erations, which seeks to develop mechanisms for dealing with relief and welfare matters and provide a co-ordinated response to all disaster situations; Mitigation Planning and Research, responsible for identifying and reducing the vulnerability of high risk areas and implementing mitigative measures; and Information and Training, directly responsible for public education information and training. These divisions work harmoniously together to guarantee the highest level of preparedness and response possible.

The main focus of ODPEM is to devise and implement measures to reduce the impact of future disasters on the Jamaican population and economy. This is to be achieved by ensuring maximum preparedness at the national, parish and community levels and will be delivered through sustained education and training programmes, involving all levels of the society

One major step being taken by the ODPEM in developing its response capabilities is the construction of a US$2.5 million National Emergency Operations Centre on its existing premises. This centre will be equipped with 'state of the art' facilities to ensure that in the event of an emergency appropriate, effective and speedy response can be made. This takes on additional significance when one considers that Jamaica is the focal point for the Northern Caribbean region with direct responsibilities for the Cayman Islands, the Bahamas, Bermuda and Belize.

As a statutory body, ODPEM expects to significantly influence the advancement of disaster management measures in Jamaica. In the initial stages, the organisation is expected to concentrate heavily on strengthening the national response mechanism; making it imperative for high risk industries to have disaster plans in place and developing the self-sufficiency of communities in the emergency phase following a disaster. In this attempt, meetings are being held with local response agencies and a major priority is the setting up or reviewing of zonal committees.

These committees at the community level are expected to detail their own operational guidelines, which are to be followed in the event of an emergency. They are also expected to carry out their own disaster preparedness measures, which include training, identifying and preparing shelters, storing relief items and retrofitting buildings to make them more capable of withstanding the effects of disasters By making these communities self-sufficient, ODPEM hopes to be able to focus its response and relief activities towards more critical areas, as well as ensuring that communities bounce back to normalcy as quickly as possible.

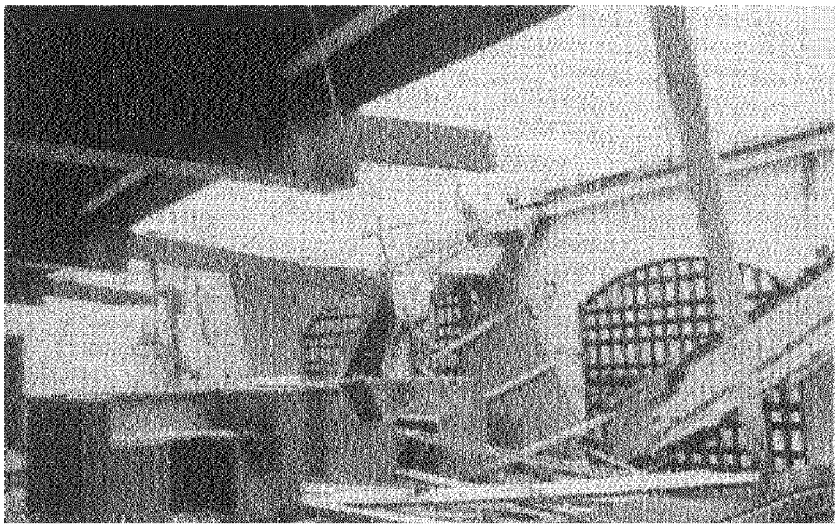
Another innovation being pursued by the ODPEM is the recruitment of full time Disaster Co-ordinators and four Regional Co-ordinators. Five parishes Kingston and St Andrew, Clarendon, St. Catherine and St. James already have Co-ordinators.

The ODPEM is also giving attention to fire prevention Despite the existence of a Fire Prevention Unit within the Jamaica Fire Brigade, it is the view of ODPEM, that much needs to be done to reduce the incidence of fire and resulting deaths.

Consequently the Information and Training Division will begin once again to include fire prevention topics in its training seminars. The need for fire prevention is apparent, when one considers the fact that between January and March of this year a total of 58 house fires occurred, resulting in 159 families being affected.

This is the nature of the changing face of Disaster Management in Jamaica, it is hoped this new structure will greatly assist in the development of a disaster awareness culture among the nation.

**Maxine Francis**



Jamaica is vulnerable to many types of natural disaster – pictured left are the residents of Aenon Town, in Clarendon, clearing sinkholes to prevent further flooding in their area, while the photo below right shows severe flooding experienced earlier this year in the Parish of Portland Pictured below left is hurricane damage in 1988, when Jamaica lost 60 per cent of its hospital facilities. The responsibility for disaster relief and welfare matters, as well as co-ordinated response to emergency situations in Jamaica, now falls upon the ODPEM.

**Maxine Francis is Public Information Officer at the Office of Disaster Preparedness and Emergency Management in Jamaica**

# CONFERENCE REPORTS

## World Conference on Natural Disaster Reduction, Yokohama, Japan, May 23-27, 1994

*The Effects of Disasters on Modern Societies* was the title of Technical Session C at this important conference held in Japan.

The significance of the IDNDR should be understood as the commencement of a long continuing global co-operation for natural disaster reduction. No doubt all problems regarding natural disasters cannot be resolved within a single decade; if so, global co-operative action for reducing natural disasters should be continued for several decades, or even at a slower pace, extended over one century until a less hazardous world can be achieved. Even fully industrialised nations with long years of efforts in coping with earthquakes, floods, cyclones/typhoons, and other types of natural perils, are still threatened by natural disaster risks. Thus, much time is required to establish a world where all natural disasters can be scientifically and technically controlled and regarded no longer as catastrophes.

With this background United Nations Centre for Regional Development (UNCRD) as part of its contribution to the IDNDR organised one of the seven Technical Committee sessions during the recently concluded World Conference on Natural Disaster Reduction held in Yokohama, Japan from 23 to 27 of May 1994. Having recognised that natural disaster reduction implemented in the next century must deal with denser populations, mostly concentrated in urbanised areas, supported by advanced technology and modernised social systems, UNCRD for its technical session took charge of the theme of disasters' effects on modern societies. For the purpose of the technical session, the concept of "modern society" was understood to vary according to different contexts and can include mega-cities, metropolitan regions, or even small or medium sized cities in developed or developing nations.

The first part of the session was based on the sub-theme *Natural Disaster Risk in Modern Societies* and identified natural disaster risks in modern societies. Four selected speakers gave presentations on the characteristics of disasters in metropolitan areas; the relation between environmental degradation and disaster risks in megacities; and the scientific approach to risk assessment of disasters in megacities and international co-operative actions for implementing such risk assessment in megacities in a co-ordinated manner.

In this part of the session, the following speakers made presentations: Shinjiro Mizutani of Nagoya University spoke on *Disaster Management in Metropolitan Areas* which summarised the reports of the IDNDR International Meeting held in Nagoya entitled *Disaster Management in Metropolitan Areas for the 21st Century;* Mohan Munasinghe, Chief of the Environmental Policy Division of the World Bank, spoke on *Urban Environmental Degradation and Vulnerability to Disasters,* which explored an integrated analytical framework to analyse the principle links between unsustainable urban development and vulnerability, especially in large cities; Philippe Masure of the International Association of Engineering Geology spoke on *Risk Management and Preventive Planning in Megacities: Scientific Approach for Action,* which examined the role of applied sciences in improving and adapting disaster mitigation techniques and developing integrated methodologies to manage both risks and the environment in urban planning and institutional systems; and Yoshikazu Kitagawa, Director of the International Institute of Seismology and Earthquake Engineering, spoke on *Co-ordination and Integration of International Projects on Risk Assessment in Megacities* which recommended an integrated approach in the assessment of natural disaster risk in various regions, as well as mutual comparisons and exchange of data.

In terms of the presented topics, commentators from megacities, Ibrahim Attwa, Vice-Governor of Cairo Governorate, and Xu Jilin, Chief Engineer of the Beijing Municipal Administrative Commission, were requested to share actual experiences in their countries and, with the participation of the general audience, a discussion was then held to explore effective strategies for assessing disaster risks in modern societies that the world will confront in the 21st Century.

The second part of the session, based on *Policies for Natural Disaster Reduction in Modern Societies,* focused on how to cope with the identified risks in modern societies by utilising structural and non-structural measures. As examples of the use of advanced technologies and modernised social systems for preventing and mitigating natural disasters, four topics were presented including structural engineering for protecting infrastructures from the threats of natural disasters; disaster reduction by means of both monitoring and communication satellite technologies; and disaster management with the help of a developed insurance system at the global level

For this part of the session, the speakers were the following; Stuart Mustow, President of the Institution of Civil Engineers/World Federation of Engineering Organisations, spoke on *Megacities: the Vulnerability of Infrastructure to Natural Disasters,* which considered the effects of strategic planning and development of megacity infrastructures to minimise the effects of natural hazards; Niek Rengers of the International Astronautical Federation and the International Institute for Aerospace Survey and Earth Sciences, spoke on *The Application of Satellite Remote Sensing for Natural Disaster Reduction in Developing Countries,* which described the integrated application of remote sensing and geo-information systems in the process of monitoring and hazard assessment of natural disasters; Eugene Staffa, Manager at International Mobile Satellite Organisation (INMARSAT), spoke on *The Use of Mobile Satellite Communications in Disaster Mitigation,* which dealt with key technical and operational aspects of mobile satellite systems in natural disasters occurring in the densely populated, as well as rural and remote areas; and Takashi Onoda, Chairman of The Marine and Fire Insurance Association of Japan, spoke on the *Role of Non-life Insurance in Disaster Management Systems,* which considered the problems and issues noted when considering non-life insurance from the standpoint of natural disaster risk management.

These presentations were followed by comments by M. Hanif, Mayor of Dhaka City Corporation, and Bernardo Grau, director of Disaster Prevention and Emergency Planning of the City of Santa Fe de Bogota, and a floor discussion on recommendations for developing appropriate measures for disaster reduction in the next century and, particularly, action plans for the second half of the IDNDR. From the presentations and discussions, the session recognised that natural disasters lead to extremely complex emergencies in which population growth, environmental degradation, and socio-political upheaval aggravate the effects of natural disasters and result in greatly increased damage. Urbanised areas were found to be extremely prone to disasters due to their concentration of population, resources, and activities, as well as land-

use patterns which greatly increase vulnerability. Also, the session noted that particularly in developing countries, the urban poor in fragile or high-risk areas should receive increased attention in development planning.

Finally, the committee made the following recommendations:

Risk assessment has to be incorporated into planning with an emphasis on sustainable development. Developing countries need to be assisted in their efforts to carry out risk assessment utilising appropriate technology. Megacities need special attention, taking into account the built-up areas and the urban fringe where future unplanned development may cause major disasters. Risk assessment should also include an evaluation of the geo-ecological capacity of cities and their surroundings and the differential vulnerability of various urban socio-economic groups to disasters, with an emphasis on the urban poor

The results of applied risk assessment to specific urban areas and regions must be used within the planning and educational purposes. They should be applied to heighten the various sectors of society: first, politicians and decision makers, who should exercise political will manifested through disaster mitigation and preparedness measures; and secondly, communities, which should participate in drafting and implementing disaster plans with enhanced knowledge and information, as well as the capability to sustain necessary non-structural measures.

International co-operation in risk assessment and disaster mitigation needs to be enhanced through the establishment of a global institution for technology transfer in the fields of risk assessment and disaster mitigation, the establishment of global or regional databanks on disasters and implementation of ways to ensure the exchange of disaster information, the establishment of a catastrophic loss reserve systems in order to stabilise reinsurance markets in case of devastating natural disasters, and the removal of all barriers to free movement of mobile satellite communication devices.

Disaster mitigation issues should be prioritised according to their relative importance and urgency. Based on this, recommended programmes and project proposals should be implemented. Initially, emphasis should be on good illustrative case studies on practical and effective disaster mitigation in high-risk disaster-prone developing countries. Case studies should be selected recognising that prevention is more important than cure.

**Hideki Kaji, Director, UNCRD**
**Yujiro Ogawa, Disaster Management Planner, UNCRD**
**Hitoshi Taniguchi, National Expert, UNCRD**

## Disaster Management Courses Tel Aviv, Israel, May 22-26, 1994

Ivan Segal, a behavioural psychologist, stressed that disasters often happen in populated areas, so dealing with local residents must be taken into consideration. In a disaster there are four stages:

(1) **Warning.** When there is an imminent danger people have a need for information. At this stage it is critical to instruct citizens what to do. If there is an information gap, there is the danger that it will be filled by rumours. People do not accept all information given to them; often there is a 'normalcy bias' and they filter out certain negative predictions.

(2) **Moment of the Incident.** At this point people often experience a 'loss of presence.' This can be for a matter of seconds, or a much longer time, during which there is confusion and a display of emotionalism. Initial response personnel must be trained to deal with this stage.

(3) **Immediate responses.** People first worry about their own well-being, then their concerns quickly broaden to enlarging circles ranging from immediate family to extended family then friends. At this point there is a need for information which is often expressed in a demand on the news (radio and television) and communications (telephone) systems. The concern for others is often voiced in a desire to volunteer to help others This complements the reality that much of the initial search and rescue efforts are done by volunteers before professional teams can organise and arrive. It is the job of initial response personnel to convert 'curiosity seekers' at a disaster scene into active volunteers.

(4) **After the Incident.** At this stage volunteers are replaced by trained personnel. It is important to avoid confrontation. Rather than totally excluding them from the operation to which they had volunteered, it is often better to give citizens a defined area from which they can view continuation of the operation. There is an acceptance of what has happened. That acceptance is sometimes accompanied by problems of critical incident stress or PTSD. There should also be a screening of workers for signs of 'burn out'.

Jim Lederman, a veteran reporter in Israel, described functions of the press following a major disaster. Continuing on the theme of the previous speaker, he drew an analogy between the police and the press (who both consider themselves public servants). Both groups gather information, and both often make the mistake of using their information for immediate goals rather than applying it to long range projects such as mitigation Both collect, analyse, edit and distribute data. The police is stronger in collection; the press is usually better equipped for distribution Yet, co-operation between the two groups is often wanting (particularly in the contingency planning stage), even when both realise that, in times of a real incident, there is a legitimate need for information. An indication of this is the rarity of any joint police/press spokesmanship training exercises. The net result is that at an actual incident police and the press are unaware of each other's needs and engage in unnecessary confrontation. The police spokesman should not take a position that he 'controls' information. He must listen to the questions of the press, since this is a good reflection of what the public needs to know. His job is to supply the public with real-time, accurate and reliable data, and the press is a channel. When this is done properly, the spokesman will also be projecting an image of competence and professionalism in the police which is critical to civilian trust and morale. The police spokesman should also make every effort to maintain open channels with police operations personnel so that he can receive information to be passed onward.

Dr. Jay Levinson of the Israel National Police described the function of an Information Bureau. After a disaster members of the public are concerned about the fate of their relatives who are thought to have been possibly involved in the incident. Responding agencies must set up an information bureau to handle telephone and in-person inquiries, giving out appropriate information to persons making the inquiry, and recording information about inquiring next-of-kin.

Derek Stavrou of British Airways described his company's Emergency Procedures Incident Centre (EPIC) at Heathrow Airport.

**Dr. Jay Levinson**

# NEWS

## Colombian Officials Admit Relief Agencies' Incompetence

Government relief agencies were slow, incompetent, disorganised, and caused greater human suffering, officials admitted following the earthquake which occurred in June. Aid from foreign governments was quick to arrive. Hundreds of tons of food, clothes, tents, medicines and other vital supplies reached Colombia, but there was no official system for storage, transport and distribution which prevented the supplies reaching the places where they were most urgently needed.

At first President Cesar Gaviria said Colombia did not need international help, and played down the severity of the problem. It was soon discovered, however, that his officials had been failing to report the true level of the disaster, and that they had not even bothered to ascertain how bad it really was.

The civil defence director was sacked for his failure to visit the disaster area. The regional head of the government food marketing institute was also sacked, for failing to distribute food to the starving. The death toll from the earthquake was well over 1000.

The explanation given for the official failures was given by the head of the disaster relief office: "the earthquake took us by surprise."

## New Legislation May Force Californian Insurers to Provide Earthquake Cover

Insurance companies in California may be forced to provide earthquake cover on homeowner policies. The news follows a meeting between 18 insurance companies and Governor Pete Wilson. The meeting was called after moves from insurance companies to remove themselves of the risks of earthquake insurance.

Farmers, a subsidiary of UK's BAT Industries, had temporarily decided to stop writing new homeowners' insurance policies in the state. The company, which expects losses of over US$1bn from the earthquake which hit Southern California in January, said it wanted to reduce it's exposure to such catastrophes.

A spokesperson for Governor Wilson said "some type of action, probably legislative action" was likely.

South Korean firemen, wearing chemical protective clothing, unload equipment during a rehearsal to cope with enemy attacks in Seoul. A massive country-wide drill also took place.

## UK City Flood Reports

A report into last January's flooding of the British city of Chichester has recommended that a flood alleviation scheme be investigated to protect the settlement in the future. Culverts carrying the nearby River Lavant through the heart of the city were inadequate, and the study says an emergency channel should be considered despite it being unlikely that such floods will occur for another 100 years. The floods in January – the biggest in the UK for many years – swamped homes and shops and caused massive disruption and cost £6 million in damage.

## Factory Fire Charges

A factory engineer and three board members of Kader Industrial (Thailand) are facing charges in connection with the tragic doll factory fire in Bangkok on May 10, 1993.

Around 188 workers – most of them women – died and a further 516 were injured in what has been referred to as the world's worst factory fire.

Reports at the time highlighted the lack of fire escapes and how most of the victims were crushed to death in the rush to escape the smoke and the flames.

## Exxon Settles Claim

At the end of July, the Exxon Corporation announced it had agreed to pay $20 million to partially settle native Alaskan claims about subsistence harvests lost due to the oil spill from the tanker *Exxon Valdez* five years ago

The spillage killed thousands of birds and animals and forced the closure of several fishing grounds and fouled several miles of shoreline. Exxon took full responsibility for the spill and agreed to pay over US$1 billion to avoid a criminal trial in March 1991. The settlement was the largest for environmental damage in American history. The petrol company has also spent US$2 billion to clean up the spillage.

## Aid Programmes Studied

An evaluation of international aid sharply criticises tied aid, expresses concern that donors are failing to meet commitments to increase assistance, and claims only 6.5 per cent of aid is spent on meeting the needs of the poorest. The report, *The Reality of Aid '94*, published by the British charity Actionaid, says the era of slowly growing aid is coming to an end, with business interests becoming more assertive over the shape of aid and the countries it goes to.