

# OPERATIONS UPDATE



International Federation of Red Cross and Red Crescent Societies  
Fédération Internationale des Sociétés de la Croix-Rouge et du Croissant-Rouge  
Federación Internacional de Sociedades de la Cruz Roja y de la Media Luna Roja  
الاتحاد الدولي لجمعيات الصليب الأحمر والهلال الأحمر

## IRAN: BAM EARTHQUAKE FINAL REPORT ON THE RELIEF PHASE

8 December 2004

The Federation's mission is to improve the lives of vulnerable people by mobilizing the power of humanity. It is the world's largest humanitarian organization and its millions of volunteers are active in over 181 countries.

### In Brief

Appeal No. 25/03; Operations Update no. 19 (Final Report on the Relief Phase); Period covered: 26 December 2003 to 31 August 2004; Appeal coverage: 82.7 % ([Please click here to go directly to the Contributions List](#)).

#### Appeal history:

- Preliminary Appeal launched on 26 December 2003 for CHF 15,409,300 (USD 13,052,425 or EUR 10,120,525) to assist 200,000 beneficiaries for 6 months.
- Revised Appeal launched on 8 January 2004 for CHF 51,913,000 (USD 43,956,465 or EUR 34,090,625) to assist 210,000 beneficiaries for 6-8 months.
- Plan of Action for the period of March-August 2004 issued on 23 March 2004 ([Please click here to go directly to the Operations Update no. 10](#)).
- Long-term Revised Plan of Action issued on 29 September 2004 ([Please click here to go directly to the Operations Update no. 17](#)). Remaining Appeal funds are being reallocated with donor approval to reconstruction and rehabilitation for the period of September 2004-December 2005.
- Disaster Relief Emergency Funds (DREF) allocated: N/A

Related Emergency or Annual Appeals: [Please click here to view all the reports related to the Bam Earthquake](#)

All International Federation assistance seeks to adhere to the [Code of Conduct](#) and is committed to the [Humanitarian Charter and Minimum Standards in Disaster Response](#) in delivering assistance to the most vulnerable. For support to or for further information concerning Federation programmes or operations in this or other countries, or for a full description of the national society profile, please access the Federation's website at <http://www.ifrc.org>. The Iranian Red Crescent Society (IRCS) maintains a website at <http://www.rcs.ir> both in English and Farsi which also provides the latest information, operational updates, reports, interviews and news on the Bam operation to the public.

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## **Summary**

On the morning of 26 December 2003 at 05:28 (local time) a major earthquake measuring 6.5<sup>1</sup> on the Richter scale struck the city of Bam, Kerman Province in south-eastern Iran. A mere twelve seconds later, Bam ceased to exist. Its physical infrastructure was turned to dust, its historic citadel crumbled and the lives of its people were shattered. No one remained untouched by this disaster - the worst earthquake to hit the country in more than a decade. All that was left of this historic city and its ancient citadel were piles of rubble. The final official figures estimate that over 26,000<sup>2</sup> people were killed, approximately 30,000 injured (of which some 10,000 were evacuated out of the area), and 75,600 were left homeless - this during the coldest time of the year. In addition, some 1,850 children were registered as unaccompanied and homeless.

The sights, even 8 months after the earthquake, bear silent testimony to this devastation. In Bam itself, more than 85 percent of the buildings were completely destroyed. According to the Ministry of Education in Kerman Province, all 131 schools in Bam and the surrounding villages were destroyed or damaged (to the extent of being unusable) with 18,000 to 20,000 students remaining in need of school facilities and teachers. The local administration and communication infrastructure of the city was also destroyed and the electricity, water supply, and most public health services were completely disrupted. According to the Ministry of Health (MoH), all 95 health houses, 14 rural health centres, and 10 urban health centres were ruined, as well as general governmental hospitals (with a total bed capacity of 240). These general hospitals were providing health and curative services to an estimated population of 240,000 from the city itself and its surroundings.

The story did not end there. Not only were individual lives lost and buildings destroyed, but a whole community was brought to its knees. According to various governmental sources, 50 percent of the health providers in the district had died; half of the members of the local water authority had perished; a third of all teachers were no more; and the Iranian Red Crescent Society's (IRCS) Bam Branch volunteers, officers and staff were severely depleted.

### **1) The immediate response: Rescue and emergency relief**

*(26 December 2003 to 8 January 2004)*

The immediate response by the Red Cross and Red Crescent Movement (RC/RC) to this devastating earthquake was swift and effective. Within half an hour of the earthquake, the Iranian Red Crescent Society (IRCS) began to mobilise its emergency response teams and within two hours, the first IRCS search and rescue teams had reached Bam. As the nation-wide emergency rescue and relief organization, IRCS provided a vital initial response by mobilizing and deploying more than 8,500 relief workers (including medical staff) and volunteers within the first hours and days after the disaster. The IRCS response involved search and rescue, temporary shelter and distribution of food and non-food items, the provision of emergency water supply and medical services such as medical evacuations, psychological first aid, and coordination with the national and local authorities and the Red Cross and Red Crescent Movement components. The IRCS opened its Disaster Preparedness (DP) warehouses and distributed its available emergency stocks such as tents, blankets, warm clothes, cooking sets and jerry cans, as well as incoming donations.

Given the scale and scope of the disaster, the Government of the Islamic Republic of Iran and the IRCS formally requested international assistance, and the International Federation of Red Cross and Red Crescent Societies (the Federation) responded by launching a Preliminary Appeal (Appeal no. 25/03) on 26 December 2003 for CHF 15,409,300 to provide immediate relief and basic assistance to the intended 200,000 beneficiaries.

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<sup>1</sup> The recorded magnitude of the earthquake varied between 6.3–6.7 on the Richter scale as registered by the seismological observatories in France and in the United States, and 6.7 registered by the Institute in Teheran. The closest recording was at the Seismological Observatory in Kerman Province, with a measurement of 6.5. According to seismologists, this earthquake was one of the shallowest recorded, with a focal depth of only 10-12 kilometres and the epicentre directly underneath Bam city. Bam is located on a main earthquake fault line and Iran is ranked as the fourth most disaster prone country in the world.

<sup>2</sup> At the end of March, Iran's official statistics centre announced the final and definite death toll as 26,271. The discrepancy with initial official estimates of up to 43,000 killed is claimed to be primarily due to the double-counting of bodies during the initial chaos caused by the disaster.

Within 72 hours, a Federation Field Assessment and Coordination Team (FACT) had arrived in country and undertook to coordinate the deployment of Federation Emergency Response Units (ERUs) - providing field hospitals, basic health clinics, water and sanitation, logistics and relief that supported the IRCS search and rescue teams. The International Committee of the Red Cross (ICRC) worked in close coordination with IRCS to enhance local tracing capabilities.

This was a race against time. The focus was on unearthing possible survivors as well as providing basic food and shelter to the estimated 80,000 left homeless - who were suffering from shock, compounded by the effects of the freezing winter weather. The IRCS worked very closely with the government, facilitating emergency response by different parties concerned. The government's exceptional "open sky policy" helped international agencies airlift emergency aid items without delay.

## **2) Providing the basics: On-going relief**

*(8 January to end April 2004)*

On 8 January, a Revised Appeal for CHF 51,913,000 was launched in Bam by the Federation's President, to provide food, shelter, water and medical services to 210,000 people - as agreed with the IRCS and harmonized with the United Nations (UN). This was the first time that a coordinated Appeal had been launched by the Federation, in association with the UN.

The Federation/IRCS assisted 52,148 families with food and non-food items in the initial relief phase. IRCS began more formal registration of families in early January 2004. The overall number was reduced following the departure of relatives from other cities and people indirectly affected by the earthquake from the surroundings. In April, some 25,000 families were re-registered for further assistance.

By the end of March, the people in Bam, estimated at around 155,000, had been housed in reasonable temporary shelter and had received food and non-food assistance from RC/RC - including monthly food rations, bottled water, tents, blankets, stoves, hygiene kits, clothes and kitchen sets. The Movement had altogether treated more than 111,000 patients through various emergency health facilities and services. For the tens of thousands traumatized and in need of long-term psychosocial support, the IRCS, supported by the Movement, contributed a psychosocial support programme (PSP) shortly after the earthquake.

A joint IRCS/Federation adjusted Plan of Action was issued at the end of March to include the provision of food and non food items, including 40,000 propane stoves, 37,000 cold boxes and six months supply of hygiene kits, to over 155,000 beneficiaries. At the same time, the Red Cross and Red Crescent Societies committed to continue to provide health services until a more permanent health infrastructure could be put back in place, to install water and sanitation facilities in selected areas, to develop a road map for the recovery phase, and where feasible, to begin with the implementation of programmes.

By April, the initial recovery of livelihoods was well underway. Shops were reopening and the local food supply was slowly beginning to improve. The Government, through the Bam Task Force, declared that the emergency and relief phase was over and the authorities began medium and longer-term rehabilitation programmes. The transfer of the tented population to semi-permanent prefabricated "container" housing was undertaken - with Federation and bi-lateral Participating National Societies (PNSs) involved in the provision of water and sanitation (wat/san) facilities for selected camps.

## **3) Bam is still alive: Rehabilitation**

*(end April to end June 2004)*

Linking relief with rehabilitation and reconstruction was planned from the very beginning of the operation. The assessment of the rehabilitation and reconstruction needs was done in January by the Federation/IRCS Recovery Advisory Team and its preliminary results were presented to donors in Bam on 20 January. As of the end of April, attention began to focus primarily on rehabilitation and reconstruction requirements. At the same time, the Iranian authorities began working on a Master Plan for the reconstruction of Bam. In addition and linked to this, the Government of Kerman Province had identified the key health, social, religious and educational facilities requiring

reconstruction. Based on this information, and in close cooperation with the authorities, the IRCS and the Federation identified a preliminary list of priority projects for Red Cross and Red Crescent participation. This information formed the basis of the Federation presentation to donors on 20 April 2004 and the follow-up communication of 28 May 2004.

Early in April, the IRCS worked out a phase-in plan for ERU hand-over and it was agreed upon by all parties concerned. The hand-over of relief items and all wat/san ERUs, as well as the ERU field Hospital to the IRCS was completed by the end of May. Field operations were wound down and vehicles repatriated. Overall delegate numbers were progressively reduced, with the Federation's Bam Office administration being taken over by trained local staff. Efforts were also made to integrate IRCS Bam Branch into day-to-day relations with local authorities, with IRCS as the implementing agency in all on-going projects and the Federation in an advisory and supporting capacity.

#### **4) The future in hand: Long-term recovery and reconstruction**

*(end June 2004 – ongoing)*

Eight months after the earthquake, the most striking aspect upon seeing Bam was the lack of major construction work. Individual efforts abounded and the city was bustling with small groups, many of them still clearing away rubble or beginning small-scale building. However, a sense of coordinated reconstruction activity was lacking, as people awaited the release of the government's Master Plan for the reconstruction of Bam in order to receive the necessary building permits.

This hampered initial reconstruction efforts and constrained progress on RC/RC reconstruction projects. Nevertheless, from mid-July, with the arrival in-country of a Federation Construction Delegate, and the clear allocation of counterparts from IRCS Construction Department, detailed project plans and budgets were prepared for all priority construction projects. Furthermore, commitments for land allocation were obtained from the relevant authorities and it became possible to firm-up donor support.

Rapid progress also ensued on the transfer of the IRCS referral hospital (previously the ERU Field Hospital) from its existing tented facilities into temporary containerised facilities, better able to withstand the rigours of the climate.

It is also worth noting that the consolidation of the two bilateral PSP programmes, under the umbrella of IRCS, lead to a longer-term and more integrated strategy of psycho-social activities within the National Society (NS).

The overall appeal Plan of Action was revised (For details, please refer to the Operations Update no. 17 at [http://www.ifrc.org/cgi/pdf\\_appeals.pl?03/250317.pdf](http://www.ifrc.org/cgi/pdf_appeals.pl?03/250317.pdf) ) to reflect the on-going nature of the rehabilitation phase, with particular focus on reconstruction, disaster management and the replenishment of IRCS DP stocks. A comprehensive Disaster Management (DM) plan was elaborated, to enhance IRCS's already sophisticated capacities in this area – most particularly for ERU wat/san and field hospital deployments in the future, as well as in the establishment of a Federation Strategic Relief Centre under the aegis of IRCS, to serve neighbouring countries. This revised programme is set to run from September 2004 to the end of 2005.

At the end of August, appeal coverage was 66.2% for a total of CHF 34,349 593 – of which 52% represented cash donations and 48% was for services and goods in kind. A total of 45 RC National Societies responded to the appeal, in addition to 15 governments (including ECHO), 25 foundations and individual donors.

#### **5) Looking back at Bam**

Each emergency operation has its unique characteristics, and Bam was no exception. Foremost amongst these was the experience and capacity of the National Society, which was well accustomed to managing large-scale disasters – and in fact, continued to do so in other parts of the country, even while it dealt with the situation in Bam. At the same time, because of this self-sufficiency, the IRCS structure was not ideally suited to coping with international input. The international response was swift and generous. During the initial emergency phases of the operation, the

various components of the Movement pulled together and worked effectively to meet the immediate needs of the victims.

Overall coordination and team-work in the field were effective and focused. Not since the Bhuj earthquake of 1991 had so many ERUs (11 of them) come together at any one time to work hand-in-hand for the overall benefit of the victims. The ERU Field Hospital and Basic Health Centres (BHCs) proved a crucial resource in providing efficient medical facility in the area – and continue to do so, now under the aegis of IRCS, long after the actual emergency is over and until such time as basic health services are reconstructed and up and running again - likely well into 2005. The water and sanitation ERUs slotted in nicely to complement the medical needs and have proved a crucial addition to capacity building, in an area in which IRCS had been lacking. The hand-over of ERU equipment is being enhanced by a programme of longer-term training, which should well-prepare IRCS to respond to wat/san and ERU Field Hospital requirements in future large scale disasters.

Another important element of the Bam Operation was its human face. Psycho-social programming was introduced early on in the response to the disaster and continued to play an important part throughout. This was the first time in the history of the IRCS that PSP was implemented as part of a large-scale disaster response and looks set to lead towards a longer-term PSP strategy within the society.

Finally, there was Iran itself - a country that has not been open for the international community for a number of years, at a time of change and turmoil in the region. This was not an easy situation in which to introduce a relatively large number of foreigners in a short period of time, and into a unique cultural context. This led to some logistical challenges, however, the IRCS, the Federation and PNSs grappled with understanding each others constraints and approaches.

## **Coordination**

The IRCS immediately undertook its role as the leading national agency for the coordination and implementation of relief in disasters, as mandated by the government. In addition to leading relief inputs from RC/RC, it also coordinated those of international agencies and Non-Governmental Organisations (NGOs). Throughout the operation, the IRCS was the implementing body for RC/RC partners – although this may have been disregarded in certain exceptional cases, where bilateral PNSs approached government ministries directly, without IRCS involvement.

The Federation's role was that of coordination and support – in terms of international fund-raising in line with the appeal, as well as for RC/RC activities in Bam. During the first four months of the operation, the Federation and IRCS worked in parallel – although the two parties made an intense effort to communicate and coordinate their activities. Communication and working relationships between senior levels of IRCS and the Federation were reported to be excellent. From the end of April, greater effort was expended into ensuring that IRCS took a lead role in all activities and most particularly with the Bam authorities, who had a tendency to approach the Federation directly.

PNS bilateral activity increased noticeably from March onwards, with the winding down and hand-over of ERUs, which had been well integrated into the overall RC/RC operations. This resulted in some frustration and missed opportunities, as bilateral priorities and demands stretched the IRCS's capacity and resources and were, in many cases, against its multilateral will.

The Federation coordinated bilateral activity to the best of its ability – although this again was constrained by varying degrees of cooperation on the part of PNSs. In light of the emergency and the need for a rapid response, the Federation's Iran Delegation erred on the side of generosity during the first months of the operation, offering a full range of services to PNSs (e.g. welcome services and logistics, administration, finance and general management support), without making any distinctions between multilateral or bilateral status. This was later normalized through a series of Service Agreements, which were negotiated in May/June 2004.

The Federation also took the initiative for coordination and information-sharing with Bam-based international organizations and NGOs, as accurate information was often hard to come by and at times contradictory. The Head

of Operations/Team Leader in Bam maintained on-going relationships with local authorities and UN agencies throughout the operation. In the early weeks of the emergency, cooperation between the Federation and the UN was reported on both sides to have been very good and built on past cooperation. This allowed for the first ever joint launch of the Federation and UN emergency appeals in Bam on 8 January 2004.

There was a degree of overlap and confusion of mandates between government ministries and local authorities, which provided a degree of challenge for the Federation and IRCS. NGOs arriving in Bam found it difficult to know who was in charge. The command structure within the authorities was far from clear, even though the Bam Task Force (BTF) had been established very early on.

Overall, coordination during the relief phase of the emergency operation - even if imperfect in certain respects - was effective in meeting the immediate needs of the earthquake victims. Cracks began to appear only later on, when the situation in Bam had stabilized and longer-term planning became necessary.

There were a number of challenges in coordination, primarily linked to the following factors:

- Nature of the disaster
- Cultural and political environment
- Scope of international response
- RC/RC expectations and response

· **Nature of the disaster**

The Bam earthquake was a sudden on-set disaster with a particularly high number of casualties and extensive destruction, which occurred in a largely urban area. This meant that local resources – both human and physical – were generally unavailable or, at best, highly curtailed. Despite this, there is wide-spread recognition that IRCS responded rapidly and effectively. IRCS was responsible for overall coordination of relief distribution – which it implemented widely and equitably – primarily through the immediate availability of its own disaster preparedness stocks and via a detailed registration of beneficiaries, subsequently revised to reflect shifts in population. Some problems were however encountered in unregulated distribution during the chaos of the first days, as well as in coordinating smaller-scale distribution by individual NGOs, which benefited certain sectors of the city to the detriment of others and raised overall beneficiary expectations, which could then not be met.

Such a large-scale disaster in an urban environment was something new for IRCS and the experience will prove useful for the NS in honing its disaster response mechanisms and adjusting its modus operandi for the future, in particular its Tehran contingency plan. Furthermore, it has now been recognized that reconstruction of a devastated urban environment is a long-term and complex process, which does not fit neatly into the more immediate demands of the victims, nor the short time-frame of donors. This posed problems of coordination, as IRCS was being prodded into planning for rehabilitation and reconstruction well before the local authorities were in a position to acknowledge, let alone approve, requests for land allocation and building permission. As a result, IRCS and the Federation found themselves ‘sitting between two chairs’ in trying to fulfill requests for project plans and detailed budgets, when the official capacity to do so did not exist.

· **Cultural and political environment**

The day of the earthquake, as soon as the extent of the devastation started to become evident, the High Level Task Force set up by the Government in response to the earthquake took the decision to request international assistance. In consideration of the need for the quickest of responses, the government agreed to waive visas for international relief workers, to ease customs procedures for relief goods and to adopt an ‘open sky’ policy for emergency flights. Given that these decisions were taken in the framework of the Task Force, in which all relevant government actors were represented (including IRCS), focal contact points could and were appointed in the key bodies (e.g. Customs) for the actual implementation of these measures.

Such easing of procedures was broadly perceived as a very positive experience and it has been recommended that these measures become part of the country’s emergency management procedures.

However, here again, once the initial acute emergency had been dealt with, the government reverted to their normal visa issuance procedures. The Federation negotiated and made a clear agreement with the IRCS that the Federation will have maximum 10 delegate positions in Iran, in line with Bam’s operational needs and in order to

meet IRCS capacity building requirements – an agreement with which the delegation complied swiftly (delegate numbers were reduced from a high of 135 in February to seven Federation delegates by early July). To a certain extent, this reflected the diminishing needs of the operation. Furthermore, the tight control by the Iranian authorities over the issuing of visas, and in some cases their refusal of visas to Federation delegates and consultants, caused unnecessary delays in the implementation of the programme, and in particular forced the postponement of the launch of an effective reconstruction programme from mid-May until mid-August.

· **Scope of international response**

The international response to the Bam earthquake was quick and generous. In addition to responding to the disaster on the ground, IRCS was faced with the task of coordinating a large number of international teams (there were 87 international teams and a total of 1854 expatriates in Bam at the peak of the operation) and relief consignments (some 170 international flights, in addition to consignments arriving at the port at Bandar Abbas). This swamped the IRCS management systems and led to the disappearance or delay in the distribution of certain relief items, to the understandable dismay of the donors.

The coordination mechanisms in place in Bam, whether operated by the UN, the NGO community itself, or governmental bodies such as the Bam Task Force (BTF), were initially perceived as weak and chaotic. There was no regular mechanism for information-sharing, and interventions by such agencies as the BTF tended to be disruptive and demanding rather than constructive and supportive. This was compounded by a failure on the part of the authorities to understand the role and status of the Federation. While IRCS had overall responsibility for relief distribution, the Federation took the lead in coordinating and information sharing with UN bodies and NGOs.

· **RC/RC expectations and response**

During the early stages of the response, the International Affairs Department (IAD) of the IRCS – through which all contacts between the Federation and the National Society had to be channelled – had been constantly present in Bam, so that the Federation Head of Field Operations and delegates had at least a nominal counterpart readily at hand. However, from early May, the IAD withdrew its consistent presence from Bam, although it indicated that it would make its personnel available there on specific occasions if the Federation requested it. In practice, this did not work as well as hoped; the Federation (thanks to its prominent, high-visibility role during the relief phase) was constantly being contacted by organizations such as the local authorities, sectoral departments, and the Bam Task Force (BTF) for discussions on operational issues, with an IRCS staff member not always readily available to take part in these interactions. The Bam branch of the IRCS had (at least until late May) constantly rotating leadership, and few of them were familiar with Federation programmes and priorities. The IRCS was unfamiliar with Federation emergency deployments and ERUs in particular, while Federation and PNS delegates were not well-informed about the capacity and mode of operation of IRCS. ERUs, for example, were deployed without appropriate IRCS counterparts. The situation was rectified in early July, when the IRCS re-allocated staff from IAD to the Bam programmes, supported by counterparts from the Construction Department.

In spite of these problems, it must be admitted that good counterpart relationships were eventually developed with certain key components of IRCS, in addition to IAD – in particular, the IRCS team who took over the management of the field hospital from the Federation/FinnCross/NorCross team in late April and early May, the IRCS construction department once key personnel had been allocated to the Bam reconstruction projects in late July, and the personnel in charge of the Relief and Rescue Organisation's PSP programme.

A difficulty of the operation was the proliferation of PNSs present in Bam, implementing bilateral programmes. Some worked in quite close collaboration with the Federation; others ran bilateral programmes over which the Federation had some degree of oversight but very little control, sometimes leading to situations where the Federation was taken to task by the authorities for failures in bilateral programmes; and still others operated with only a minimum of contact with the Federation, and seemingly felt no obligation to share with the Federation any information about their programmes. One of the main problems of coordination from an RC/RC perspective was the attitude of some bilateral PNSs, who expected services from the Federation, while ignoring the most basic requirements of overall coordination, and who seemed to put more emphasis on rapid implementation of their own projects rather than on the preference of the IRCS for a multilateral approach.

## Objectives, activities and results

### Emergency relief (food and non-food items)

**Objective: Basic food and non-food item needs of 155,000 most vulnerable beneficiaries are met, enabling them to start rebuilding their future.**

- **Completion of relief distribution to 155,000 most vulnerable beneficiaries and move to cash distribution.**
- **Continuous support on relief, logistics and procurement provided to IRCS.**

#### Activities

The IRCS response to the earthquake was immediate. A relief team from the neighboring city of Kerman arrived in Bam by 7:45am. At the same time, all 28 IRCS provincial branches were requested to send assistance. By the end of the first week and over a period of two days, the IRCS had registered 213,775 people in 52,560 families. After 15 days, a further registration exercise reduced the figure to 39,065 families comprising 171,700 people. A third registration in March resulted in a final distribution figure of 155,000 beneficiaries.

In parallel, the Federation rapidly deployed a FACT team, which arrived in-country 72 hours after the earthquake. Once established, the FACT leader called for the deployment of the American Red Cross Relief ERU and a psychosocial assessment team. Other ERUs had already been deployed. NSs coordinated their ERU deployments via the Federation Secretariat and had to make compromises, including joint deployments, in order to achieve a coordinated approach. The one exception was the Japanese ERU, which deployed under a bilateral arrangement with IRCS. The first ERUs arrived in Bam before or at the same time as the FACT team, with an average of 3-4 days deployment time. Overall, the ERU response times were good and their performance professional – with ERU members showing commitment and determination. Their contribution was appreciated by the NS.

In total, 12 NSs participated in the deployment of 11 ERUs – and in general, this is considered to have been a success. ERU teams covering the same sectors showed commitment in working together as one team. Joint deployments were as follows:

- Norwegian/Finnish ERU field hospital
- Swedish/German water and sanitation ERU
- British/Danish logistics ERU

Other ERUs deployed were:

- German Basic Health Care Unit (2)
- Japanese Basic Health Care Unit (2)
- French Red Cross wat/san ERU
- Austrian Red Cross specialized water ERU
- Spanish Red Cross mobile specialized wat/san ERU
- American Red Cross Relief ERU

Very substantial quantities of relief items were received and distributed by IRCS, with logistical assistance from the relief and logistics ERUs. The city was divided into 6, then 14, sectors, with relief distribution in each sector being coordinated by one IRCS provincial branch. The IRCS provided more than 2,000 collection points across the country for public donations. The national society distributed to the beneficiaries its pre-positioned food and non-food items including rice, cooking oil, tents, blankets, kitchen sets, jerry cans, etc. The table below provides an overview of the IRCS distribution:

**Table 1. Distribution of Relief Items by IRCS from own Disaster Preparedness Stocks**

(26 December 2003 – 15 May 2004)

No	Description of items	Unit	Total Distribution	Value in IRR
1	Relief (large) tent	Piece	108,850	130,620,000,000
2	Blanket	Piece	436,672	371,171,200,000
3	Different clothes	Piece	589,322	41,252,540
4	Canned food	Can	7,986,000	23,958,000,000
5	Bread	Box	1,172,427	3,517,281
6	Hygiene kit (10 items)	Set	156,826	11,761,950,000
7	Kerosene heater	Piece	113,833	10,244,970,000
8	Kitchen set	Set	51,751	9,832,690,000
9	Body bag	Piece	2,200	154,000,000
10	Sugar	Kg	551,000	2,755,000,000
11	Mobile tank	Piece	65	1,625,000,000
12	Mineral water	Bottle	10,884,727	21,769,454,000
13	Nylon (plastic sheet)	Piece	266,111	3,725,554,000
14	Rice	Kg	3,928,000	19,640,000,000
15	Lantern (kerosene)	Piece	100,844	3,026,520,000
16	Shoes	Pair	226,636	15,864,520,000
17	Carpet (Moquette, size: 3m*2m)	Piece	144,752	12,303,920,000
18	Cover	Piece	5,929	177,870,000
19	Relief cloth	Piece	5,270	579,700,000
20	Bean	Kg	571,989	5,147,901,000
21	Bandage	Piece	16,344	490,320,000
22	First aid material	Piece	150	4,500,000
23	Stretcher	Piece	625	125,000,000
24	Jerry can	Can	30,070	360,840,000
25	Detergent	Package	1,102,000	3,306,000,000
26	Soap	Bar	1,102,000	2,204,000,000
27	Biscuit	Package	5,393,614	21,574,456,000
28	Powder milk	Can	147,119	4,413,570,000
29	Baby food	Package	8,541	512,004,600
30	Onion	Kg	625,000	937,500,000
31	Generator	Piece	26	182,000,000
32	Cooking oil	Kg	330,600	3,967,200,000
33	Kettle	Piece	10,880	76,160,000
34	Tea	Kg	141,495	2,122,425,000
35	Food items kit (9 items)	Kit	165,460	39,710,400,000
36	Halva (sweet)	Package	186,692	373,384,000
37	Cheese	Kg	86,412	1,728,240,000
38	Fruits	Kg	524,627	2,623,135,000
39	Plastic dishes	Piece	23,359	116,795,000
40	Matches	Box	126,259	126,259,000
41	Small gas stove (picnic)	Piece	29,471	2,947,100,000
42	Gas stoves with accessories	Set	7,753	542,710,000
43	Gas cylinders (11 kg)	Bottle	22,015	2,861,950,000
44	Cool boxes	Piece	16,588	912,340,000
45	Black scarves (Chador)	Piece	42,611	4,261,100,000
46	Sanitary napkins	Box	270,560	811,680,000
47	Dates	Box	86,868	608,076,000

48	Canned fruits	Can	121,671	608,355,000
49	Tomato paste	Can	342,811	1,714,055,000
50	Jam	Bottle	44,562	267,372,000
51	Juice	Can	672,155	1,680,387,000
52	Egg	Box	39,583	4,749,960,000
53	Lemon juice	Bottle	84,007	420,035,000
54	Kerosene	Litre	140,377	28,075,400
55	Potato	Kg	1,272,203	1,908,304,500
	<b>Total</b>			<b>753,678,707,321</b>
				<b>CHF 109,066,838</b>

The International Federation also mobilized sizeable international assistance to provide relief items. The major items provided were 115,150 blankets, 5,355 family tents and 100 large tents, 24,940 cool boxes, 17,250 gas stoves and accessories, 7,180 heaters, 59,750 hygiene kits, 63,565 jerry cans, and 33,920 kitchen sets. Since a big portion of these goods were donated in kind and arrived with certain delay, they were used for the replenishment of the depleted stocks.

In addition, the National Society distributed the following items valued at CHF 1,824,371 which had been received from the World Food Programme (WFP):

No	Description of items	Quantity
1	Vegetable oil	295,549 litre
2	Rice	422,000 kg
3	Sugar	230,500 kg
4	High energy biscuits	30,050 boxes
5	Pulses	30 MT
6	Salt	45 MT

In addition to the distribution of non-food items, the IRCS provided its standard emergency package<sup>3</sup> from the beginning of the operation through the end of February. In addition, 17 IRCS mobile bakeries allowed for the distribution of bread three times a day. The Sphere minimum standard of 2,100kcal/person/day was exceeded.

The distribution of relief goods was terminated at the end of April and replaced with a cash voucher distribution system in May and June. A total of IRR 34,140,900,000 (CHF 4,548,750) was distributed in this period. This helped to spur the local economy, which noticeably came back to life. Market stalls sprang up around the major roundabouts and a wide variety of goods became readily available.

## Results

There is a consensus that all those who needed relief goods received them. This represents a considerable achievement. However, there was a lack of consistent distribution data from IRCS, which made it difficult to report exact, detailed figures. The figures supplied may represent the quantities of goods sent to Bam, rather than quantities distributed. It is however generally recognized that the basic relief needs of the affected population were met swiftly and effectively, despite some initial and probably unavoidable hiccups during the first days of chaos.

One important question raised during the relief phase of the operation concerned the focus of distribution. The Iranian approach to charity dictates that IRCS should be generous, non-discriminatory and err on the side of excessive distribution. Furthermore, the IRCS makes its distribution on a house-to-house basis, as it is considered undignified to ask people to stand in line at distribution points. This approach does not marry with that of international agencies' western approach, which normally operate in a resource-constrained environment where careful targeting is essential. Although blanket coverage was achieved, concerns were raised that this did not

<sup>3</sup> One emergency package contains 3 kg of rice, 1 kg of sugar, 600gr of edible oil, 200 gr of tea, 1 kg of pulses, 7 tins of tuna fish, 7 tins of canned food, 2 boxes of washing powder, and 2 bars of soap.

guarantee fair distribution – particularly to the most vulnerable and less active. Nevertheless, according to IRCS, once the registration process was in place, it was possible to target the more vulnerable (children, the elderly, female-headed households and the handicapped) through the distribution plan.

If anything, relief distribution was generous, rather than lacking. Furthermore, it was felt in retrospect that the relief distribution had somewhat impeded the natural resumption of the local economy and could have been terminated one month earlier, to be replaced with the cash voucher system.

On the logistics front, it had been decided to deploy the logistics ERU with minimal kit as it was envisaged (incorrectly) that the team would be based in Kerman. Additionally, it was believed that the IRCS would be able to meet any Federation vehicle requirements. In the event, obtaining sufficient and appropriate IRCS trucks and light vehicles was an on-going difficulty - resulting in some unnecessary cargo damage.

During the first weeks, due to the high volume of traffic and the incompatibility of IRCS tracking systems with international standards, it turned out to be impossible to follow procedures and count items to accepted standards. The intensity of the aircraft flow and the need to clear the dispersal was too high, and IRCS capacities were overwhelmed. This led to initial delays in receipt of consignments and misdirection to IRCS warehousing facilities, some of which were still being followed-up five months after the earthquake. All goods were eventually tracked and either distributed or integrated into IRCS DP stocks, following successful forensics investigations. With the first consignments of relief items being received in the RC/RC compound on 2 January, the Federation was able to initiate its standard logistics systems and procedures. A warehouse manager joined the logistics ERU team to ensure proper handling of all goods and stock movement reports were issued regularly as from 5 January.

## **Health, Water and Sanitation**

**Overall Objective: The population in Bam has adequate access to health care, water and sanitation services before the restoration of permanent health, water and sanitation infrastructure and facilities.**

### **2.1 Objectives (Health):**

- **People in Bam receive sufficient health services, including psychological support.**
- **Gaps in the health system between the emergency and the long -term solutions are bridged through the field hospital and Basic Health Centre (BHC) ERUs.**
- **The suffering and risks for development of severe trauma of 20,000 quake survivors are reduced**  
(ECHO funded: Danish RC/Icelandic RC and Italian RC)

### **Activities**

RC/RC response was rapid and comprehensive – and overall constitutes one of the main success stories of the Bam operation. As early as 29 December, IRCS had deployed 6 mobile hospitals, supported by 32 doctors, 182 nurses and 40 ambulances – and had treated and/or hospitalized 1,200 injured. This medical assistance was rapidly supplemented with the arrival of the 220 bed ERU Field Hospital (Finnish/Norwegian Red Cross), which opened on 2 January 2004. It provided a vital source of medical care throughout the emergency and well after. The field hospital was accompanied by an Austrian Red Cross specialized water ERU to provide filtered water for hospital and other medical use.

Altogether, by the end of January 2004, the RC/RC was running the following health services:

- ERU Field Hospital (Finnish/Norwegian), subsequently handed over and known as IRCS referral hospital;
- Four basic health centres (German and Japanese Red Cross)
- Twelve health posts (IRCS)
- Four mobile clinics (IRCS)
- One medical centre (IRCS relief centre)
- Six ambulances (ERU Field Hospital)
- Relief helicopters on standby for evacuations
- Provision of water to the hospital, basic health centres and the Khomeini Hospital

- Sanitation to the hospital, basic health centres and in selected camps
- Community outreach services.

The field hospital, the only jointly operated IRCS/PNS ERU, was perhaps the most important symbol of the Federation/IRCS contribution to meeting the humanitarian needs of Bam’s population. During the early days, Iranian and expatriate medical teams collaborated closely and managed to establish high quality and reliable healthcare services, in the ERU hospital as well as in the ERU Basic Health Care Units. This was an achievement which gained RC/RC solid credibility among the local population and gave them a sigh of hope. However, once the hand-over process began, in March, the hospital’s future was at times in serious doubt due to management problems and friction between the IRCS and the Ministry of Health. By the end of May, thanks to the hard work by all concerned, these problems had been solved and the construction of a 60 bed containerized facility to sustain the hospital until early 2005 was completed by the end of August 2004. For the total number of patients treated in the ERU Field Hospital, please refer to the table below.

**Table 2. ERU Field Hospital Admissions – 2004**

<b>Total per month</b>	<b>OPD &lt; 5y</b>	<b>OPD total</b>	<b>In-patients 7.a.m.</b>	<b>Adm</b>	<b>Disch</b>	<b>Opr. Incl c/s</b>	<b>C/S</b>	<b>Birth incl. c/s</b>	<b>X-ray</b>	<b>Lab</b>	<b>Death</b>	<b>Trans from wards</b>	<b>Trans from OPD</b>	<b>Trans total</b>
<b>Jan</b>	958	12476	834	358	327	122	12	69	851	1176	7			20
<b>Feb</b>	1791	19174	846	472	388	149	22	189	1803	2806	15	0	0	127
<b>Mar</b>	1445	13683	673	401	372	133	18	135	1729	2661	15	53	149	202
<b>April</b>	1351	16209	768	405	364	99	20	146	2122	3987	8	35	201	236
<b>May</b>	2357	25534	853	473	426	145	23	160	3008	4926	11	23	164	187
<b>June</b>	2789	29300	878	404	405	134	21	152	2687	5634	16	21	190	211
<b>July</b>	2753	31070	1030	501	481	80	34	160	2936	6329	10	27	173	200
<b>Aug</b>	2209	27763	870	450	347	79	36	111	2991	4876	12	25	138	163
<b>Grand Total</b>	15653	175209	6752	3554	3110	941	186	1122	18127	3239 5	94	184	1015	1346

**Abbreviations:** OPD: Out patients department / Adm: Admissions / Disch: Discharged / Opr incl c/s: Operations including caesarians / C/S: caesarians/ Trans: Transfers

The Basic Health Care ERUs provided generally a good quality of service, though they were generally under-utilised. The Basic Health Care Units’ (BHCU) records show that the disease profile was non-emergency. On average, the BHCUs were treating 150 patients per day during the first three months. The running of the clinics was progressively taken over by IRCS and hand-over were completed by mid-April.

Psychological support was also a key component of overall health care provision to the survivors of the Bam earthquake. The Ministry of Health and United Nations Children’s Fund (UNICEF) estimated that some 25,000 people were in need of psychological support to overcome the trauma caused by the earthquake. This is still evident, from anecdotal evidence as well as medical statistics. Many people remain frightened to live indoors – a fear that is exacerbated by the frequent aftershocks still being experienced in Bam. Furthermore, nocturnal incontinence and mental disorders have seen a marked increase and there has been some rise in domestic violence. There have been many suicide attempts over the past months and it has been observed that survivors have become risk takers – for example, driving in Bam has become even more reckless than before the earthquake.

The day after the earthquake, a team of 85 IRCS staff and volunteers trained in PSP arrived in Bam. They initiated tent-to-tent visits, providing psychological counselling, information and referral in tandem with the distribution of relief items. Special activities and playing spaces were set up for children, including the distribution of specialized play kits. Victims of the earthquake were also encouraged to volunteer. Three psychosocial support teams were

established with a total of 160 members, providing support primarily to groups of women and children (following agreement with the Welfare Organisation, which would concentrate on the elderly and disabled). IRCS teams were later complemented by a Danish/Icelandic psychosocial support team, which carried out an assessment in January 2004 together with the Regional PSP Delegate, with a view to: (1) initiating, designing and setting-up community-oriented PSP aiming at providing support to the population during both the emergency and a rehabilitation phase; (2) outlining a feasible long-term PSP, which would target psychosocial needs, including a capacity building component through appropriate training and integration of 1,000 IRCS staff and volunteers.

Over 28,000 beneficiaries have and continue to benefit from the PSP programme. Furthermore, there has constantly been between 20 and 25 volunteers involved in the program – mainly young psychologists and social workers, with a total number of volunteer beneficiaries of 397.

In addition, from late June, Italian Red Cross instigated a separate PSP programme, to establish a psycho-social assistance centre in Bam – initially based in containerised facilities on the grounds of the IRCS referral hospital, and subsequently to be replaced by a semi-permanent building. In collaboration with IRCS, a number of professional staff members have been integrated into the programme, to offer counselling, based on referrals.

Over the past 6 months, IRCS has covered a vast group of survivors through its psychosocial activities as listed below:

- 414 women underwent group counselling, with approximately 8 women in each group
- 1023 children participated in play group activities, with approximately 20 children in each group
- 3850 tent-to-tent visits were carried out in sectors 7 and 10 in Bam city
- Individual counselling was offered to 871 women and men
- 50 children participated in the photo workshop ‘With different eyes’
- Focus groups were conducted among 50 volunteers to monitor the situation and to assess the opinions and experiences of the survivors

In early August, with the assistance of the Federation’s Regional PSP Delegate, agreement was reached to consolidate the two bilateral PSP programmes under the overall direction of IRCS and in order to ensure complementarities of service being offered.

## **Results**

The ERU Field Hospital – and its subsequent incarnation as the IRCS referral hospital – has been and remains a symbol and a focal point for the people of Bam, without which their primary health care needs would not have been adequately met. Thanks to the joint relief and health efforts, the essential and primary health care needs of the people of Bam were fulfilled without interruption. Disease outbreaks have been efficiently prevented. Early warnings of the risk of diarrhoeal and other infections during the hot summer months were never materialised.

At the caring end of the spectrum, collaboration between the expatriate and local medical teams was exemplary and a demonstration of ‘humanitarianism’ in action. On the managerial front, there were some hard negotiations during the hand-over phase between the bilateral PNSs, the Federation, IRCS and the Iranian Ministry of Health, which were ultimately resolved to the satisfaction of all. The major difficulties revolved around the non-availability of specialised doctors (particularly orthopaedists) and contractual agreements with local hospital staff. Active involvement of the expatriate medical teams in daily healthcare and treatment duties was an important factor in ensuring a smooth functional consistency for the hospital and BHCUs in the first three months. For this reason, immediately after the first phase of the handover and the reduction of expatriate medical personnel, the hospital’s staffing handicap gained prominence.

Long time and stubborn efforts were needed to achieve a substantial change and improvement of the stalemate. The change of the Hospital Manager and the comprehensive recruitment of a complete team of medical and non medical specialists finally lead to tangible results and order was established. Most importantly, irregularities in the daily operational routine of the hospital and basic health centres were treated and patients were ensured with optimal medical care and treatment at all times without interruptions and shortcomings.

A further challenge for the field hospital became its life-span – which is on-going, and projected to be required until mid-2005 – well beyond the normal time-frame of an ERU. This required flexibility on the part of all RC/RC partners and their donors, in order to ensure that primary health care was maintained as long as necessary, without substituting for Ministry of Health and privately operated local health care. The transition of the tented facilities into semi-permanent containerised ones – more suited to the climate and in view of the longer time-frame – was unnecessarily delayed by visa restrictions and resulted in on-going use of the tented facilities well into the intensive heat of summer.

After the initial emergency, the hospital settled into the more normal operations of a primary referral hospital, with in-patient demand running at a relatively steady 840 patients per day. An increase in out-patient activity was however noted after 6 months and is thought to be due – at least partially – to the Federation policy of providing free medication, which many people understandably decided to take advantage of.

Another positive outcome in the longer term will be IRCS’s increased capacity in deploying field hospital ERUs – thanks to the hand-over of the tented facilities, the containerised facilities and related equipment, as well as to knowledge acquired during the operation which will be complemented by further training being planned in the operation of hospital ERUs.

The IRCS Basic Health Centres continued to play a crucial role in addressing the primary health care needs of the Bam population after their hand-over from the German and Japanese ERUs. Following a notable reduction in their daily caseload in May/June - due primarily to an increased migration activity among the population relocating to the newly built prefabricated houses – two of the BHCs were successfully relocated in order to render basic health care services to larger population groups. This revision and relocation is on-going until the resumption of normal medical service by the authorities.

**Table 3. Cumulative Statistics of Activities at the Red Cross & Red Crescent Health Facilities in Bam**

	IRCS Referral Hospital	IRCS BHCs, No 4 (Basic Health Centres)	JRC BHCUs, No 1 (Basic Health Care Units)	GRC BHCUs, No 2	SA RC Hospital	Total
<b>Period</b>	01.01-31.07.04	28.03-31.07.04	01.01-27.03.04	01.01-27.03.04	01.01-12.01.04	
<b>Out-patients</b>	146,724 13,769 <5y	17,251 2,055 < 5y	8,790 8.4% < 5y	7,279 6.8% < 5y	1,849	181,893
<b>In-patients</b>	3521 (revised)					
<b>Services</b>	Surgeries 815 Caesarean sections 165 Deliveries 988 LabTests 27,357 X-Ray 15,252 Discharges 2,696 Transfers 1,346 Deaths 81	Basic healthcare and treatment in general medicine and mother & child care.	Basic healthcare and treatment in general medicine, mother & child care and psychosocial support.	Basic healthcare and treatment in general medicine, mother & child care. Home visits.	Surgeries 437 Lab-tests 105 X-rays 150 Cases Airlifted 400 Transfers 20 Vaccinations 270	
<b>Comments</b>	Ongoing Handed over by FRC & NRC	Ongoing Handed over by JRC & GRC	Handed over to IRCS, 24.03.04	Handed over to IRCS, 16.04.04	Closed 12.01.04	
<b>Abbreviations</b>	FRC/Finnish RC, NRC/Norwegian RC, JRC/Japanese RC, GRC/German RC, SA RC/ Saudi Arabian RC, IRCS/Iranian RC					

The experience from Bam suggests that psychosocial programming can be beneficial from very early on after a disaster. IRCS quickly established a programme of one-on-one tent-to-tent visits and relied on an extensive network of volunteers. This was complemented by bi-lateral PNS programmes<sup>4</sup>, focusing on establishing group-based activities leading to referrals for more in depth individual counselling. The Federation was closely involved throughout and overall collaboration between the partners – IRCS, PNS and Federation – was productive, leading to successful projects such as the photo workshops and subsequent publication of the book ‘With Different Eyes’. The Bam Operation has provided IRCS with greater experience in mass disaster PSP response, with the National Society keen to use the momentum to build on its capacity into a broader PSP strategy for the organisation. For the Federation, it is essential that best practices and lessons learned be assessed and integrated to guide future PSP disaster response activities.

**2.2 Objective (Water and sanitation): Outbreak of water-borne epidemics is prevented in Bam and its surroundings through the installation of adequate and safe water supply and sanitation facilities.**

**Activities**

In the immediate aftermath of the earthquake, four wat/san ERUs were deployed, as follows:

<b>Deploying Red Cross Society</b>	<b>Type of ERU/Mission</b>	<b>Serving</b>
Austrian	Specialized water	Federation field hospital and Federation compound
French	Mass water	Displaced people
Spanish	Mobile specialized water (5 mobile treatment units)	Water and sanitation to BHC clinics and the Imam Khomeini Bam city hospital
Swedish/German	Mass water and sanitation	Water for displaced people Sanitation for displaced people Sanitation for Federation compound

These ERUs were deployed in parallel with the Federation FACT team and not as a result of FACT assessment. According to the Operations Review carried out in March, the water and sanitation work carried out by the different ERUs appears to have been of a high standard. International water and sanitation quality standards and Sphere standards were met or exceeded. The appointment of a Federation Water/Sanitation Coordinator in early January contributed to the good working environment.

In the immediate aftermath of the earthquake, IRCS distributed bottled water and at no point was there any risk to life due to lack of water. The water supply in Bam was restored within a few hours of the earthquake with sufficient capacity to cater for urgent needs. The IRCS, the Government and private contractors operated large fleets of water tankers until the end of February. Within two months of the earthquake, the Water Organization in Bam had connected 66km of new distribution pipes, installed 3000 taps and 1000 storage tanks. At the same time, the Federation ERUs had installed 25 tanks or bladders and 25 water points. Although water for the city supply is drawn from deep boreholes and is of high quality, it was not declared safe to drink by the Ministry of Health (MOH) even though it is chlorinated twice before being distributed. The RC/RC wat/san ERUs produced an average of 80,000 litres a day, serving approximately 2,000 people daily.

The hand-over of wat/san ERUs proceeded largely on schedule and all wat/san ERUs had been officially handed over to IRCS by May 2004. Hand-over arrangements were not always straightforward, primarily due to staffing difficulties for some of the ERUs – as this was not a traditional area of expertise for the NS. As a matter of fact, wat/san is not part of the Relief and Rescue Organization of the IRCS nor its mandate. For much of the operation, there was no technical focal point within IRCS for wat/san issue. The dedication of some of the local staff was however exemplary – maintaining facilities and working under difficult conditions above and beyond the call of

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<sup>4</sup> Bilateral ECHO-funded PSP programmes were set up by Danish/Icelandic and Italian Red Cross. The two programmes were consolidated in July 2004.

duty, due to a lack of readily available replacements. Three senior IRCS technicians were trained at the end March/ early April in basic specialized wat/san ERU.

In March, the Federation was approached by local authorities to assist with installing water reticulation systems in selected prefabricated camps. As a result, commitments were entered into for water supply reticulation to 20,000 people in these camps. Technical surveys, design of camp water supply and water connections with the main water supply were carried out successfully and completed by early July by the Federation in Golestan Camp and on a bilateral basis in Sina Camp. Additional bilateral plans for the construction of 1500 hygiene units for 7500 beneficiaries in Rashestan Camp were also undertaken, but remain uncompleted and indeed uncertain at the end of August. A number of problems arose which prevented the bilaterals from successfully completing this project.

In general, a shortage of volunteers and local labour hampered wat/san activities (ERUs and camp installations). This forced ERU team members to undertake tasks they would normally have given to volunteers and local labour, such as digging pit latrines. On the other hand, Federation local staff working closely with the wat/san Coordinator took a keen interest in the work and developed an ad hoc expertise in wat/san matters. Unfortunately, it does not appear as if the local branch wishes to take advantage of this acquired expertise in future training activities.

Despite fears of water shortage and possible contamination over the hot summer months, this never materialised. There have been absolutely no indications of an abnormal rise in water-borne diseases at any time.

## **Results**

The water and sanitation work carried out by the ERUs and wat/san installations in camps was of a high standard. Overall, the water situation in Bam can be said to have been well handled – as there was no shortage of water, nor any outbreak of water-borne disease.

In the Operations Review and in later assessments, there was nevertheless a general consensus that there was an unnecessarily large deployment of water and sanitation ERUs – particularly given the capacity of the Iranian authorities in water and sanitation. While mass water did make a contribution to the camps, water treatment was largely unnecessary. Water quality was verifiably good from the outset and the ERUs water treatment was not cost effective. It may have been better to provide technical expertise, rather than relatively expensive equipment and personnel. Indeed, it has been argued that the current ERU wat/san concept may be better suited to situations where little or no local technical or material resource exists – which is not the case with Iran.

Nevertheless, from an IRCS perspective, very tangible benefits from wat/san ERU deployment have ensued – most particularly with the hand-over of specialised equipment to enhance the NS's wat/san capacity in future disasters. This is not an area in which IRCS has extensive material or expertise and – assuming that the planned training under the on-going DM programme proceeds – this will certainly contribute to building IRCS capacity.

Although overall coordination of wat/san deployment was considered to be effective, this may have been due more to the experience and skills of the Federation wat/san Coordinator and the wat/san ERU teams, than to the overall structure. Indeed, collaboration was based on good-will and good sense (always useful attributes). Problems and disagreements did occur – but were solved. With so many different teams operating in one area, this could have led to difficulties in overall coordination as there was no clear mechanism to resolve this – the Federation Coordinator only having the power of persuasion at his disposal, rather than any clearly defined authority.

One of the most problematic areas of the whole operation became the installation of wat/san facilities for the prefabricated housing camps on a bilateral basis – especially as this inevitably involved the Federation and IRCS and had implications in terms of management and image. The reasons for the failure to execute the installations in Rashestan camp are complex and will no doubt constitute the basis for in-depth analysis by the affected PNSs, which is beyond the scope of this report. Suffice it to say that Federation and IRCS time, effort and reputations were affected by commitments and operations in which they had little direct control. These are issues which need to be addressed more clearly by the Movement as a whole, if the rising trend in bilateralism is to be managed intelligently and to the benefit of all.

### 3) Rehabilitation and Reconstruction

**Objective: In close cooperation with the IRCS and the Iranian authorities, to define the scope of activities which will contribute to the rehabilitation and reconstruction of the health and social infrastructure in Bam.**

#### Activities

As of the end of April, attention began to focus primarily on rehabilitation and reconstruction requirements. Indeed, as early as January 2004, the Federation/IRCS Recovery Advisory Team undertook an initial assessment of rehabilitation and reconstruction needs. At the same time, the Iranian authorities began working on a Master Plan for the reconstruction of Bam – a draft of which has been made available to the IRCS - and which is still awaiting final approval. In addition and linked to this, the Government of Kerman Province identified the key health, social, religious and educational facilities requiring reconstruction. Based on this information, and in close cooperation with the authorities, the IRCS and the Federation identified a preliminary list of priority projects for RC/RC participation. This information formed the basis of a Federation presentation to donors on 20 April 2004 and a follow-up communication of 28 May 2004. The list was further refined during June and July, based on an assessment of current needs, other Non-Governmental Organizations (NGO) and government commitments, and the potential for value-added contribution on the part of RC/RC. More precise costing and project planning was prepared by the Federation Delegation and made available to donors in early August.

At the present time, the IRCS and the Federation are working together to confirm donor interest in the proposed multilateral reconstruction programme, with actual construction activities set to begin in October-November and run until the end of 2005.

As per the IRCS/Federation joint concept developed in March/April 2004, all RC/RC efforts will focus on institutional reconstruction and will not involve any household rebuilding. Once completed, all constructed building will be handed over to the relevant governmental authorities. Priority reconstruction projects in education and social welfare include:

- Construction of 5 primary, 3 secondary and 2 high schools for a total beneficiary population of 3,535 pupils.
- Construction of an Urban Health Centre serving a beneficiary population of 10,000 people.
- Construction of the IRCS Road Rescue Centre

Furthermore, the Federation has completed the installation of the temporary containerised facilities, to replace the tented facilities of the IRCS referral hospital (previously the ERU Field Hospital). A Memorandum of Understanding (MoU) between the Federation and the IRCS was signed on 20 June and contracts between Geneva Secretariat and the building contractor were signed on 21 June. The new facilities were installed and operational by the end of August 2004. Additional construction projects are being undertaken on a bilateral basis.

Finally, reconstruction of key IRCS Bam-based facilities is also underway, with Federation as well as bilateral support. IRCS had a number of buildings in and around Bam which were either destroyed or damaged in the earthquake. Some of these buildings can be repaired, although most require reconstruction. These were focal points for overall IRCS Bam Branch operations, youth activities as well as relief and rescue efforts in and around the city. Priority projects include the construction of roadside relief and rescues centres (6), relief bases (2) and the Bam Branch Office and Warehouse.

#### Results

Reconstruction projects are in the early planning stages and form an important component of the Federation's Revised Plan of Action (Operations Update 17). The full impact and lessons learned can therefore not be assessed until these projects have been completed. This will be covered in subsequent reporting.

It is however worth noting a few challenges that have arisen during the project planning stage. One of these concerned the proliferation of bilateral projects in reconstruction, despite IRCS's clear preference for undertaking these on a multilateral basis. This put serious strains on limited IRCS resources and likely resulted in certain frustrations and delays on all sides. Having said this, much of the impatience was donor-driven and did not reflect the actual pace of planning and progress in Bam. The situation was also hampered by the lack of specifically-

assigned counterparts with the necessary expertise – and was not resolved until late July, when IRCS allocated a team from the Construction and IAD Departments to follow-up directly on construction projects.

More generally, it is important that donors, PNSs and the Federation fully grasp the scale of reconstruction of the socio-economic infrastructure required and the extent to which this presents a major challenge for all concerned. The task is an enormous one and will continue to be so for the years to come. It cannot be rushed, even though the needs of the local population would dictate so. There is nevertheless scope for on-going and well-coordinated Red Cross and Red Crescent involvement in the rehabilitation and reconstruction of Bam, so that life can move on from the heaps of rubble and back to a more structured and settled normality.

#### **4) Disaster Preparedness and Capacity Building**

**Objective: The IRCS capacity in disaster management has been strengthened at the national, regional, and community levels.**

##### **Activities**

The IRCS has some 7,000 staff distributed across its 28 provincial and 320 local branches and in its Tehran headquarters. It has 2 million volunteers (aged 29 and over) who contribute to the organisation with their time and expertise. In addition, there are 1.3 million youth members, mainly students. The IRCS is mandated by the government to maintain a capacity to respond to disasters affecting 1% of the population (i.e. 700,000 people) for a period of one month. As a result, it holds substantial DP stocks pre-positioned in warehouses throughout the country and at the Relief and Rescue Organisation headquarters in Tehran. This enabled the organisation to respond directly and rapidly to the beneficiary needs in Bam.

The Bam operation utilised well over 50% of IRCS relief stocks and a DP stock replenishment plan is underway. On-going replenishment needs have been outlined in the Revised Plan of Action of September 2004 and will be pursued into 2005 (Please see Operations Update 17).

The Bam operation has shown the capacity of the IRCS to carry out a timely and large-scale relief and rescue operation and has also highlighted the need to further increase its DM capacity in order to be better prepared for future disasters. The Federation and the IRCS made a number of reviews of the Bam earthquake operation, including an Operations Review of the RC/RC Movement response to the earthquake in Bam in May 2004. These review reports identified the areas on which the DM capacity building of the IRCS should be focused.

In July 2004, the Federation recruited a Disaster Preparedness and Disaster Response Coordinator based in Tehran in order to address the DM capacity building needs of the IRCS and develop a way in which the resources and expertise of the IRCS are better used in future relief operations in the region. The coordinator worked out a DM Plan of Action in close consultation with the Relief and Rescue Organization of the IRCS. This plan, which has been detailed in the Revised Plan of Action (Operations Update 17) and is set to run from September 2004 to the end of 2005, pursues the following specific objectives:

- The IRCS capacity in disaster management has been strengthened at all levels.
- Community-level disaster preparedness (CBDP) has been improved to reduce the impact of disasters.
- The Federation Regional Strategic Relief Centre (FRSRC) has become operational to provide needy services to national societies in the region.

Preparations are now underway to organize different types of training workshops, standardize training curriculum and make the FRSRC operational.

## **5) Communications- Advocacy and Public Information**

**Objective: The ongoing and long-term needs of the quake-affected population in Bam are advocated through enhanced media coverage and profile of the Red Cross/Red Crescent intervention.**

### **Activities**

The IRCS was extremely visible in the international media. IRCS 'gilets' were clearly visible and the Head of the IAD conducted a large number of interviews. The Federation and individual NSs dispatched a total of 16 media delegates to Bam during the early days of the emergency, who together were able to communicate in 12 languages. A Media/Information Delegate was included in FACT. An Information Delegate arrived in mid-January for a six-month assignment.

The IRCS also sent 3 cameramen and 3 journalists to Bam. The cameramen filmed the destruction from helicopters and the IRCS used these and other images to create a 13-minute CD-ROM covering IRCS and International Federation response.

The RC/RC conducted more than 1,000 interviews in total between Geneva and Bam. Following the initial emergency, the focus shifted from hard facts to human interest stories. A total of 15 stories were posted on the Federation web-site. In addition, two special Magazines on Bam were produced – the first at the end of February for media and donor information, and to coincide with the Federation MENA regional conference; and the second at the end of August, to recap the overall Bam operation and maintain donor interest in on-going reconstruction and rehabilitation, as well as to provide a tool for IRCS volunteers.

Further profile-raising activities were carried out on a regular basis. The most innovative of these was the production of a special commemorative book 'With different Eyes', produced with children involved in the Bam PSP programme and with the assistance of IRCS professionals from the Public Relations Department. It is hoped that this will generate some on-going interest in Bam, well after the earthquake – in particular through the production of a traveling photo exhibition to accompany the book.

### **Results**

There was extensive media interest in the Bam earthquake, which was handled professionally by both Federation and IRCS spokespeople. However, Federation involvement with international media, following the initial emergency, was limited due to Iranian rules on foreign media exposure. Spokesperson capability within IRCS was perhaps unnecessarily limited by relying solely on the Head of the IAD.

The RC/RC benefited from a high profile at the beginning of the operation and has continued to keep the issue 'alive'. Visibility and profile of RC/RC has been raised through on-going fund-raising and advocacy support to the affected population. IRCS's work has been covered effectively, resulting in greater international recognition.

## **National Society Capacity Building**

The Bam operation was the largest international operation ever mounted by the IRCS with the support of the Federation, PNSs and other donors. Many humanitarian actors were involved in the operation and all sorts of relief and rescue means were used. As admitted by the IRCS, it was a good occasion to test its level of disaster preparedness and disaster response and identify the areas of future improvement.

In the course of running the operation, the IRCS experienced in practice the Federation emergency response mechanisms such as FACT and ERUs as well as their field activities. On-the-job training in ERU during the operation has enhanced the knowledge of staff in this area and future ERU training will help the IRCS develop its ERU capacity and use it in dealing with disasters that may occur in and out of the country. While working with delegates from the Federation and PNSs, the IRCS has been able to build on its capacity in the fields of DM, health, construction, communication, logistics and, more importantly, organizational development and create conditions for its further development by determining the areas of future cooperation.

The implementation of the Revised Plan of Action for September 2004-December 2005 and the future cooperation agreed upon between the IRCS and the Federation will contribute to assist the IRCS in developing its capacity in some weaker areas identified during the Bam earthquake operation.

## **Assessment and Lessons Learned**

The implementation of the Bam earthquake operation has progressed on the basis of regular and systematic monitoring, evaluation and revision of plans.

The implementation of projects in various sectors was monitored by IRCS staff, Federation delegates, and field progress reports. Monitoring results were used in improving the quality of implementation and reporting the progress. A total of 17 Operations Updates were issued in the period covered by this Final Report.

The operation was also evaluated on several occasions, particularly by a review team of independent and RC/RC consultants in May 2004. In general, the evaluation results show that the emergency response following the earthquake was swift and effective in meeting the immediate needs of victims and that there have been relatively good cooperation and coordination between all parties concerned. The team also made a number of recommendations to improve the Federation operations in Iran and other countries in the future. These recommendations proved useful in revising the Plan of Action for September 2004-December 2005. More reviews and evaluations have been scheduled at different phases of the operation, e.g. a final evaluation of the Bam emergency operation in late 2004 or early 2005, as well as a review of the DM programme at the end of 2005.

In the course of carrying out the large-scale emergency operation from December 2003 to August 2004, the Federation, IRCS and PNSs have also learned a number of lessons, which can be summarized as follows:

- The joint launch of the UN Flash Appeal and the Federation Revised Appeal was conducive to drawing the immediate attention of the public to the operation and helpful in the initial fund-raising.
- The strong disaster response capacity and volunteer network of the IRCS paid off in mounting the swift and effective emergency operation immediately following the earthquake.
- The success of the operation was guaranteed by the exceptional energy, time and efforts put by the IRCS volunteers, staff and leadership on this operation, as well as the Federation delegates.
- High level of coverage by local and international media is important for fund raising, more specifically the continuous production of stories, press releases and audio-visual materials by Federation delegates helped a lot in keeping a high profile of the operation and considerable fund-raising.
- A key to successful operations is to move to integrated rather than parallel operations, with the IRCS and Federation personnel working together at all levels in Tehran and Bam.
- The harmonization of operating procedures and systems of the IRCS with the Federation standards is necessary for effective procurement, reception, warehousing and distribution of relief items, especially the integration of international inputs with nationally sourced supplies.
- Combining the training in advanced disaster response tools like FACT, ERU and RDRT (Regional Disaster Response Teams), with the development of community-based disaster preparedness tools is essential for the IRCS to become a well-prepared national society.
- The IRCS needs to review and improve its current structure and system, especially with regard to decision making in emergencies, counterparts appointment and reporting, in order to guarantee success in future international operations.
- Better coordination of ERUs deployment by the Federation is crucial for having the right ERUs in right places based on assessment of needs in the field.
- Following Federation standards and ensuring NS involvement are crucial in undertaking major wat/san projects in-country on a bilateral basis.
- Psychosocial assessment and activities need to be considered as a routine part of Federation emergency response for mass casualty disasters. The Bam operation is the first time in the history of RC/RC where PSP has been involved and deployed to a large scale disaster. It is therefore essential that basic lessons are learned and best practices are collected and analysed, hopefully soon before memories fades too much.
- Good working relationship between the Federation Delegation in-country and the Operating National Society (ONS) is a big asset for effective implementation of the programme.

- There needs to be better coordination between the ONS, Federation and PNSs before PNSs decide on new bilateral projects, so as to prevent them from stretching the ONS capacity and resources and affecting the on-going multilateral projects.
- The Principles and Rules for Red Cross and Red Crescent Disaster Relief have to be respected by all parties that take part in an international operation, especially the part of respecting NS priorities (e.g. IRCS clear interest of working multilaterally) and allowing the NS to take lead in planning and implementation.

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