on physical reconstruction and operationalization of the health care delivery system, community involvement, documentation, field research and development of guidelines and coordination. A mid-term phase is outlined and the work-plan is currently being developed with the MOH&ME and it will be provided with the budget at a later date.

The required budget for implementation of the immediate response phase is US\$3,865,000.00 and for the mid-term is US\$41,000,000.00

2. Health status before the earthquake

The city of Bam is located to the east of Kerman Province in the southeast of the country. Bam lies at a distance of 220 Km from the city of Kerman (the province centre) and 1,283 Km from Tehran. The city is the only main city of its district and is located in a vast plain between the two mountain ranges of Barez and Kabudi. According to the latest demographic data, the total population of Bam District before the quake was 240,000 with 97,000 urban and 143,000 rural.

Improvement in Iranians' health status over the last 3 decades has been one of the main reasons for the progress in human development in the Islamic Republic of Iran. Expansion of health care facilities, particularly primary health care, has greatly contributed to longer life expectancy. Table 1 indicates important health indicators for the Kerman province in comparison with the national data.

Table 1 – Important health indicators for Kerman Province in comparison to national data (source: Kerman University of Medical Sciences and Health Care Services data for 2002, Ministry of Health and Medical Education, Iran)

Indicator	Kerman Province	National
Population growth rate	2.36	1.58
Percentage of population above 65 years of age	5.3	5.5
Percentage of literacy rate for persons above 6 year of age	79.9	81.4
Percentage of households with access to safe drinking water	89	93
Percentage of households with access to sanitary toilets	42.8	36.3
Percentage of households with access to shower and bathing facilities at their homes	36.5 (Rural)	45.4 (Rural)
	82.6 (Urban)	88 (Urban)
Percentage of households with access to safe garbage disposal	22.7 (Rural)	24.9 (Rural)
	94.7 (Urban)	96.5 (Urban)

Gross fertility rate	2.4	2
Gross death rate	4.3	4.4
Infant mortality rate	17.9	18.1
Under 5 mortality rate	35.4	32.3
Maternal Mortality Rate	53 (Rural)	35 (Rural)
Percentage of stunting for 5 years old children	21.7	15.4
Immunization coverage for under one years of age	88.7	89.9
Percentage of exclusive breast feeding up to 6 months	35	44.1
Prevalence of mental disorders in different forms in population above 15 years of age (based on GHQ-28 questionnaire)	23	21
Percentage of hypertension among 40 to 69 years of age	22.5	23
Percentage of hypercholesterolemia among 40 to 69 years of age	17.9	17.9
Percentage of smokers above 15 years of age	11.9	11.9
Percentage of BMI>30 or more in population above 15 years of age	5	10.3
Prevalence of diabetes among 40 to 69 years of age	4.7	5.9
Percentage of visible hypothyroidism in all age groups	4.6	4.5
Prevalence of moderate and sever anemia	4.4	5.3
Prevalence of Malaria in 100,000 population during the year 2000	109.1	30.7
Prevalence of Cholera in 100,000 population during the year 2000	3	0.54
Prevalence of Meningococcal Meningitis in 100,000 population during the year 2000	1	0.60
Prevalence of Leishmaniasis in 100,000 population during the year 2000	2.7	19.8

3. Health Situation after the earthquake: impact on health care delivery system, major health problems and diseases, vital needs, coordination mechanisms, critical constraints

Damages to the health facilities are almost total. 95 health houses, all 13 Rural Health Centers, 10 Urban Health Centers, one district hospital, one maternity hospital and one private general hospital were destroyed. The percentage of the damage differs from one to another facility from 40-100% but generally no health facilities were functional due to the extent of the destruction and non-availability of local health workers. According to the Ministry of Health s' information 50% of the health personnel are dead. Imam hospital with 136 beds is completely destroyed. 40% of 54- bed Mahdiah Maternity hospital and 50% of the 65- bed private hospital (Aflatoonian) were also destroyed. All of these cannot be expected to be functional in the new future.

The health care facilities of the Bam District Health Care System as well as the percentage of damage by the earthquake are shown in table 2.

Table 2 – District Health Care Delivery System, and the damage due to earthquake

Health Facility	Number	% of Damage
Health House	95	100
Rural Health Center (RHC)	14	100
Urban Health Center (UHC)	10	100
Health Posts (Urban)	5	100
Maternity facilities (as part of RHC)	5	100
Emam District Hospital (public)	136 beds	50
Mahdieh Maternity Hospital (public)	54 beds	40
Aflatoonyan Hospital (private)	65 beds	100
Emergency Station (115)	1	100
Behvarz Training Center	1	100
District Health Network expansion Center	1	100
District Health Care Management Center	1	100
Faculty of nursing and paramedics	(2000 sq.m.)	100
Dormitory of the Faculty of Nursing	(1500 sq.m.)	100

3.1 Ministry of Health Response

As pointed in the introduction, the Ministry of Health and Medical Education (MOH&ME) in collaboration with the Army, the Red Crescent Society and other partners airlifted more than 12,000 injured to health care facilities in other parts of the country.

Due to the destruction of the health care infrastructure, the disease surveillance system including diagnostic laboratory facilities was interrupted. Primary Health Care services including maternal and antenatal care, routine immunization, control and care for chronic diseases such as hypertension and diabetes as well as management of Tuberculosis and Malaria have been curtailed. Yet, within 4 days after the disaster the PHC services have been reactivated and a good diseases surveillance system, with active tent- to- tent case finding, has been established.

Environmental health monitoring such as drinking water quality control, promotion of sanitation, solid wastes, and disinfection/decontamination of high-risk areas are being implemented by the MOH&ME. Similarly, an elaborate mental health action plan has been designed and is being implemented. It is believed that the earthquake of Bam will cause very high incidence of Post-Traumatic Stress Disorder (PTSD).

To cover the health needs of the people; the city of Bam is divided into 12 zones, each managed by a team from Universities of Medical Sciences and Health Services from other provinces.

At present 65% of the city water network has been restored. It is feared that an acute shortage of latrines will lead to a major health problem. The municipality has restarted the system for waste collection and disposal.

3.2 WHO Response

WHO responded immediately to a request for support from the Ministry of Health of Iran. An operation room was set up in the Ministry of Health with WHO's full participation. The WHO/Iran EHA Officer was sent instantly after the earthquake struck and was in Bam immediately with communication facilities. A team composed of the Director of Health Promotion, the Regional Adviser MEP, a senior environmental health consultant and a staff member from the WHO office in Pakistan have been provided by the WHO Regional Office (EMRO). Furthermore, a senior health specialist from WHO/HQ from HAC was immediately sent to Iran, arriving in Bam within 48 hours. Also, the WHO Assistant Director-General for External Relations and Governing Bodies, Dr. Kazem Behbehani, and the representative of the Director-General for Polio eradication, Dr. David Heymann, visited Iran. These WHO staff participated in coordination meetings with UN agencies and NGOs as well as the Ministry of Health teams in Bam and Tehran.

Emergency funds, released within hours of the earthquake by WHO's Director General and the Regional Director for WHO Eastern Mediterranean Region, were made available to the Ministry of Health to purchase urgently needed items. Up until now approximately US\$ 400,000 has been spent by WHO for local purchase of drugs, supplies and equipment, external purchase and delivery of trauma Kits (A and B), burn dressing kits and serums to national authorities. The WHO team is presently working in the areas of emergency health care, communicable disease control, information collection and analysis, environmental health, and health service planning. Field mobility has been supported to facilitate transport and communication of the WHO team in Bam with Ministry of Health partners. The WHO senior specialist in communicable diseases from WHO/HQ visited Bam for a focused assessment on means for reducing post-earthquake morbidity and mortality. The WHO country team as a member of the UN Disaster Management Team, participated in the preparation of the UN Flash Appeal for Bam earthquake and led the working group on Health and Nutrition.

3.3 Critical Current Priorities

- Shortage of field toilets and showers
- Danger of outbreak of endemic diseases such as cholera, typhoid fever, malaria and leishmaniasis

- Heavy mobility of population into and out of Bam city.
- It is observed by national and local authorities that a large number of people from neighboring areas have moved into the affected area to benefit from the support provided by the local authorities and aid agencies

4. UN Flash Appeal

The health sector needs for the immediate phase has been prepared and incorporated into the UN Flash Appeal. It has been estimated that around US\$3,865,000.00 is needed for the next 3 months. The UN Flash Appeal was launched on 8th January 2004 in Bam and in Geneva by OCHA.

Part II

Government- WHO Collaborative Framework

5. Government and WHO collaborative framework for rebuilding of the health sector in Bam:

In view of the special nature of the situation in Bam and firm commitment and desire of the government for speedy rehabilitation of the infrastructure, especially the health sector, there is a need for a focused approach by all parties involved. Addressing this need has been facilitated by considerable international attention and donors' readiness to help. Such a focused approach augurs well with the development of "Country Cooperation Strategies" (CCS). This will provide a unique opportunity for looking at a joint WHO-government collaboration for health development in emergency situations.

The first priority without a doubt is the immediate reconstruction of required health care facilities and rehabilitation of their services. In this regard, naturally, the Ministry of Health will be in the mainstream of the overall master plan for the reconstruction of Bam's various sectors. In planning the overall reconstruction, the health sector plays a vital role. In addition to monitoring the incorporation of strict physical safety standards in buildings and other structures, the health and environmental considerations should play a major role in the final decision for location and the design of overall reconstruction of the city. For example, one alternative for master reconstruction is first to place the existing tents in one or two camps and build the city in a new site and away from the earthquake fault zone. Such decisions, though may appear simple, have huge health, legal, economic and psychosocial impacts. Experiences in other natural disasters show that temporary camps become permanent slum areas causing monumental health and psychosocial problems in the future. The Government-WHO Collaboration in addition to support for rehabilitation of health services, should assist the MOH&ME in strengthening the master plan for rebuilding of Bam. Another critical area in which the MOH&ME of Iran has developed an impressive and sound plan is the programme for Mental Health and Psychosocial interventions. The joint Government-WHO collaboration will support this programme not only for implementation in Iran but also as a model for other countries. Similarly, based on a successful ongoing package of environmental health, as part of the PHC programme, the joint Government-WHO Collaboration will assist in strengthening the package, especially for emergency and disaster conditions. The experience in Bam, during the acute phase, showed that more technical environmental health guidelines are needed. Therefore, expanded environmental health guidelines for natural disasters and emergencies will be developed for use in other countries of the Region. Also the MOH&ME capacity will be strengthened to develop national policy, strategies and guidelines for incorporation and monitoring of health, safety and the environmental health safeguards and required actions in urban and rural development and settlement.

Furthermore, it is of the utmost importance that innovative approaches to health be incorporated within the overall reconstruction and rebuilding efforts.

Information and communications technologies (ICT) will play a major role in helping to deliver the accepted goal of excellent, efficient, patient-centered healthcare. For healthcare executives and policy makers the availability of operational information at local and national levels must be improved in order to allow the necessary planning for healthcare changes and improvements. Information gathered for clinical audit purposes is particularly important to achieving targeted improvements. With new treatment options and technologies, the staff will require access to high levels of training, and access to support systems in order to maximize effectiveness. It is not possible for training and development to be delivered as it has been in the past, as conventional delivery is costly and inefficient. *E-LEARNING* tools will increasingly provide on the job training both for clinical and non-clinical staff within the concept of *E-HEALTH*.

All those processes, products and services related to patients' health will be available on-line. Some of these services will be electronic versions of processes that are currently provided using manual methods.

One of the more important uses of communication technology must be in the field of health education at all levels, not only making the knowledge of specialists available to everyone, but also educating future health professionals.

A unique and far-reaching example of how technology, education and health can be fully utilized in servicing the health sector of Bam is present in the Health Academy; a WHO initiative to create a global health and technology network. This is unique as it provides health information to the general public for the purpose of health improvement. It provides guidance in terms easily understood by people from all walks of life and all age groups, taking into consideration their individual cultural sensitivities. Indeed, the Health Academy will provide a rare opportunity for the city of Bam to be at the cutting edge of *E-HEALTH* and *E-LEARNING*, which will empower the people of Bam to re-create a modern and comprehensive city.

Indeed, since time is of the essence, government-WHO collaborative programmes should be further strengthened to assist the national efforts and take advantage of all available resources. In this connection the highest priorities must be addressed first.

5.1 Priorities

The most urgent priorities for the Intermediate Phase are:

5.1.1 Financial support to survivors

5.1.2 Shelter

5.1.3 Revival of municipal and rural services

5.1.4 Rebuilding of the health sector:

- Development of a reconstruction planning process

- Construction of the facilities
- Placement/training of human resources
- Equipping the facilities
- Supporting the re-establishment of the private sector
- Utilizing opportunities for introduction and development of innovative health approaches in line with health sector reform:

-Health system/sector reform

-Health knowledge and knowhow

-Health promotion

-Community based initiatives

-Environmental health

-Mental and psychosocial health

-Information-networking

- Capacity building for documentation and media interaction due to the international dimension of the natural disasters.

-Research, evaluation, documentation and development of guidelines.

5.1.5 Strengthening of health-sector response to emergencies and national disasters, including a multi sectorial approach

5.1.6 Rehabilitation and social welfare

5.1.7 Inter-agency collaboration/coordination

5.2 Collaborative Framework

5.2.1 Guiding principles

The collaborative framework approach will be based upon the following guiding principles:

- 5.2.1.1 Evidence-based planning and implementation
- 5.2.1.2 Involvement of the affected people and community based-approaches
- 5.2.1.3 Creating active dialogue between all stakeholders and coordinated action (including national ministries, agencies, NGOs and external support partners)
- 5.2.1.4 Building on existing successful programmes and incorporating new, innovative approaches in health
- 5.2.1.5 Strengthening disaster preparedness and response within the main framework of health sector rehabilitation
- 5.2.1.6 Facilitating, documentation and exchange of experience for the benefit of countries worldwide.

5.2.2 Collaborative Mechanisms

In view of the importance of the collaboration, a Government-WHO Joint Programme Review Mission (JPRM) will develop a detailed plan of action for collaboration and support by WHO during the interim term. Similar to JPRM exercise for planning of WHO regular budget in each biennia, the external assistance for reconstruction of Bam will be planned, identifying the role and responsibilities of Government, WHO and other partners.

The collaborating mechanisms will also include:

- 5.2.2.1 Formation of Task Forces at Headquarter and Regional level; formation of only 1 task force at regional level with the support of HQ
- 5.2.2.2 Establishment of a national Task Force by the Ministry of Health and Medical Education.
- 5.2.2.3 Advancing the preparation of joint government-WHO Country Cooperation Strategy with a “Millennium Development Goals” perspective
- 5.2.2.4 Joint government-WHO mission for in-depth assessment
- 5.2.2.5 Strengthening of WHO Representative (WR) Office in Tehran and Bam
- 5.2.2.6 Joint sectoral technical review missions and respective programme development i.e. health system, disease control, mental health, environmental health, etc.
- 5.2.2.7 Establishment of an inter-agency Task Force
- 5.2.2.8 Setting up/participating in of a national inter-ministerial coordination mechanism and being closely involved in the overall reconstruction of affected areas
- 5.2.2.9 Development of a systematic monitoring and evaluation mechanisms
- 5.2.2.10 Assisting the development of national policies and strategies for minimizing human loss and material damage
- 5.2.2.11 Creation of local level active mechanisms for active dialogue and participation for reflections of people’s priorities and visions for the urgent development of Bam and the health sector.
- 5.2.2.12 Computerizing the first, second and tertiary levels health information
- 5.2.2.13 Harnessing modern technology for health and medical education
- 5.2.2.14 Designation of a national focal point (s) for e-learning to support health rebuilding and development

Part III
Mid-Term plan (one year)

6. Mid-Term plan (one year)

6.1 Physical reconstruction and operationalization

Table 3 – Cost of construction and operationalization of the District Health System

Health Facility	Cost of construction	Cost of operationalization	Unit Cost US\$	Number	Total Cost US\$
Health House	45,200	18,000	63,200	95	6,004,000.00
Rural Health Center	181,000	42,000	223,000	13	2,899,000.00
Urban Health Center	181,000	54,000	235,000	10	2,350,000.00
Health Post			5000	5	25,000.00
Hospital Bed			55,000	255	14,025,000.00
Emergency Station (115)			37,500 (Excluding ambulance)	1	37,500.00
Behvarz Training Center			180,000	1	180,000.00
District Health Network expansion Center	241,000	121,000	361,000	1	361,000.00
District Health Care Management Center	421,000	180,000	601,000	1	601,000.00
Faculty of nursing and paramedics (2000 sq.m.)			723,000	1	723,000.00
Dormitory of the Faculty of Nursing (1500 sq.m.)			362,000	1	362,000.00
TOTAL					27,567,500.00

6.1.1 Physical infrastructure

Criteria for prioritizing the work plan will be based on the Provincial/District health network development plan. Assessment will be made by the MOH&ME in collaboration with WHO to identify population needs, availability of human resources and access to all levels of health care services. Wherever possible, international partners such as NGOs or donors will contribute to reconstruction and rehabilitation of the physical infrastructure. The detailed construction plan for the Bam District Health system will be prepared by the MOH&ME and will be shared with international partners and the donor community. Detailed construction plans will be prepared so that the new buildings will be earthquake-resistant to avoid repetition of the Bam disaster.

During the acute and intermediate phase, referral services outside the district are being used as primary choice to decompress the acute humanitarian crisis of the city. Between 29 December 2003 to 2 January 2004, there were some 10 field hospitals erected in the affected area. Since then, the Italian field hospital has been donated and handed over to the MOH&ME. The IFRC hospital will eventually be moved to semi-permanent and permanent installation over time and will gradually be handed over to the national authorities to replace the district hospital. The other eight field hospitals will all have been closed and returned by 10th January.

The cost for reconstruction of physical facilities as shown in table 3 amounts to **US\$ 27,567,500.00**

6.1.2 Private sector

Even though the national and international efforts will be focusing on provision of essential services for a year or more, there will be a gap and need for supplementary services. The need will create an environment in which the private sector can re-establish and expand its services. Efforts will be made to provide incentives for private sector services such as loan facilities, subsidized drugs, medical equipment and exemption from taxes for a limited period. Health personnel in the public sector will be permitted to open their own private clinics outside government working hours. Considering the needs, there still has to be a regulatory mechanism in place for the private sector.

The budget to support the private sector is estimated at **US\$ 1,000,000.00**

6.1.3 Human resources development

The MOH&ME has indicated that 50% of the health workers have been killed and that the rest are not able to resume their obligations either because of injury or requirements of their affected families. The intermediate solution is presently to divide the city into 12 zones each under a partnered medical college, which provide temporary staffing for PHC.

In addition, the building of the health training centers in Bam has been totally destroyed. All training activities of auxiliary health workers have thus come to stand still.

As the international staff phase out, and the staff from other provinces return to their institutions during the intermediate phase, the gap in the manpower will be filled by recruitment, transfer and relocation of staff by the MOH&ME, especially from Kerman province. In service training and re-training of medical staff on trauma care, PTSD, rehabilitation and triage will have to be instituted to upgrade their knowledge and skills in order to ensure complete rehabilitation of the

injured. The Community Health Workers and nurses have to be also included in the process of training.

The training center will be reconstructed and operationalised with international assistance required. New Community Health Workers (Behvarz) for the health houses will be trained. The skills and knowledge of available health workers will also be upgraded. Costs of reconstruction of the training centers are included in Table 3.

The costs of training in all categories are estimated to be around **US\$ 1,000,000.00**

6.1.4 Community Rehabilitation, Participation in the process of reconstruction: Basic Development Needs (BDN)

The people of the affected area face a number of health related problems and needs to be supported and rehabilitated in order to return to the health status that existed before the earthquake. The people are not psychologically in a position to consult the health care providers who are scattered throughout the city and district for preventive health care services. Women do not have access to their health records indicating dates for their children' vaccination, growth monitoring or their own antenatal care, etc. Some children may already be malnourished and need iron supplementation, advice on nutrition, and other kind of supports. Installation of sanitary latrines, follow-up of chronically ill patients, application of an active disease surveillance system, re-establishment of the water supply network and many other health, nutrition and sanitation activities cannot be achieved without active participation of the community.

The health system in Iran has benefited from the active participation of nearly 100,000 Women Health Volunteers during the past 10 years. The Women Health Volunteers (WHV) have made a major contribution for effective delivery of health care services in urban areas of the country. The women health volunteers are being selected in urban community by their neighbors; each covers a population of 20-50 households. They are being trained on the most important health related issues and attend weekly training sessions in the nearest urban health center. The WHVs follow-up the defaulters and provide the health system with the latest and most reliable vital events information including death, birth and migration. They also encourage mothers to use and take part in the available health care services by community awareness building. The WHVs are also involved in generating resources for improving other aspects of progress including education, women's development, road construction, transport, higher education, etc.

The mid-term project is aiming to mobilize 600 female and possibly an equal number of male health volunteers in the reconstruction and rehabilitation of Bam.

The following major activities may be carried out to achieve the above-mentioned objectives:

- Selection of one male and one female volunteers per 20- 30 tents by the community;
- Training of the volunteers
- Use of the volunteers in active disease and nutrition surveillance, follow-up of at risk groups, EPI activities;
- Involve community through the volunteers in water supply and sanitation and other environmental health activities.
- Create social informal forums, dialogue and communal counseling for social rehabilitation.
- Create formal and informal community and one-on-one dialogue for health advocacy, life style and coping with emergency and recovery condition.
- Involve the community for rapid return to normalcy: reopening of schools, women development and community capacity building;
- Establish women vocational training centers in the affected areas and train them in handicrafts to earn money and reactivate the economy of the region;
- Establish 10 skill-training workshops on different skills, and train 10,000 youth in a period of two years.
- Provision of income generating loans to 2000 people trained by the WVTCs and skill training centers.

Table 4- List of activities and budget estimation for WHVs project

Activities	Quantity	US \$	Remarks
Preparing and printing of training materials	1,000 copies	2,000	
Selection of 600 volunteers through negotiation with the affected community including supervision and monitoring		10,000	Traveling cost of experts and expenses for the briefing meetings
Recruitment of a programme manger for a period of 11 months	One for 11 months	6,600	
Training expenses, weekly meetings and of 600 Volunteers	600 volunteers for 12 months	360,000	US \$ 50 per volunteer per month (no salary)
Establishment of 10 Women Vocational Training Centers	10 centers, salary of 20 instructors for 12 months, raw materials, physical space and required machinery	20,000	
Transport facilities		60,000	2 vehicles for the

			supervisors and 10 motorcycles for the volunteers
Establishment of skill training centers for the youth	10 centers	150,000	20 instructors, physical space, collaboration with other related sectors, raw materials, etc
Documentation, including situation analysis and evaluation	One STC for a period of 30 days (15 days at the beginning and 15 days at the end of the first year)	15,000	
Financial assistance for income generating loans to the trained people by the WVTCs/ Skill training centers	US \$ 5000 per person totally 2000 beneficiaries	1,000,000	
TOTAL		1,623,600.00	

The total funds needed for community rehabilitation, participation and urgent basic development needs is **US\$ 1,623,000.00**

6.1.5 Health Knowledge and Technology for Bam

Many countries are hindered from achieving the goal of “health for all” by weak mechanisms in promoting health and providing health information. The provision of electronic health information is one way to surpass shortcomings. A major advantage of communication technology is that electronic materials can be quickly updated and disseminated, whereas text books take time to prepare and publish, and are costly to distribute.

E-LEARNING tools and the Health Academy, a WHO initiative to create a global health and technology network, will thus be a necessary component of health knowledge for the people of Bam. The employment of *E-LEARNING* tools and the Health Academy will have far reaching affects beyond the health sector and people can be educated and informed about all aspects of the immediate city development such as environment, education, economy, etc. In this regard, health will be an introductory venue to introduce such technologies for later use by all other sectors.

The cost of introduction of health technologies, training and capacity building as is estimated at **US\$ 1,750,000.00**

6.1.6 Information Infrastructure for Health Services in Bam

The MOH&ME is planning to reform the PHC system and strengthen it with the introduction of family physicians and developed patient-centered care. In the

meantime to reduce the curative health costs, it is planned to introduce a modern diagnostic and curative process through modern technologies and electronic network and computerized communication network to support the family physicians and the health care providers at the lower levels.

The information infrastructure for health services cost is estimated at **US\$ 1,750,000.00**

6.1.7 Environmental Health

The provision of water supply, sanitation and solid waste management facilities are the responsibilities of the Municipality and the local authorities. The role of the MOH&ME in Environmental Health is one of monitoring, surveillance and quality control. Nonetheless, the situation in Bam calls for a much more involved role for the MOH&ME for the restoration and activation of environmental health services. Also, for the overall reconstruction of the city, the health and environmental impacts of the any master plan scenario has to be critically analyzed and assessed. Such an assessment should be an important factor in selecting the final master plan, among different alternatives. In relation to reconstruction of the city, the safety of buildings and prevention of injuries as well as safeguarding the health and environment considerations in architectural and engineering designs must be strictly monitored and enforced. Therefore, the MOH&ME environmental health program should be strengthen and supported to fulfill such expanded and deciding role.

In terms of quality control there is a need for establishment of water and wastewater laboratory facilities. Similarly environmental quality lab should be able to perform chemical and microbiological food quality analysis to help the food quality control services. The water distribution system in Bam is being rehabilitated to serve the immediate needs of the earthquake victims, but it might be necessary to build a new distribution system, should the reconstruction plan for the city decide to build the city in a different site than the existing location. In any case, the distribution system has sustained considerable damage and requires major overhauling. In respect of sanitation, it will be vital to build a sewerage system for the reconstructed city. Bam is in a water scares area of the country and sewerage system, in addition to public health benefits, will allow the option for wastewater reuse. In respect of solid waste management, the municipality should be provided with the required machineries, collection and transportation means for effective garbage collection and disposal.

The concerned ministries and local authorities outside the health sector would provide the budget for the waster supply distribution system, sewerage, and solid waste management. However, in order to strengthen the health considerations and safeguarding the public safety from the environmental hazards, some additional resources may be provided to the health sector, enabling it to be an active stakeholder for the reconstruction of heavy investment environmental

services. Furthermore, the Ministry of Health should be active in hospital and health care facilities wastes segregation, collection, treatment and disposal as well as in the field of chemical safety. The development of human resources for environmental health monitoring and control requirements as well as the expanded role to effect health and environment considerations in city planning and reconstruction calls for an active Government – WHO collaborative programme on environmental health.

The total cost for fulfillment of the above functions and facilities is estimated at **US\$ 1,629,550.00**

6.1.8 Mental Health

Based on experiences with previous natural disaster MOH&ME has developed an elaborate mental health program to provide the required care to traumatized victims and help in stabilization and social rehabilitation. In case of Bam the number of death and intensity of the destruction are as such, that all survivors require extensive psychological counseling and psychiatric treatment. Based on early assessment about 40% of affected population develop post-traumatic stress disorder (PTSD). This is more than twice the percent people that developed PTSD in the earthquake that struck the northern provinces of Iran in 1990. It is important to note that the mental health intervention and services will not be heavily centered to only care for PTSD cases, but it will be a package dealing with family, school and community mental health interventions and programmes. It will also address the needs of already existing people with mental and psychological problems and illnesses as well as those afflicted with conditions like epilepsy. The other important element of the package is to cope with substance abuse and addiction, which is of major concern in Bam.

The package calls for a community based approaches to deal with drug addiction as part and parcel of the PHC network. The programme includes specialized interventions, provision of the required psychotropic drugs, counseling, therapy sessions and when needed hospital care. The mental health package will utilize the services of 600 Health Volunteers (mentioned before). The mental health package, which has been prepared by the MOH&ME after implementation in Bam and further development, has a very good potential to be used as a model for other countries in the region.

The budget for mental health program is estimated at **US\$ 500,000.00**

6.1.9 Implementation of Integrated Health Services

The programs and facilities for disease control, health system development/ health sector reform, reproductive and adolescent health, IMCI, nutrition, and oral health have will be strengthened and provided for. The disease control covering

routine immunization, polio, and measles surveillance, malaria and leishmaniasis control should be particularly restored and reactivated. The reconstruction of Bam and the incorporation of new approaches for health development provide a good opportunity to address injuries and road traffic accidents. Injuries and fatalities due to traffic accidents are one of the most critical health concerns in the country, but it is particularly high, especially in surrounding areas of Bam. The Government-WHO collaboration will develop the multi sectoral approaches (police, road and transportation, education, community, etc.) for prevention of road traffic accidents and required emergency care. The programme will be developed as a model for implementation in the other parts of the country. Also, non-communicable diseases particularly diabetes, hypertension, cardiovascular diseases, asthma, and genetic disorders will be given due attention and the cancer registry will be reactivated.

To implement the health care services mentioned above it is estimated for program strengthening, provisional medicine, supplies and equipment and other expenses a total of **US\$ 2,000,000.00** will be required.

6.2 Strengthening the media interaction and communication facilities of the Department of the International Health in MOH&EM

Iran, being a natural disaster prone area, unfortunately has to deal with a major natural disaster almost every 3-4 years. Since the relief and rebuilding in these unfortunate disasters has a large international dimension, the capacity of the international department of the Ministry of Health has to be strengthened to have sufficient communication, graphic, data processing, bulletin preparation and press release preparation facilities and capabilities. Such capacity building entails specialized training for the staff, equipment facilities and closer collaboration with the health department in the center and provinces. In this regard, the international department has to be able to provide timely briefings and execute its function with the donor communities as well as the international press.

It is estimated that a sum of **US\$ 300,000.00** will be necessary to build the capacity of the International Department.

6.2.1 Documentation, research and development of guidelines

Iran being a disaster prone country has gained considerable experience in response to natural disasters and wars. Unfortunately, some of these most valuable experiences have not been documented properly, especially for use by other countries. The health sector response for the current earthquake, which has been swift and effective, has drawn on the past experiences in an applied sense. Therefore, documenting the health sector response will provide an

excellent basis for sharing with other countries, developing guidelines and mapping the required processes and actions from the onset to the recovery.

In the meantime it is critical that the efficiency and efficacy of response of the whole process be evaluated through a scientific research framework to improve national capacity as well as streamline existing WHO technical guidelines for disaster management.

It has been proposed to hold a series of technical consultations, inviting experts from other countries of the Eastern Mediterranean Region as well as donor countries to develop the protocol and framework for the research, documentation and guidelines. This matter was discussed with a number of donors and received their enthusiastic willingness to participate. The Government has requested WHO to technically coordinate this activity. The exercise will include identification and implementation of research and investigation in various fields such as assessment of manpower needs and human resources development, management and administration of disaster response, evaluation, and identification of areas for improvement. Furthermore, the existing guideline will be reviewed and updated with the aim of preparing more detailed procedural and technical guidance.

Proposed activities and budget for the next two years is as follow:

Activity	Cost US\$
- Three Regional expert meetings	150,000.00
- Support for conducting research on priority topics	100,000.00
- Manpower assessment and human resource development	50,000.00
- Preparation and printing of guidelines and reports	100,000.00
- Total	US\$ 400,000.00

6.2.2 Coordination

Considering the abruptness of natural disasters, coordination is always a formidable task. Even though the health sector acted swiftly in this current earthquake, especially for rescue and care of the injured, in some health areas where the main responsibility was not that of the Ministry of Health, difficulties were experienced. In addition, there were instances where coordination of logistic support and better procedural routines would have facilitated the health sector response. There is an agreed upon coordination procedure between the main stakeholders i.e. Ministry of Health, the Iranian Red Crescent Society, Ministry of Interior and Ministry of Housing. However, in the early days of the earthquake the coordination required considerable improvement. This applies

also to coordination of external assistance. The appearance of the lack of coordination was not due to lack of an organizational structure. It was more due to a hesitation by some partners to exercise institutional responsibilities and mandate.

To remedy the situation it is proposed to hold a series of structured coordinating exercises through a process of actual rehearsal and play acting (similar to military maneuvers) where participants identify problems and develop solutions and problem resolution. These coordination/problem resolution rehearsals will be conducted at all levels (district, provincial, national).

The breakdown of budget per year is as follows:

Activity	Cost US\$
Development of the process	50,000.00
Technical assistance for implementation	50,000.00
- Preparation and printing of guidelines and reports	50,000.00
Total	150,000.00

6.2.3 Experts and technical missions

In view of the importance of the undertaking, the WHO Representative Office should be strengthened and a mid-term senior international staff member should be assigned in Bam. Moreover, WHO/HQ and the WHO/EMRO technical review missions and consultancy will continue support and special agreements have to be provided for.

External and internal resources are required for design, implementation and documentation of this process.

It is estimated that for a period of 5 years a total sum of **US\$ 629,550.00** will be required.

6.2.4 Disaster preparedness

Disaster preparedness is an important component that needs to be taken account of for mitigation of future disasters both in Iran itself and worldwide. It will cost approximately **US\$ 500,000.00**

The budget outline for disaster preparedness is as follows:

6.2.4.1 Support to the MOH, e.g. review and modification of policy and plans; information management (disaster reduction and risk management) – US\$ 75,000

6.2.4.2 Capacity Building – US\$ 130,000

- training, at national, provincial, district and community level (courses, fellowships, NTAs)

- advocacy and awareness materials

6.2.4.3 Provision of essential equipment & supplies, e.g. communication, medical kits – US\$ 210,000

6.2.4.4 Coordination and meetings with all stakeholders, (Red Cross, intern. agencies, UN, government authorities, etc.), addressing multi-sectorial coordination as well - US\$ 30,000

6.2.4.5 Assessment of healthcare facilities for earthquake appropriateness - US\$ 55,000

Summary of overall fund requirements

Activity	Requested Funds (\$US)
6.1.1 Physical infrastructure	27,567,500.00
6.1.2 Private Sector	1,000,000.00
6.1.3 Human Resource Development	1,000,000.00
6.1.4 Community Rehabilitation, Participation, Income generation and Basic Development Needs (BDN)	1,623,600.00
6.1.5 Health Knowledge and Technology	1,750,000.00
6.1.6 Information Infrastructure for Health Services	1,750,000.00
6.1.7 Environmental Health	1,629,550.00
6.1.8 Mental Health	500,000.00
6.1.9 Implementation of Integrated Health Services	2,000,000.00
6.2 Support for strengthening of International Department of MOH&ME	300,000.00
6.2.1 Documentation, research and development of guidelines	400,000.00
6.2.2 Coordination	150,000.00
6.2.3 Experts and technical missions	629,550.00
6.2.4 Disaster preparedness	500,000.00
7. Coordinated Project management, monitoring, evaluation and lessons learnt	2,700,000.00
8. Subtotal	43,500,200.00
9. PSC at 6%	2,610,012.00
Total	46,110,212.00

Part IV
Annexes

Annex I

National Health Policy

In the third five-year National Development Plan (2000-2004), the Islamic Republic of Iran has reiterated its commitment to the delivery of comprehensive health care as the right of all individuals. The policy has also outlined its enduring support to the policy guidelines of health for all with targeted adaptation to the prevailing socio-economic and cultural realities of the country. In this framework, the Government has made explicit choices as follows:

1 Focus on comprehensive primary health care (PHC) as a priority:

At present the entire budget of PHC is met by the public sector. In this endeavor the emphasis was focused on the rural areas and under privileged localities. Preference in resource allocation was given to primary prevention over secondary prevention and to secondary care over tertiary/specialized care. The Health Sector Reform was the first priority of the MOH&ME and relevant activities have been formulated and started during the biennium 2003-2003. However, there is still the need to revitalize PHC network in light of the new changes and challenges.

2 Consolidate the 1994 initiative of integrating the Universities of Medical Sciences into the Ministry of Health and Medical Education, with the objective to reorient the training of human resources for health to the realities of the health care system and base it on the health needs of the country.

3 Strengthen national strategic policies for the control, elimination and eradication of communicable diseases and reduce the burden and risk factors of non-communicable diseases.

4 Support the basic needs of low-income groups, the disabled and other vulnerable groups that are not covered by insurance and social welfare services to enable these social groups into self - sufficient active members in the society.

5 Promote intersectoral action and community involvement in health and integrated total development for a better quality of life.

6 Pursue the concept of essential drug policies and sustain the generic system of drug labeling to improve efficiency, promote competition and encourage the private sector.

7 Promote food safety, food security and nutrition literacy with emphasis on children, mothers and other vulnerable groups, and sustain micronutrient policies that endeavor to achieve universal coverage.

8 Introduce regulatory norms and quality programmes for continuous education for all categories of health professionals.

9 Strengthen the referral care with expansion of specialized outpatient and day care/short stay facilities and improving emergency care referral support.

10 Ensure the comprehensive coverage of the different strata of society with health insurance.

11 Encourage health care delivery through cooperative based schemes and/or public private partnership ventures.

12 Expand the health system research to all levels of the health care delivery system; promote decentralization with delegation of authority to the district health system; strengthen the health management information system for evidence based decision making and promote national self-reliance in essential drugs manufacturing and procurement of medical supplies and equipment.

ANNEX II

Donors' contribution to the acute phase of the earthquake response

Donor/NGO	Type	agency/organisation	value	date
ECHO	Cash	IFRC	622,129Euro	29-Dec
ECHO	for field hospital	Finnish red cross	500,000 Euro	29-Dec
ECHO	for water purification	German Red cross	330,000 euros	29-Dec
ECHO	cash	MDM	160,000 euros	29-Dec
ECHO	cash	comite d'aide medicale	653,577 euros	29-Dec
DFID	cash	IFRC	150,000£	29-Dec
DFID	for tetanus Im.	WHO	100,000 \$	30-Dec
UNICEF	Kits- obstetric	UNICEF	285,000	29-Dec
UNICEF	warer purification tab	UNICEF		29-Dec
USAID	FEMA team-supplies			29-Dec
Morocco	Team of surgeons.kits			29-Dec
Americares	medicines and supplies		136,286\$	
CWS	Medicines		350,000\$	31-Dec
IMC	team and kits			
Saudi	medical relief items	IRCS		
Egypt	IV solutions	IRCS		
UAE	medicine-supplies	IRCS		
AAH	water tanks-team		221,971	
Malteser	team -medicines			
ICRC	medical supplies	IRCS	800,000 CHF	30-Dec
Malaysia	medical mission			31-Dec
WV	water, medical equipment	IRCS	600,000\$	31-Dec
Croatia	medicines			31-Dec
ACT	team-medicines	IRCS		31-Dec
IOCC	medical supplies	IRCS	382,000\$	31-Dec
MSF	team-medicines			27-Dec
China	medicines		600,000\$	27-Dec
Jordan	field hospital			27-Dec
Caritas Australia	funds		40,000	28-Dec
Germany	Water purification plant	medicines THW	248,316Euros	28-Dec
Australia	water purification /medicines			28-Dec
Baptist Aid	team-supplies			28-Dec
Kuwait	medicines			28-Dec
Philippines	team			28-Dec
Ukraine	hospital		600,000	28-Dec
Spain	funds pledged		20millions\$	28-Dec
Spain	field hospital		90,000euros	28-Dec
Georgia	paramedic team			28-Dec
Swiss	1NEHK			28-Dec
Life	medicines		1Mil\$	28-Dec
Merlin	team-supplies			29-Dec
Indonesia	medicines	IRCS	200,000	29-Dec
CRS	medicines		100,000	29-Dec

France	field hospital team		2,095,060euros	29-Dec
Taiwan buddhist	medicines			27-Dec
Japan	team			27-Dec
Greece	medicines		250,000 euros	27-Dec
Poland	team			27-Dec
Mozambique	team			28-Dec
South Africa	team			27-Dec
Russia	mobile hospitals			
Finland	field hospital		1M euros	
Germany	mobile health stations	IRCS	106,888	
Hungary	medical team.medicines		44,000 euros	
Austria	water purification			
Bulgaria	medicines			
India	mobile hosp			
Italy	trauma kits	WHO	54,882 euros	
Italy	kits-	MOH		
Norway	field hospitals	IRCS	1,455,604	
Turkey	medicines			
UNFPA	supplies		100,000	
WHO	local purchase drugs -supplies		200,000	

ANNEX III

List of drugs, supplies and equipment requested by Ministry of Health and Medical Education for response to needs due to Bam Earthquake

		Requested Number (quantity)	items provided by WHO to date	Total amount IRR
1)	Different General Surgery sets	100	136	183,876,447
2)	Explanatory laparotomov (Surgery) sets	100	8	38,446,956
3)	Different Nenro Surgery Sets	100		
4)	Different Orthopedic Surgery Sets	100		
5)	Trachaaostomy Sets	200		
6)	Ambo-Bag	200		
7)	Infusion Stand	300		
8)	Suction Machine	200	7	16,520,000
9)	Pulse oximeter	200	90%	
10)	Oxygen Monometer	200		
11)	Laryngoscope	100		
12)	Ventilator Machine	50		
13)	Arterial Blood gas (ABG) Machine	10		
14)	Hemo-Dialysis Machine	50		
15)	Operation Table	15		
16)	Aneasthesia System Machine	15		
17)	Cialetic light (Operation Room Light)	15		
18)	Cast cutter for plaster of paris (POP)	50		

19)	Micro-drill	50		
20)	Craniotomy Electrical	20		
21)	Elastic Bandage (different sizes)	5000 Series		
22)	C.T.Scan Films	300 Series		
23)	Orthopedic Surgery screw & Plates (6 holes and more) Different sizes	500 Each	120+ 219+1505=1844	5,710,080+65,878,325+239,677,159=311,265,564
24)	Nail Inter lock different sizes: (12*36)(12*46)	4000 Each		
25)	External Fixator (orthopaedic surgery)	5000		
26)	Plaster of paris (Chipson) Sizes: 10,15,20 cm	6 Container		
27)	Steinman pine (orthopaedic) size:2.5,3	5000 Each		
28)	Radiology (X-RAY) films	5000	350	113,400,000
29)	Wheelchair (Mobile chair)	400		
30)	Cotton Bandage size:10, 15 cm	100000		
31)	Disposable syringe size:2, 5, 10cc	150000		
32)	Seringe Dressing Gauzes	3 Tons		
33)	Betadine Solution	3000 Lit		
34)	Nelaton Sound (Catheter) different size:20000	2000	189	189,000
35)	I.V Catheter (Angio-cath.) size: 14,18,20,22	50000	40% (20,000)	60,000,000
36)	Metalic Atel (orthopaedic support) different sizes	5000	20% (1000)	120,000,000

37)	Folly's catheter different sizes	5000	30% (1741)	31,605,204
38)	Homovac (Suction)	5000	100%(5000)	45,000,000
39)	N.G. Tube Different sizes	100000		
40)	Chest tube (Tube toracheostomy) different size	2000	100% (Chest tube:1000; chest lead:1000)	45,000,000+1,000,000=46,000,000
41)	Airway different sizes	2000	100%(2000)	20,000,000
42)	Indo tracheal Tube different sizes	2000	100%(2000)	23,000,000
43)	Blood transfusion bags	100000	15% (15000)	30,000,000
44)	Sterile Surgical Gloves different sizes	100000		
45)	Condon sheet	2000		
46)	Urine Bags	5000		
47)	Adhesive tapes	54	54	1,916,700
48)	Anaesthetic bags	133	133	2,639,087
49)	Finger probe for pulse oxymetry	89	89	71,556,000
50)	Chlorine kit (Amkor Iran) DPD	300	300	42,000,000
51)	Chlorine test solution 1,2	2	each 10,000 test	2,500,000
52)	Halamid	500 Kg	500 Kg	75,000,000
53)	IGEBA-TF35 fog generator	10	10	98,000,000
54)	IGEBA-VLV-UH15 fog generator	1	1	60,000,000
55)	Emergency kit A	3	3	82,974,436(9,996.92 US\$)
55)	Emergency health kit B	3	3	259,495,682 (31,264.54 US\$)
56)	Burn dressing kit	5	5	5,999,987 (722.89 US\$)
57)	Stretcher	200	200	70,000,000

58)	Electric Generator 3 phases	3	3	138,000,000
59)	Dressing bandages	1027	1027	45,380,000
60)	Electric Generator single phase	20	20	44,000,000
61)	Kreoline	1000 Litre	1000 litre	8,800,000
62)	Portable sprayer	5	5	15,000,000
63)	10 feet refrigerator	40	40	55,200,000
64)	compressors	2 units	2 units	16,360,000
65)	complete condensor unit	2 units	2 units	6,300,000
66)	Evaporatory	2 units	2 units	8,200,000
67)	taps and accessories	2 full sets	2 full sets	5,040,000
68)	full automatic dispatch board	2 units	2 units	7,780,000
69)	cold room	1 unit	1 unit	22,300,000
70)	pipe joints with vibration absorber	2 full sets	2 full sets	7,000,000
71)	cost of assembling, installing, and operation			10,500,000
72)	full automatic dispatch board with local electric supply and diesel generator	1 unit	1 unit	12,000,000
	TOTAL	1US\$=8,300		2,213,245,063 IR
				266,656.03 US\$

Attachment IV

Field hospitals in Bam

B-FAST Field Hospital (Baravat area)

Time of arrival: 30.12.2003.

Expected time of departure: 06.01.2004.

No of personnel: 17

Doctor: 7; anaesthesiologist, 4 surgeons, 1 internist, 1 gynaecologist

Nurses: 7

Log: 3

No of beds: 25

X-ray: No

Laboratory: No

153 patients treated

No of performed operations: 2

Italian Field Hospital (Baravat area)

Time of arrival: 30.12.2003.

Expected time of departure: 05.01.2004.

No of personnel: 28

Doctors: 8; 3 surgeons, 2 internists, 2 anaesthesiologists, 1 microbiologist

Nurses: 20 paramedics

No of beds: 10 beds

X-ray: No

Laboratory: Yes

Capability to treat 100 pt/day

No of patients treated: 100

Morocco Field Hospital (Baravat area)

Time of arrival: 29.12.2003.

Expected time of departure: 2 weeks

No of personnel: 40

Doctors: 22; 4 surgeons, 1 anaesthesiologist, emergency medicine doctors

Nurses: 18

No of beds: 20

X-ray: No

Laboratory: No

Capability to treat 200 pt/d, 20 operations per day

10 operations performed, 100 consultations so far

Japanese Red Cross Hospital (Ferozi str)

Time of arrival: 31.12.2003.

Expected time of departure: in 3-4 months

No of personnel: 14

Doctors: 5; 4 surgeons, 1 emergency, med. doctors

Nurses: 4

Technicians: 3

Admin: 2

No of beds: 5

X-ray: No

Laboratory: No

Hungarian Special Rescue Team Medical Unit (Ferdozi str)

Time of arrival: 31.12.2003.

Expected time of departure: 03.01.2004.

No of personnel: 7

Doctors: 4

Nurses: 2 paramedics

Admin: 1

No of beds:

X-ray: No

Laboratory: No

Main activity: primary health care

Jordanian Field Hospital (Football field)

Time of arrival: 31.12.2003.

Expected time of departure: in 2 weeks

No of personnel: 41

Doctors: 11; 2 surgeons, anaesthesiologist, internists, pediatrician

Nurses: 30

No of beds: 25

X-ray: Yes

Laboratory: Yes

Capability to treat 250 pt/d, 10 operations

IMST (Base camp)

Medical/surgical team (Role 1)

Time of arrival: 31.12.2003.

Expected time of departure: in 1 week

No of personnel: 57

Doctors: 14; 7 surgeons, anaesthesiologist, 3 pediatricians, 3 em., Med doctors

Nurses: 20; 10 paramedics, 2 PA, 3 resp. techn, 1 pharmacist

Log: 3

No of beds:

X-ray:

Laboratory:

Ukrainian Field Hospital

Time of arrival: 29.12.2003.

Expected time of departure: in 1 month

No of personnel: 46

Doctors: 22 incl. infectionist

Nurses:

No of beds: 40

X-ray: Yes

Laboratory: Yes

130 pt/d treated, 3 operations performed, 2 deliveries,

E.S.C.R.I.M. (France) Zone 4

Time of arrival: 29.12.2003.

Expected time of departure: in 7-10 days

No of personnel: 60

Doctors: 9; 1 surgeons, anaesthesiologist, 9 internists

Nurses: 11

No of beds: 60

X-ray: Yes

Laboratory: Yes

152 patients treated

IFRC Field Hospital

Time of arrival: 31.12.2003.

Expected time of departure:

No of personnel: 80

Doctors: 15

Nurses:

No of beds: 200, 3 out-patient dept-s, 20-300 beds each

X-ray: Yes

Laboratory: Yes

Capability to treat 100 pt/d,

ANNEX V
Schematic Map of District of Bam and its Health Care System

Schematic Map of District of Bam and its Health Care System

