Reflecting upon a decade of disasters:  
the evolving response of the international community

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Between 1967 and 1970, the Nigerian civil war resulted in at least one million deaths and affected a further four-and-a-half million people. In 1970, a cyclone ripped across the flat delta plains of East Pakistan, leaving 300,000 dead in a matter of eight hours and disrupting the lives of 3,648,000. To escape the horrors of civil war, ten million East Pakistanis sought refuge between March and November 1971 in the impoverished border states of India. Late in the evening of 8 July 1971, an earthquake lasting for over three minutes killed eighty-five people and left a further 2,348,522 homeless in central Chile.1

What all these incidents had in common was that they were regarded as ‘disasters’. Each, in other words, reflected a condition in which the lives and very pattern of existence of a group or community were directly threatened by at least one of three types of ‘disaster agents’: natural (such as earthquakes, floods, droughts); man-made (such as civil strife); or technological (such as chemical poisoning, plutonium leaks).2 Each, by definition, resulted in ‘loss or suffering on a scale sufficient to warrant an extraordinary response from outside the affected area or community’. 3

What these four disasters also had in common was the way the international community responded to the plight of the afflicted. Governments, international governmental and non-governmental organizations provided over $533,079,909 worth of aid to the four stricken countries.4 And yet, despite this volume of seeming generosity, the overall response was random, ad hoc and only too often inappropriate to meet the needs of the disaster victims. What this vast outpouring lacked was some form of systematic response, providing not only predictability but appropriate types and levels of aid.

The emergence of a system

In too many instances, disaster victims continue to be dependent upon an international response that bears all the hallmarks of the early 1970s. However, this


2. Morris Davis has commented: ‘no one definition is able to capture the full range of phenomena that have been traditionally included under the rubric of “disaster”’. The overall meaning involves the idea that some agent produces a change in the environment by creating possible physical and social impact’. M. Davis. ‘A few comments on the political dimensions of disaster assistance’ in L. Davis, ed., Disasters and the small victims (Oxford: Pergamon, 1981). For a good description of ‘disaster agents’ see Turner’s comments on Warren’s “Epidemic classification of disasters” in B. A. Turner, Man-made disasters (London: Weidenfeld, 1978). pp 8-14.


impression has to be tempered by the fact that significant changes have occurred over the past decade in the manner in which the international community is able to respond to disasters. Indeed, to the extent that both donor and recipient governments, international governmental and non-governmental organizations have developed more sophisticated methodologies, institutions and coordinating mechanisms for dealing with disasters, one can point to an emerging 'international disaster relief system'. Certainly this is so if one accepts that the term 'system' implies the potential to respond effectively and efficiently to highly predictable disasters which have been proffered to date. To some extent, however, they can be circumvented by a more concerted effort at pre-disaster planning, more sensitivity to the institutional framework of the affected state, and increased functional expansion of the international agencies and the creation of what will be called 'regional policy coordinators'.

... in a relative sense

When the earthquake rocked Chile and the cyclone ripped through the flat delta of East Pakistan, when the Western press was filled with pictures of dying Bihari children and the squalor of refugee camps in West Bengal, not one single international governmental organization had within it a permanent body that dealt with disasters or disaster preparedness. As the Davidson report on Special economic, humanitarian and disaster assistance rightly points out, there had been growing concern from 1968 onwards that the United Nations should establish a more permanent focal point for dealing with disaster relief, but even as late as October 1970 it was noted that disaster relief was not a function with which the United Nations had 'been entrusted by the community of nations'.

Before 1971, voluntary agencies (with few exceptions) maintained little contact during disaster relief operations, and certainly did not seek to coordinate funding arrangements or logistic facilities either prior to or during relief work. The League of Red Cross Societies did provide information on disasters to the International Council of Voluntary Agencies, a general 'clearing house' for voluntary agencies.

5. G. F. Davidson, International efforts to meet humanitarian needs in emergency situations: summary report (C/5910) (Geneva: United Nations Economic and Social Council, 1981). While agencies in the UN system have clearly been heavily engaged in disaster relief work—indeed, some were initially conceived to deal with disasters (e.g. UNHCR, UNICEF, UNRWA, UNICEF)—the general trend was to move into the direction of what Davidson calls 'longer term planning'. Davidson points to the fact that UNHCR actually sought the abolition of its Emergency Fund in the early 1960s (p.14).

6. There are certainly a few important exceptions to this rule, one being the Disasters Emergency Committee which moved at the behests of the British Red Cross Society. To a lesser extent the US American Council of Voluntary Agencies for Foreign Service also attempts to bring some cohesion into its members' response. However, its main purpose is to lobby Congress on behalf of the charities.
but neither had units that dealt with disasters as such. On the governmental level, potential donors—except in very rare instances—had no offices which dealt on a permanent basis with the complexities of overseas disasters; and links between non-governmental donors and governments were generally casual if not nonexistent. Recipient governments—and certainly those of the particularly ‘disaster prone’ states—could rarely boast of disaster or emergency plans, let alone ‘disaster units’ within the government that could deal with the present or prepare for the next inevitable disaster. And if there was any single feature that symbolized the relatively random and unpredictable approach to disasters, it was the paucity of manuals and specialized literature on the actual running of relief operations or refugee camps.

To a certain extent this generally unstructured and unsystematic approach to disaster relief was sustained by three prevalent and interrelated assumptions. The first of these is the long-standing tendency to regard disasters as man-made or natural—as fundamentally unpredictable and short-term phenomena; hence, difficult to prepare for or control. This assumption was often sustained by a sense of fatalism or cultural or religious beliefs and, according to Barry Turner, even disaster researchers have remained “preoccupied with a ‘bolt-from-the-blue’ hypothesis about the emergence of disasters... Amongst the studies available, very few indeed offer any degree of assistance to the study of the nature, origins and preconditions of disaster...” This ‘bolt-from-the-blue’ hypothesis, as well as various cultural factors, inhibited attempts to study the phenomena, let alone to establish institutions to deal with what was regarded as essentially unpredictable and of short duration. Secondly, if there was any single assumption which reflected a general ignorance about the nature of disasters, it was the prevailing attitude towards the needs of victims, namely that anything which could be eaten, anything which could provide warmth and shelter would be utilized (with gratitude) by the affected. No matter where the disaster occurred, survival would determine usage no matter what culture, religion or experience might previously have determined.

The final assumption concerned the supposed inherent resilience of the affected nation-state and rested upon a fundamental distinction between disaster relief and development aid. Generally speaking, it was recognized that the cost of development was an expense which many developing countries could not bear on their own. Disaster relief, however, did not entail the high costs of structural change; its objective was at best to restore a portion of the population to its pre-disaster situation, a burden far less onerous, it was assumed, than the popular capital-intensive projects of the 1950s and 1960s. Nation-states were supposed to have the social resilience to absorb the affected. Furthermore, it was the responsibility of the government of the stricken state to deal with the victims of...
disasters. Members of the international community, as one commentator noted after
the Japanese earthquake of 1923, would compete with each other to provide
demonstrations of good will and concern, but 'it seemed quite natural that, after
receiving due messages of sympathy or even gifts on a more or less generous scale,
all the afflicted country had to do was to repair the loss and devastation by its own
unaided efforts'.

Increasingly, these assumptions collided with the reality of the late 1960s in a
variety of ways. Certainly science and technology opened the way towards not
only predicting but preparing for natural disasters, remote sensing from space
satellites being but one example. The emerging challenge to the 'bolt-from-the-
blue' hypothesis is reflected in the Intergovernmental Typhoon Committee's 1968
declaration of objectives: 'to mobilize scientists and resources to discover ways of
mitigating the harmful effects of these storms and of removing or minimizing their
destructive potential'. However, other challenges to traditional assumptions about
disasters were less positive. It became more and more obvious both that disasters
were not necessarily short-term and that disaster agents were not readily divisible
into man-made and natural phenomena. Disasters had a much longer incubation
period than had been assumed, and they were often generated by forces far more
complicated than had been previously realized. The too often interrelated factors of
poverty, population growth and political instability were generating what eventually
came to be called 'complex disasters'. Examples of this cruel interrelationship
abound. Increased agricultural needs lead to deforestation which in turn increases
the likelihood of floods. Famines in a country governed by an unstable regime leads
to civil disturbances which in turn provoke a man-made disaster; or a man-made
disaster triggers off a flood of refugees, leaving the country without farmers willing
to plant and harvest, which in turn threatens the onset of a famine. Specific
examples of this type of disaster are given below.

The ethnocentric assumption that survival needs were universally similar was also
increasingly challenged as stockpiles of culturally unacceptable goods, sold with the
best of intentions, went unused in relief operations. The C-130s filled with tons of
rations and fur-lined coats for rice-eating Bengalis, the 'standard universal
shelters', the mobile hospital units; all reflected what donors were willing to offer
but not necessarily what the recipients required. Also becoming more evident was a
clear correlation between poverty and disaster impact. The experiences of the late
1960s showed plainly that the nations most affected by disasters were only too
often the poorest; and this brought into question the above-mentioned assumption
that nation-states had the inherent resilience and ultimate responsibility for dealing
with disaster relief. While the government might have the ultimate responsibility,
12. Camille George, The International Relief Union: its origins, aims, means, and future (Geneva:
13. Ironically, effective warnings were issued before the cyclone struck East Pakistan in 1970. The
problem of getting this information to the agricultural workers in the newly-affected areas, however,
meant that the warning was less than useful.
14. The Typhoon Committee was organized by the World Meteorological Organization and the
Economic and Social Commission for Asia and the Pacific in 1968.
15. Although two-thirds of the world's population live in developing countries, it has been estimated
that 98 per cent of the disaster-related deaths occur in these countries. Brown, Disaster prevention
and the United Nations, p. 10. See also E. Steen (and N. Hewitt). A pilot survey of global natural
disasters of the past twenty years, (Natural Hazard Research Working Paper No. 11) (Boulder, Colo.:
University of Colorado, 1967).
all too often the financial cost of dealing with a serious disaster could wreak havoc on the entire annual budget of a developing country.\textsuperscript{16}

The challenges to these assumptions gained particular momentum as the international community faced the implications of a series of large-scale disasters as well as a real increase in the numbers of disasters between 1968 and 1971.\textsuperscript{17} This spate of extremely severe disasters made only too apparent how totally unsophisticated and unprepared were the responses of the components of the international community.

By 1971 intense pressure was being felt by donor governments from domestic interest groups and the media to devise more systematic means of dealing with foreign disasters. Criticism was rife over the supposed politicization of relief, the 'junk cash' approach to donations, the lack of domestic coordination, and the slowness of governmental responses.\textsuperscript{18} Recipient governments, too, actively sought improvements in the ways disasters were handled, both domestically and from outside. They looked for means of receiving aid without having to contend with the disjointed dispersing of international relief that too often overwhelmed their administrations and clogged their countries' infrastructures. They wanted means to neutralize, through international governmental organizations, some of the less acceptable implications of bilateral assistance.

The momentum towards a more effective approach to disaster relief also affected the voluntary agencies. As one of the dozens of emergency relief operations later remarked, the activity on all fronts in 1971 'obliged us [the voluntary agencies] to get our own houses in order'.\textsuperscript{19}

At the heart of many proposals to improve the international community's response to disaster relief was the United Nations system. The UN generally and the Secretary-General more particularly had been the butt of frequent criticism for failing to mobilize the offices and prestige of the UN family to provide an umbrella, under which more organized approaches to disasters could be developed.\textsuperscript{20} However, those more familiar with the internal workings of the system knew only too well how constrained the UN was, not only by the restrictions of Article 2, paragraph 7,\textsuperscript{21} but also by the fact—as the Soviet Union never failed to remind U Thant during the East Pakistan emergency of 1971—that there was no authority which allowed the Secretary-General to mobilize or coordinate the resources of the UN family or those even of willing member states to deal with disaster relief.

\textsuperscript{16} Interview with Ghulam Iskand Khan, in 1975 Chief Secretary to the Cabinet, Government of Pakistan, concerning his role in the November 1974 cyclone relief operation in East Pakistan, 20 April 1983.


\textsuperscript{18} In Delhi, Fraser, more than a hundred people marched through the town every night for a week to protest about the small amount the French government was providing to the East Pakistan relief operation: 'Rally in French town cyclone', Dawn, 27 November 1971.

\textsuperscript{19} Interview with Stanley Minas, Director for Emergency Services, Church World Service of the National Council of Churches, 13 December 1981.

\textsuperscript{20} Those who worked close to U Thant during this period knew how sensitive the Secretary-General was about these criticisms, and how he sought means to mobilize the system without violating his relatively conservative interpretation of the Charter. Based on interviews with Diego Cordovez, UN Under-Secretary-General for Social Affairs, and Janice Kimani, in 1975 Assistant Secretary-General for Inter-Agency Affairs of the UN.

\textsuperscript{21} Article 2 paragraph 7 of the UN Charter prohibits UN intervention in matters essentially within the jurisdiction of a state.
operations. By 1972, however, the UN's role and authority in disaster relief work had changed. New institutions, new machinery for coordination, new approaches to the mitigation and control of disasters were all under way, as part of a general trend affecting many areas of concern to the international community.

Institutions, coordination, preparedness and prevention

Between May and August 1980, floods in China's Huabei province destroyed millions of tons of crops and left thousands homeless. The Beijing government, through the offices of the Resident Representative of the United Nations Development Programme, contacted the United Nations Disaster Relief Organization in Geneva for assistance. A joint UN inter-agency assessment team inspected the area and determined the types of requirements the international community could usefully provide. An international appeal was subsequently launched, coordinated by UNDRO.22

On 10 October 1982, tremors reaching 7.3 on the Richter scale in the area of El Amann in Algeria were first reported to UNDRO's Giles Whitecote by the Swedish Seismological Institute. A Special Unit for Disaster Relief of the Swedish Stand-by Force was sent to assist an UNDRO-led UN coordinating team and the Algerian government. UNDRO's first situation report was issued on Saturday, 11 October. Although the scale of the disaster was extensive (11,000 killed or injured, 300,000 homeless), many observers were impressed with the speed with which the Algerian government was able to determine what it required in the way of assistance from abroad.23

At the end of March 1982, the influx of refugees from Guatemala and El Salvador into Honduras greatly increased just at the time when the Honduran refugee coordinating agency, for internal reasons, had broken up. At the request of the Honduran government, the United Nations High Commissioner for Refugees took the unusual step of acting as its own operating agency and temporarily coordinating its own assistance programmes. These programmes ranged from appointing 'roving officers' responsible for protecting the refugees near border areas to assisting a group of voluntary agencies to purchase land for the use of refugees.24

When compared to the response of the international community a decade before, these cases suggest a real potential for a more organized and systematic approach to disaster relief. National and international institutions have been created to deal specifically with the management of disasters; increased coordination amongst these new institutions has reduced much of the duplication and haphazardness of bilateralism; and certain levels of expertise in fields of preparedness and prevention have greatly increased since the beginning of the 1970s. From 1972 onwards there was a concerted attempt by many international governmental and non-governmental organizations as well as by many donor and recipient states to create local points

23. Information concerning this case is based on interviews conducted by Charles L. Kent with representatives of the UNDRO, Beijing, and Ms. Jia Lingsong of the Ministry of Economic Relations with Foreign Countries (Wai Jia Guang Chu). 24. Information concerning this case comes from the BBC broadcast by Ted Harrison, A friend in need, and from UNDRO News, January 1981.
for disaster relief. While the functions and effectiveness of such 'emergency units', 'disaster agencies', or 'relief cells' spanned a broad spectrum, the overall institutional development has provided several benefits to victims as well as to donors.

In the first place these disaster institutions are obviously designed to regard disaster work as a primary consideration, and not merely a tertiary concern in a general home affairs or development portfolio. Secondly, they are often mandated to initiate relief work and need not necessarily await authorization from officials outside the unit's own hierarchy. Related to this, they generally have emergency funds with which at least to launch a relief operation. Lastly, but equally important, these institutions provide a focal point for the receipt, assessment and coordination of relief assistance.

Since 1972 not only the United Nations but most of the major international agencies in the UN family have instituted departments or offices that deal solely with disaster relief, preparedness and prevention. Of these the single most important development has been the creation of the United Nations Disaster Relief Organization in December 1971 to mobilize, direct and coordinate the relief activities of the United Nations system and to coordinate the assistance with that given by other inter-governmental and non-governmental organizations. The importance of UNDRO should not necessarily be judged at this stage by its achievements to date but more by the evolution of its mandate; for it is the latter which best demonstrates the degree of growing commitment to a more coherent international approach to disaster assistance. From a relatively undernourished start, UNDRO has fought a running battle to gain not only adequate manpower and resources, but also clarification of what had been an intentionally vague mandate.

This vagueness reflected the ambivalence in the early years of the member governments towards such an overall disaster organization as well as a weak compromise with other already well-established UN agencies. The looseness of the mandate frequently meant that UNDRO found itself at loggerheads with many of its more established sister organizations. What was meant by 'to direct'? Did UNDRO's responsibilities include man-made disasters normally handled by the United Nations High Commissioner for Refugees? Would UNDRO's appeals clash with those of agencies such as UNICEF? Was UNDRO intended to have an 'operational role', that is, to get involved in the actual running of relief work, or merely a non-operational, coordinating role?

By 1976 UNDRO had been strengthened by a special trust fund; but it was not until 1981 that the subject of a highly critical evaluation in October 1980 that the international community had to decide what to do with this floundering experiment in disaster relief organization. A UN resolution of December 1982 at least officially resolved the ambiguity, when it was decided that UNDRO would, on behalf of the Secretary-General, be the central coordinator to develop concerted

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26. For example, emergency units over the past decade have been instituted in UNICEF, FAO, WFP, UNHCR, WHO and PAM.
28. United Nations General Assembly, 29 November 1974 (A/Res/2425), provided UNDRO with a special trust fund that went into operation by 1976. The importance attached by key donor states to a single UN coordinating body for relief can be seen in, for example, 'Need for an international disaster relief agency' (Washington, DC, Congressional Record of the United States, 5 May 1976). Nevertheless, the hopes of UNDRO remained unfulfilled as the Joint Inspection Unit, Evaluation of the Office of the United Nations Disaster Relief Coordinator (Geneva: United Nations, October 1980) made only too clear.
relief programmes as a basis for united appeals for funds which UNDRO, in turn, would also be responsible for coordinating. 29 Even without this important clarification, UNDRO had over the past ten years become increasingly recognized as an important focal point for the collection and dissemination of international disaster information. Its coordination centre in Geneva maintains contacts with over ninety potential donors, warns of disasters, informs about relief requirements and monitors, as far as possible, the flows of assistance being provided through bilateral and multilateral sources. UNDRO is also the recognized focal point for organizing joint inter-agency missions to evaluate the needs of the disaster-stricken, and has undertaken a major role in the past few years in organizing disaster preparedness programmes. 30

In addition to UNDRO, the United Nations has also established an Office of the Coordinator for Special Economic Assistance Programmes, created for the purpose of assessing the most urgent requirements of a country facing economic disaster and arranging as far as possible the contribution by donor countries of the resources required to stave off economic collapse. 31 In a recent report on such special economic assistance, the Secretary-General was able to state that at least seventeen African nations were provided aid to fend off disaster of one sort or another. 32 Many governments have also institutionalized the manner in which they either distribute assistance to others or deal with disasters within their own countries. Potential donor governments such as those of Sweden, West Germany and the United Kingdom have established ‘disaster units’ to deal with foreign disaster assistance and the EEC has established three separate funds to deal specifically with disasters. 33 An increasing number of governments of disaster-prone countries have established organizations to deal with disaster relief operations. In a recent count of seventy-seven developing nations which have to deal with serious recurrent disasters, forty have national disaster organizations, the majority of which have been established over the past decade. 34 Non-governmental organizations have also followed the pattern of establishing more permanent focal points for disaster relief operations. Several of the big charitable organizations have established their own emergency units, including the League of Red Cross Societies, 35 but perhaps the most striking institutional development in the voluntary sector has been the creation of the Voluntary Agency Steering Committee, which seeks to pool information from both voluntary organizations and inter-governmental organizations.

The Voluntary Agency Steering Committee is as much a reflection of an increased willingness to coordinate as it is an example of institutional building. Coordination

29. United Nations General Assembly, 17 December 1982 (A/37/144) for important background to this resolution, see A/36/223.
30. See, for further examples, Reports of the Secretary-General A/36/259, 22 June 1981; A/35/228, 16 June 1980; A/34/190, 30 April 1979.
31. Devlin, International efforts to meet humanitarian needs, p. 54.
32. Special economic and disaster relief assistance: special programmes of economic assistance, 28 October 1982 (A/37/143).
33. There are at present three separate disaster relief funds in the EEC: aid to Africa, Caribbean and Pacific countries associated with the Community under the Lome Convention; aid to developing countries that are not associated in this way; and aid to EEC member states.
34. These statistics are derived from material produced by Brown (see Disaster preparedness and the United Nations, pp. 113-20) and the US Office for Foreign Disaster Assistance in 1982; Disaster preparations in developing countries, unpublished.
35. Francis Fukuyama, of the League of Red Cross Societies, Geneva, stated that “most of the major voluntary agencies markedly increased their involvement in disaster relief over the past ten years, since 1972.”
both at headquarters and operational levels is a critical component of any relief effort. When, for example, the Indian border states found themselves inundated with refugees from East Pakistan in 1971, over a nine-month period sixty-seven countries provided assistance directly, over 620 non-governmental organizations became directly or indirectly involved, and nine major UN agencies undertook significant relief roles. All of this did not include the sizeable contributions made to the relief operation of the Indian Central Authorities as well as the individual states of India. The magnitude of the operation was eventually understood and a relatively effective coordination structure was imposed. However, this was by no means typical of the attitude towards coordination prevalent at the time. Both machinery for coordination and the willingness to share information have developed over the past ten years—horizontally (between similar actors such as IGOs) and vertically (between different types of actors such as IGOs and NGOs). On the level of UN coordination, there has been a series of important understandings defining the roles of the respective organizations during relief operations and also regulating procedures for coordinating activities. Such memoranda of understanding have been signed, for example, between UNDP and all the principal agencies dealing with relief, including UNHCR, UNICEF, WFP and WHO; and in 1979 the United Nations Development Programme agreed that the Resident Representative in countries where the UNDP had an office would act ex officio as UNDRRO representative during natural disaster operations. Other agencies have followed suit, such as WHO and UNICEF, in agreeing to their respective roles in meeting the needs of children and other vulnerable groups in times of disaster.\textsuperscript{26}

UNDRRO and the Office of the Coordinator for Special Economic Assistance Programmes rely increasingly upon ‘joint inter-agency assessment missions’ in which one or the other leads a team of experts from the operational agencies to evaluate disaster preparedness or relief requirements. In cases of large, complex disasters, it has now been generally accepted that the operational aspects of disaster relief will be handled either by a special representative appointed by the Secretary-General or by a ‘lead agency’ appointed by the Secretary-General. In either case, the underlying principle is to project a ‘one voice’ approach to disaster relief operations.\textsuperscript{27}

Instruments for coordination between voluntary agencies and international organizations have also increased as evidenced by the above-mentioned Voluntary Agency Steering Committee. In more and more instances, the IGOs are also showing an inclination to use the ‘grass roots’ knowledge of the voluntary agencies through joint arrangements, for example between CARE and UNICEF, UNDRRO and League of Red Cross Societies. Governments, too, have tended to involve voluntary agencies more and more in the planning of relief assistance activities; and Green has noted a trend by several governments to promote greater coordination amongst the voluntary agencies themselves.\textsuperscript{28}

Expertise: pre-disaster planning and prevention

The planning and organizing of relief operations, like so many aspects of disaster work, have seen many changes of attitude and many challenges to conventional

\textsuperscript{26} Davidow, International efforts to meet humanitarian needs, p. 27.

\textsuperscript{27} Interview with Sir Robert Jackson, Special Representative for the Secretary-General in the Kampuchea relief operation, 21 November 1980.

\textsuperscript{28} Green, International disaster relief, p. 59.
assumptions. As one commentator noted after the Guatemalan earthquake in 1976, ‘victims are not always starving, naked or in need of blankets. Disaster relief is not always the only answer.’ This commentator exaggerated the resilience of the afflicted, he did point to an increasingly accepted view that all aspects of relief work, even the criteria for determining malnutrition and the value of importing temporary shelters, needed to be re-evaluated.  

The recent development of a more professional approach to disaster relief has taken a variety of forms. A body of practical literature and manuals is emerging which provides guidance on a wide variety of disaster issues such as setting up a refugee camp, assessment procedures and food distribution techniques. Conferences and seminars organized by intergovernmental organizations, voluntary agencies and universities are more readily available to enable discussion of new techniques and methods of planning and preventing disasters. Governments have tended to call much more frequently upon relevant UN agencies to review natural disaster plans and to help set up disaster units; and over the past few years meetings have been organized in South Asia, Latin America and South-east Asia to establish bases for coordinating work in cases of regional disasters.  

Stockpiling or pre-positioning supplies, has also increased. A good example is the International Emergency Food Reserve, established in 1976 as a supplement to the World Food Programme’s own emergency food resources. UNICEF’s packing and Assembly Centre (UNIPAC) in Copenhagen is a further example. There, surgical supplies, cooking and shelter materials are made available at short notice for relief operations throughout the world. Early warning systems are increasingly available, as are systems such as Landscan, which technically have the ability to ‘sense’ droughts, floods, great storms and fires and to assess and monitor their impact. There is no doubt that as yet few developing countries can utilize the data fully, since weak infrastructure and poor communication facilities too often mean that the information cannot be readily transmitted or interpreted in the areas where particular disasters might break. Nevertheless, increased availability means at least that the potential for the use of early warning systems, space satellites, and enhanced communication facilities is much greater.

Disaster prevention, too, has increasingly occupied the attention of governments, IGOs and NGOs. One example is earthquake risk reduction techniques which are

41 For example, The United Nations High Commissioner for Refugees handbook for emergencies was first issued in December 1982.
42 For example, from 6–10 March 1982 an international seminar on disaster preparedness and relief was held in Islamabad, and attended by representatives of seven south Asian countries, the LORCS, UNRWA and several other UN organizations.
43 For example, in November 1978, representatives of UNRWA, the government of Sweden, the LORCS and the Americas Health Authority met representatives of the government of Guatemala, Costa Rica and Peru to discuss the use of the Swedish wind-dryer for UN snipers in the case of disaster striking those countries. (Athens, 26 April 1978).