

## Energy Dimension of Disaster management

### TERMS OF REFERENCE

#### INTRODUCTION:

The horrors of the 26 December 2004 Tsunami remind us of vulnerability of many geographical regions within India that are prone to natural disasters. Helping those affected by such tragedies is an enormous challenge. There are lessons to be learnt from each disaster and relief operation to upgrade our systems, procedures and infrastructure to improve our preparedness to cope up with disasters. Various reports are available giving an account of post disaster relief measures; however, not much information has been documented on the energy dimension of rescue and relief measures.

WEC-IMC, being a body of energy organisations, proposes to conduct a study to evolve and document a mechanism for more effective implementation of energy dimension of the rescue, recovery and rehabilitation process by involving the all the partners.

#### The Tsunami:

A massive earthquake of magnitude 9.0 (USGS) hit Indonesia off the West Coast of Northern Sumatra on the morning of December 26<sup>th</sup>, 2004, at 06:58 AM. Another earthquake of magnitude 7.3 occurred 81 km west of Pulo Kunji (Great Nicobar, India) at 9:51 AM (IST) on the same day.

These resulted in giant tsunamis of 3 to 10 meters height traveling 2,000 km across the Indian Ocean, the Bay of Bengal and beyond.

In the Indian subcontinent, the Andaman and Nicobar Islands were the first to be hit causing extensive damage. The tsunami then spread along a narrow strip of land on the East Coast of India and low-lying portions of Sri Lanka and to a lesser degree the west coast of India.

#### The Impact of the Tsunami

According to Government reports, 10,749 people in India lost their lives and 6,913 were injured. The highest human losses were in the Andaman and Nicobar Islands and the state of Tamilnadu.

Overall damages are estimated at approximately US\$ 660 million and losses are estimated to be approximately US\$ 410 million.

## **Relief Measures :**

The govt. and local administration took up immediate rescue and relief measures with the assistance of police, fire and rescue services, medical and health services, other associated departments, armed forces, NGOs and civil society. The public and private sector also contributed their might in rescue and relief efforts.

The efforts concentrated on-

- Psychosocial Support
- Disposal of the dead, removal of debris, rescue and moving people to safer locations.
- Water Supply, Sanitation, Hygiene and to prevent an outbreak of epidemics
- Power supply and communication network
- Health and Nutrition
- Shelter and Habitat
- Financial assistance and relief material to families of the deceased and the injured and announced house repair subsidies.

## **Transition from relief to rehabilitation is a long term phase and is focusing on-**

- Restoring Livelihoods
- Capacity Building for Disaster Risk Management
- Restoring of infrastructure and services, and wherever possible, upgrading the same.

## **Proposal :**

Due to the crosscutting nature of the disaster's impacts, multi-sectoral, inter-institutional, and multidisciplinary approach was needed for the rehabilitation and reconstruction process. Entire world contributed in this effort to their best.

After such a disaster the rescue operations acquire a paramount importance to check loss of life. The rescue and relief operations need efforts on various fronts and availability of energy becomes a most important input. Rescue of people entrapped in buildings and rubble require area lighting, cutting tools, earth moving equipment, lifts, fire fighting equipment, communication network etc.

The importance of restoration of energy infrastructure for the rescue operations is obvious; however, there has been remarkably little reference to energy in most of the reports pertaining to the Tsunami.

Therefore, it is proposed–

- To document how the energy dimension of the relief effort was handled and what problems were encountered.
- To draw best practice conclusions for future reference.

Post Tsunami, a number of disaster risk management capacity building efforts have taken place in the affected areas. They provide an opportunity to systematically assess the current capacities of emergency services, establish minimum standards, define responses and upgrade the procedures and infrastructure accordingly.

The overall objective of this study is to define the approach of energy sector and if possible, establish-

- A system audit with local authorities to establish preparedness to cope up with natural disasters.
- Recommendations for strengthening of institutional capacities for identifying and managing disaster risks, in a multi-hazard framework.
- Systems for experience sharing and more effective implementation by the partners involved in the rescue, recovery and rehabilitation process.
- A checklist of energy related initiatives
- Recommendations for investment in improving the basic emergency infrastructure, response equipment and skills of personnel.
- Methodology and roadmap for a comprehensive database listing an inventory of disaster response resources in energy sector.
- Roadmap for Organizing communities to respond to emergency situations
- System for the rapid recovery of energy infrastructure after such a natural disaster.
- Short term (first 24 hrs.), medium term (first week) and long term response and strategies.

#### **Action Plan:**

- Form a steering committee inviting members from members, NGOs, academicians
- Call a meeting for finalization of draft proposal
- Finalisation of terms of reference
- Preparation of draft report before Executive Assembly at Colombo in September 05