

8th Asian Community Conference

Contribution of a Mobile Rescue Unit to the management of a seismic disaster

Mashhad 2017



Source: fr.sputniknews.com

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- Crisis Management Advisory of the **IBM FRANCE** Chairman, in charge of the Crisis Management Plan & Business Continuity Plan (BCP) IBM France, and in charge of the Crisis Communications Plan **IBM EMEA** - 2004/2007
- Resilience Business Information Leader **IBM EMEA** - 2003
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- Manager in charge of the Crisis Management Plan & DRP - **Société générale** - 1985/1991
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- Co-author of 3 books and author of more than 15 articles:
 - « Gestion de Crise : la réponse de l’entreprise » - EFE 2006
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Few governments or cities are prepared to affront a catastrophic event

Etymologically, in old Greek language, “καταστροφή”, means a reversal bottom *

Whatever their origins, the focus is to preserve human life. Reputation and assets are less important.

In such situation, the emergency effectiveness is based on:

- the preparedness level of operational plans
- the staff & management training to implement them



Source: teheran.ir

In Mashhad City, a technical training to emergency situation is organized under by the Red Crescent

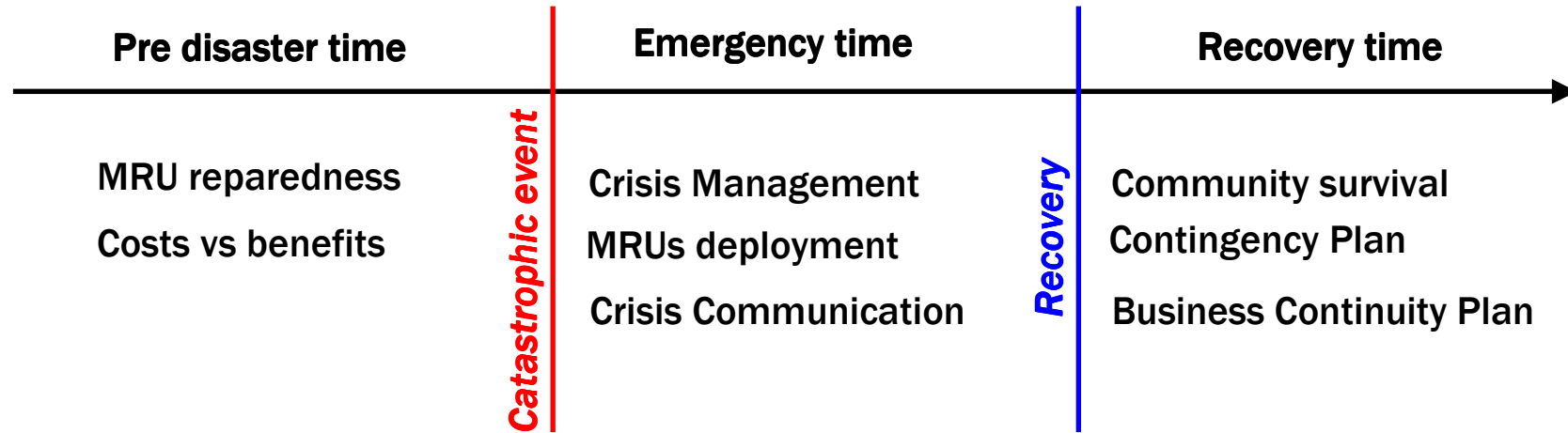
* In : « Gestion de crise : la réponse de l'entreprise » - Simone Eiken & Olivier Velin (EFE – 2006)

How to manage a catastrophic situation?



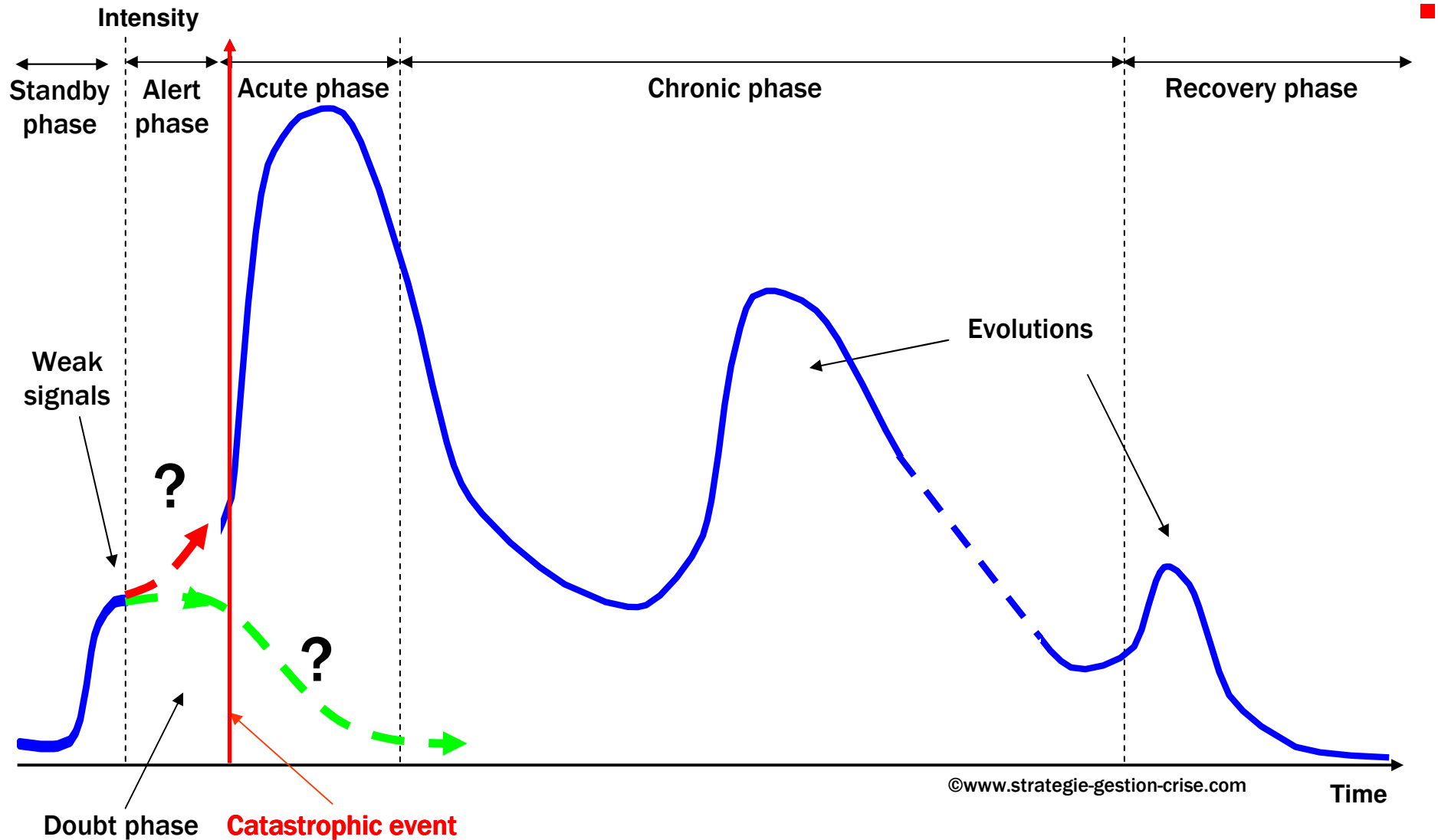
Source: Reuters

Reminder of a Disaster phases



Source: Sputniknews.com – Picture: Soheil Ghanbarzadeh

Let us have a look at the disaster curve phases

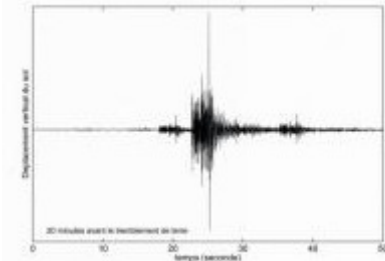


Key points for each phase

Phases	Explanation
Standby phase	Waiting for weak signals
Alert phase	Detection / interpretation of weak signals as a prediction of a potential crisis
Event	Trigger event
Acute phase	Deploying the crisis management plan together with the crisis communication plan
Chronic phase	Managing the evolutions of the catastrophic situation
Recovery phase	Recovering progressively to return close to the “usual” situation and life Preparing complementary improvement plans

Seismic activity can sometimes be anticipated before the earthquake occurs, thanks to weak signals

“Scientists have analyzed seismic recording got close to the epicenter of the seism of Izmit (1999) They have discovered, just before the break of the fault, a very particular seismic signal, never noticed until now. More precisely, they noticed on recording, repetition of the same vibration during 44 minutes” (*)



Latest earthquakes in Iran and adjacent areas

Origin Time (UTC)	Magnitude	Latitude (deg-N)	Longitude (deg-E)	Depth (km)	Region
2017-01-22 15:38:54.8	2.1	29.701	51.581	8	Kazeroon, Fars
2017-01-22 15:12:03.2	1.7	35.894	53.195	15	Shahmirzad, Semnan
2017-01-22 13:23:06.8	2.8	38.489	44.481	6	Qotor, West Azarbaijan
2017-01-22 13:13:21.8	1.1	37.123	59.269	10	Hasan abad-e laeen no, Khorasan Razavi
2017-01-22 12:58:24.1	1.6	37.710	45.813	8	Gougan, East Azarbaijan
2017-01-22 12:52:42.1	1.7	36.714	49.901	5	Jirandeh, Gilan
2017-01-22 12:37:35.8	2.3	29.207	56.708	10	Bezanjan, kerman
2017-01-22 12:04:31.0	2.5	29.700	51.538	8	Kazeroon, Fars
2017-01-22 12:04:26.2	1.8	37.938	48.354	16	Koraiem, Ardebil
2017-01-22 11:39:54.3	2.7	30.917	56.610	6	Zarand, kerman
2017-01-22 11:19:48.9	2.5	29.233	56.745	19	Bezanjan, kerman
2017-01-22 11:18:17.6	2.0	31.983	51.974	10	Manzariyeh, isfahan
2017-01-22 11:12:37.3	1.5	36.776	58.150	8	Safi abad, North Khorasan
2017-01-22 11:06:58.3	1.8	32.005	51.521	12	Dehaqan, isfahan
2017-01-22 10:59:05.2	1.6	36.475	59.766	10	Mashhad, Khorasan Razavi

But gathering such a weak signal should really be difficult in Iran country!

2006–2015

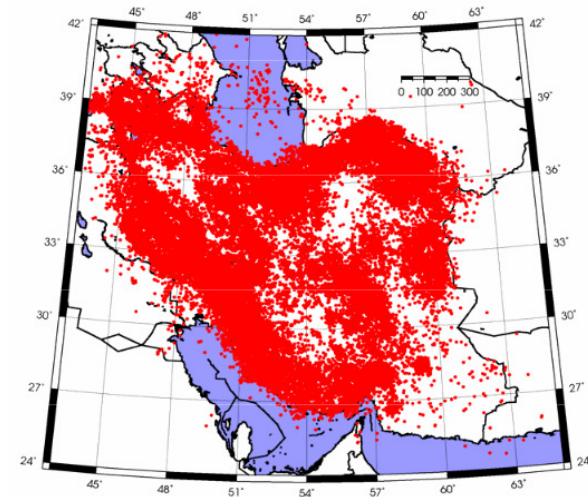
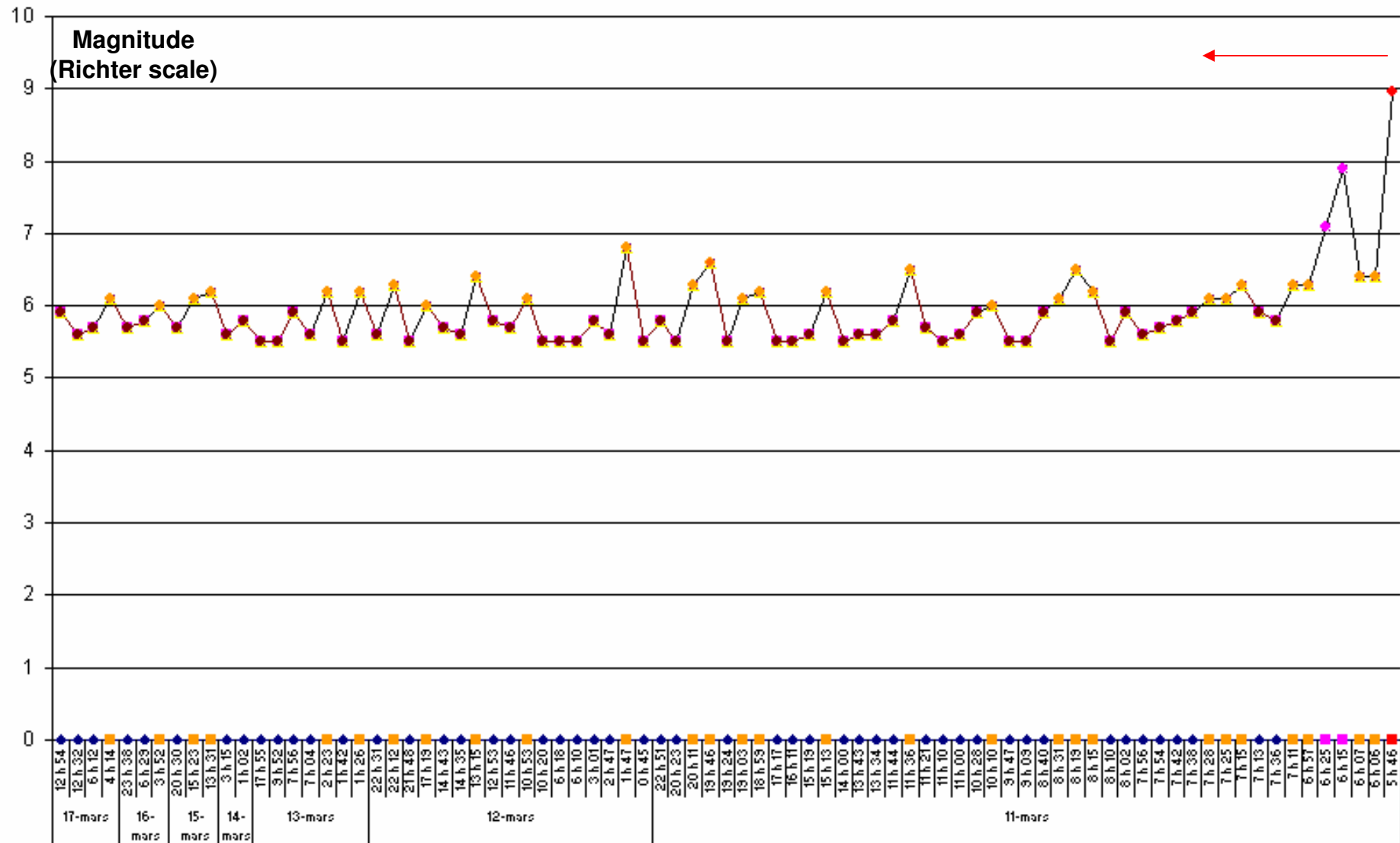


Figure 5. Seismicity of Iran. Data from Iranian Seismological Center (IRSC) for the period of 2006-2015.

(*) Extended Nucleation of the 1999 Mw 7.6 Izmit Earthquake. Michel Bouchon, Hayrullah Karabulut, Mustafa Aktar, Serdar Özalaybey, Jean Schmittbuhl, Marie-Paule Bouin. Science. 18 février 2011.

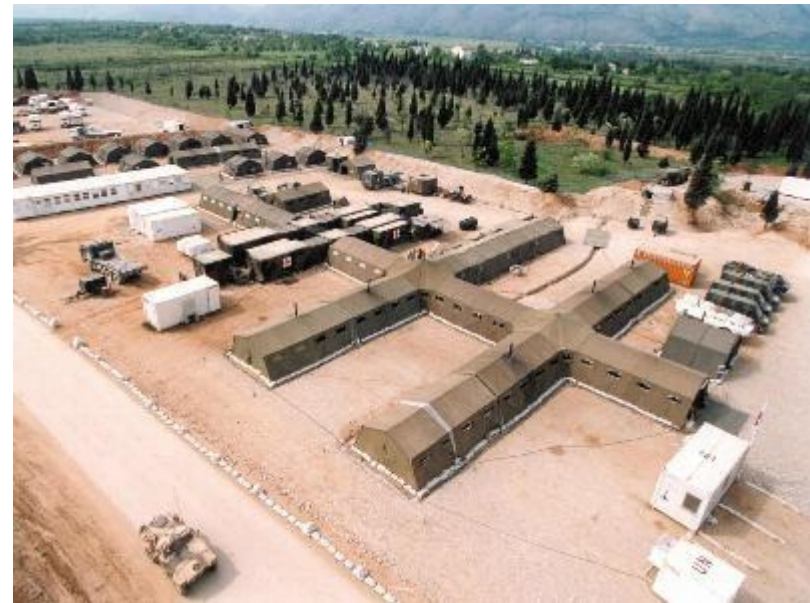
Moreover, a catastrophic earthquake is (often) followed by many aftershocks



Managing rescue aspects is a challenge to win against Earth, Time and Death



Source: interieur.gouv.fr



Source: hellopro.fr

A Mobile Rescue Unit is a level field hospital

- Objectives: a Mobile Rescue Unit, designed for reception, triage and treatment of trauma patients, can be added to a main hospital or considered as a first aids hospital as such
- It is organized to receive from 300 to 750 patients' beds, with a specific zoning based on the injured men state, from light injured men up to “morituri” (i.e. people who unfortunately will soon die).
- Logistical services are suppliers in energy, food, drinking water and toilet water, medicaments, small medical equipment, etc..
- Managing such a Mobile Rescue Unit must be anticipated in terms of preparation, deployment, organization, staff training



Source: objectifgard.com

Managing a MRU according to the disaster phases

- Defining a MRU's needs must be anticipated and prepared before a disaster occurs:
 - large divided up tents, beds, tables, chairs, etc.
 - special equipments for refrigeration, UV-sterilization, washing machines, autoclaves, surgical units, medical equipment, etc.
 - long shelf life products stockpiled in advance: drinking water, food, medicines, bedclothes, gas, etc.
 - list of short-life products (medicines, food, etc.) to be regularly renewed
 - diesel generators for a safe and reliable electrical supply, with gas-oil tanks
 - radio equipment and sat-phones
 - MRU's transport trucks, also in charge of supply, with their maintenance equipment and spare parts
- Building/buying safety sites/warehouses (not too far) to stock the complete MRU
- Identifying clean areas to deploy it and different itineraries between warehouses and these areas
- Giving trainings to the whole MRU staff, from physicians to trucks drivers



Source: interieur.gouv.fr



Source: icrc

Managing a MRU according to the disaster phases

- After a disaster occurs:
 - alert and mobilize people in charge of the MRU deployment: managers, trucks drivers and engineering staff, physicians and nurses, security guards and administrative staff, etc.
 - prepare the deployment area to avoid that somebody uses it for other purposes
 - transport the MRU under guard surveillance to avoid pillage
 - deploy the MRU as soon as possible and organize the itineraries and some specific zones (“reception desk, emergencies, care rooms, bedrooms, rest rooms, technical zone, mortuary, etc.) while the rescuers bring the victims towards the zone of deployment
 - provide cares to people waiting for emergency medical treatment but also to light injured people to reduce the patients number
 - organize funeral formalities for the dead people

Managing a MRU according to the disaster phases

- Authorities must organize a zone for the survivors, not far from the MRU, to recreate a life environment. Survivors must help to:
 - carry the injured and the dead people,
 - try to list missing persons and to identify the dead people,
 - withdraw rubble from ruins,
- preserve public order,
- celebrate religious services,
- manage the trauma
- coordinate the volunteer actions,
- organize the school, the preparation and distribution of food, the water purification, the gathering and repairing of necessities,
- rebuild shelters,
- repair roads, etc.



Source: m.elle.fr

Thanks!



Questions?