INTRODUCTORY NOTES

1. The importance of terminology in disaster management was recognized by institutions active in the field a long time ago. This importance stems from the need for rapid and unequivocal communication among individuals and teams and involved institutions in actual disaster response activities, as well as in disaster mitigation by prevention and preparedness.

   UNDRO started its efforts in standardization of terms in its publication, "Natural disasters and Vulnerability Analyses", in 1979. This first attempt was already at that time integrating the views of several organizations within the UN system, as well as non-governmental agencies.

   Another terminological endeavour by UNDRO was recently included in the manual "Natural Disasters - Phenomena, Effects and Options", and in a report by UNDRO consultant R. Ockwell in his paper, "Disaster-Related Terminology - Some Observations and Suggestions", prepared in the framework of the UNDP/UNDRO Disaster Management Training Project.

2. Several calls for a terminological effort were simultaneously made by the meetings which led to or immediately followed the launching of the International Decade for Natural Disaster Reduction. A scientific Symposium on "Disaster Mitigation Problems", connected with inter-disciplinary cooperation between geophysical and social scientists was held in Perugia, Italy in 1990. It stressed the importance in this cooperation of terminology clarification. Last but not least, the Scientific and Technical Committee of the IDNDR endorsed the endeavour of UNDRO to establish an internationally agreed terminology and included the project among those to receive primary attention in the proposed information and communication strategy for the IDNDR.

3. The UNDRO/IDNDR terminology project is divided into two stages: the first consists in the preparation of a multilingual glossary of basic terms most frequently used in field and office activities. The second stage is to establish a recommended methodology for the preparation of glossaries in different specialized subjects of disaster management.

4. In the first stage, an inventory and review of published and non-published terminology material was made and about 350 basic terms with definitions were selected to be included in the first draft of the basic glossary. The selection was guided by a flow-chart of all diaster-related activities.

The chart and a hierarchy of terms is being reproduced here for information only, as one of several possible alternatives, since there is a divergence of opinions on definitions of some of the basic terms like "mitigation", "prevention", "preparedness" etc. There are also different definitions possible for the same terms used in different scientific disciplines.
As an example, it can be mentioned that the terms "forecast" and "prediction" may acquire different understandings in meteorology in contrast with seismology.

5. These last differences are however of semantic nature, while the differences in understanding terms like "mitigation" or "preparedness" go beyond semantics as they may have important implications in national and international organisational patterns in disaster-related institutions.

In order to highlight this problem, which in our view is neither of semantic or scientific origin, a short list of terms, which may fall in this category, together with their proposed definitions, is included in front of the Glossary. This list together with the definition was proposed at an UNDRO convened meeting of international experts and representatives of international organisations, held in Prague from 23-27 September 1991.

6. The meeting noted that the definitions proposed by different organisations, for example with regard to the term "Disaster mitigation" are not necessarily contradictory, but have a different scope. Thus, the above term has a narrowest meaning in the definition of the US OFDA, a less narrow in UNDRO and the widest in that of WHO and PAHO.

It was finally considered that the establishment of definitions of terms is a process which can be only achieved in stages. There is however an urgent need to cross the first stage, this of identifying agreement on most of the terms and disagreement on a few of them. The establishment of equivalents in English, French and Spanish, and perhaps also in other languages, is for some terms also difficult. It is therefore attempted to minimize confusion at international level when using the terms in different languages, by providing the equivalents simultaneously with the selection of the definitions - thus produce a multilingual glossary.

Find below, a short list of general and basic terms, considered important for organisational and procedural purposes in disaster-related activities:

- **Acceptable risk** - degree of human and material loss that is perceived by the community or relevant authorities as tolerable in actions to minimize disaster risk.

- **Alert** - advisory that hazard is approaching but is less imminent than implied by warning message. See also "warning".

- **Disaster** - a serious disruption of the functioning of a society, causing widespread human, material, or environmental losses which exceed the ability of affected society to cope using only its own resources. Disasters are often classified according to their speed of onset (sudden or slow), or according to their cause (natural or man-made.)

- **Disaster mitigation** - see Mitigation.

- **Disaster response** - a sum of decision sand actions taken during and after disaster, including immediate relief, rehabilitation, and reconstruction.

- **Elements at risk** - the population, buildings and civil engineering works, economic activities, public services, utilities and infrastructure, etc., at risk in a given area.

- **Forecast** - statement or statistical estimate of the occurrence of a future event. This term is used in different meanings in different disciplines, as well as "prediction".

- **Hazard** - a threatening event, or the probability of occurrence of a potentially damaging phenomenon within a given time period and area.

- **Mitigation** - measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and on environment.

- **Natural hazard** - the probability of occurrence, within a specific period of time in a given area, of a potentially damaging natural phenomenon.

- **Prediction** - a statement of the expected time, place and magnitude of a future event (for earthquakes and volcanic eruptions).

- **Preparedness** - activities designed to minimize loss of life and damage, to organise the temporary removal of people and property from a threatened location and facilitate timely and effective rescue, relief and rehabilitation. See also "prevention.

- **Prevention** - encompasses activities designed to provide permanent protection from disasters. It includes engineering and other physical protective measures, and also legislative measures controlling land use and urban planning. See also "preparedness".

- **Relief** - assistance during or after disaster to meeting the life preservation and basic subsistence needs. If can be of emergency or protracted duration.

- **Risk** - the expected number of lives lost, persons injured, damage to property and disruption of economic activity due to a particular natural phenomenon, and consequently the product of specific risk and elements at risk.

- **Search and rescue** - the process of locating and recovering disaster victims and the application of first aid and basic medical assistance as may be required.

- **Specific risk** - the expected degree of loses due to a particular natural phenomenon and as a function of both natural hazard and vulnerability.

- **Vulnerability** - the degree of loss to a given element at risk or set of such elements resulting from the occurrence of a natural phenomenon of a given magnitude and expressed on a scale form 0 (no damage) to 1 total loss).

- **Warning** - dissemination of message signalling imminent hazard which may include advise on protective measures; see also "alert".

HIERARCHY OF DISASTER MANAGEMENT TERMS

1. D i s a s t e r m i t i g a t i o n
   1.1 Risk assessment
      1.1.1. Hazard assessment
      1.1.2 Vulnerability assessment
   1.2. Prevention
      1.2.1 Structural measures
      1.2.2 Non-structural measures
   1.3. Preparedness
      1.3.1 Emergency planning
      1.3.2 Warning and evacuation

Explanatory notes:

1.1.1. Monitoring, zoning of intensity, probability of occurrence

1.1.2 Vulnerability functions of all elements exposed to hazards, damage rations, damage probabilities, expected loss (=risk) from hazard and vulnerability data

1.1.2.1 Disaster resistant or protective structures (banks, flood-walls, dikes, dams ...)

1.1.2.2 Land use and building regulations, disaster legislation, public education and information, disaster insurance

1.3.1 Planning of actions for the case of a disaster, training of special teams and of population, contingency planning, testing of disaster scenario

1.3.2 Development of disaster prediction methods and establishment of warning systems including communication facilities, shelter and evacuation planning

2. D i s a s t e r r e s p o n s e
   2.1 Relief
      2.1.1 Search and rescue
      2.1.2 Shelter provision
      2.1.3 Food supply
      2.1.4 Medical care
      2.1.5 Removal of debris
      2.1.6 Transport
      2.1.7 Partial or full evacuation

      i.e. immediate intervention of the duration of days or weeks

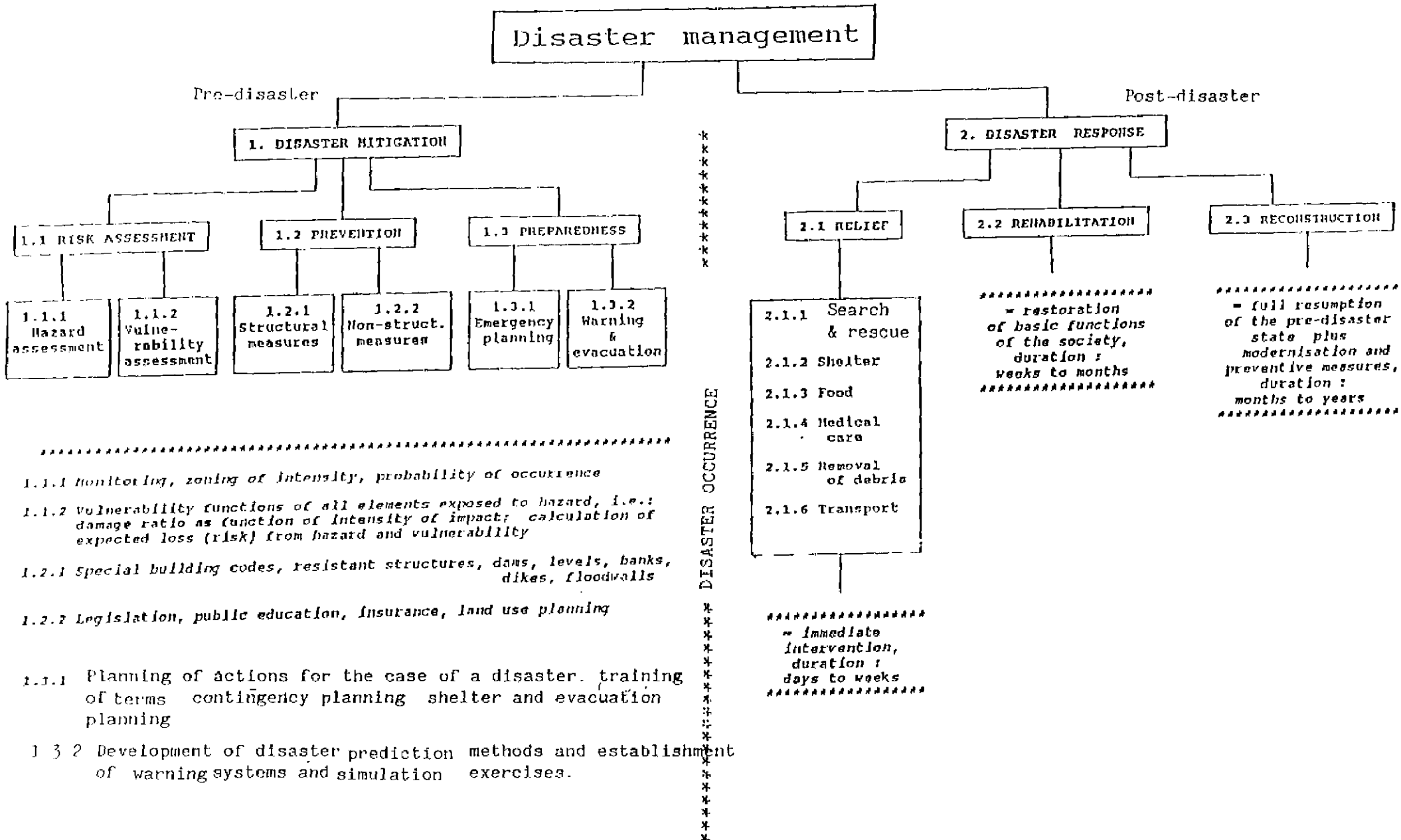
   2.2 Rehabilitation

i.e. restoration of basic functions of the society, duration: weeks to months

   2.3 Reconstruction

i.e. a full resumption of the predisaster state including all preventive measures and modernisation of the urbanistic lay-out, industry, infrastructure, etc., duration: months to years

Disaster Management · hierarchy of leading activities and related terms



1.1.1 *Monitoring, zoning of intensity, probability of occurrence*

1.1.2 *Vulnerability functions of all elements exposed to hazard, i.e.: damage ratio as function of intensity of impact; calculation of expected loss (risk) from hazard and vulnerability*

1.2.1 *Special building codes, resistant structures, dams, levels, banks, dikes, floodwalls*

1.2.2 *Legislation, public education, insurance, land use planning*

1.3.1 Planning of actions for the case of a disaster, training of terms contingency planning shelter and evacuation planning

1.3.2 Development of disaster prediction methods and establishment of warning systems and simulation exercises.

LIST OF DISASTER MANAGEMENT TERMS

Third Draft (December 1991)

--A--

Acceleration - a change in velocity; in earthquake engineering, it is expressed as a fraction of gravity (g). USGS*

Accelerograph - instrument for recording strong ground motion.

Acceptable risk - degree of human and material loss that is perceived by the community or relevant authorities as tolerable in actions to minimize disaster risk.

Acid rain - a washout of an excessive concentration of acidic compounds in the atmosphere, resulting from chemical pollutants such as sulphur and nitrogen compounds. When deposited these increase the acidity of the soil and water causing agricultural and ecological damage.

Aftershock - a smaller earthquake that follows the main shock and originates close to its focus. Aftershocks generally decrease in number and magnitude over time.

Alarm - massage notifying of danger.

Alert - advisory that hazard is approaching but is less imminent than implied by warning message. See also "warning".

Amplitude - the difference between zero level and peak of any wave such as a seismic wave.

Anemometer - instrument which measures wind speed or wind speed and direction. H

Annual flood - highest peak discharge in a year.

Antecedent precipitation index (see also antecedent soil moisture) - weighted summation of past daily precipitation amounts, used as an index of soil moisture.

Anticyclone (Area of high pressure, High) - a region where barometric pressure is high or relative to that in the surrounding regions at the same level.

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*Note: Indicates that the term and its definition were taken without change from a source, which is identified at the end of the list. Without such indication the term, while taken from one of the sources listed at the end, was changed by consensus of experts present at the Prague UNDRO meeting.

Areal precipitation - (1) the average amount of precipitation which has fallen over a specific area.

Arid zone - an area in which the water resources from ground water and rainfall are insufficient to counterbalance the evaporation and loss of water needed for vegetation.

Aseismic - nonseismic; used to designate an area free from seismic activity.

Assessment - survey of a real or potential disaster to estimate the actual or expected damages and to make recommendations for prevention, preparedness and response.

Ash flow - Pyroclastic flow.

Atmospheric pollution - contamination of the atmosphere by large quantities of gases, solids and radiation produced by the burning of natural and artificial fuels, chemicals and other industrial processes and nuclear explosions.

Avalanche -the rapid and sudden sliding and flowage of masses of usually incoherent and unsorted mixtures of snow/ice/rock material. OFDA

- B -

Backwater - a rise of water level in a stream caused by a natural or artificial obstruction.

Barometer - instrument for measuring atmospheric pressure. H

Barometric pressure - the pressure exerted by the atmosphere as a consequence of the force of gravity.

Barrage - barrier across a stream provided with a series of gates or other control mechanisms to control the water-surface level upstream, to regulate the flow or to divert water supplies into a canal. OFDA

Beaufort scale - scale of wind speed, measured from zero (calm) to twelve (hurricane force wind).

Biological disaster - disaster caused by the exposure of living organisms to germs and toxic substances.

Bomb - see Ejecta.

- C -

Chemical accident - accidental release occurring during the production, transportation or handling of hazardous chemical substances.

Chlorofluoro-carbons (CFC) - a group of chemical compounds used in industry and in the household, of which the excessive and universal use is believed to be one of the causes of ozone depletion, with resulting environmental damage.

Civil defence - the system of measures, usually run by a governmental agency, to protect the civilian population in wartime, to respond to disasters, and to prevent and mitigate the consequences of major emergencies in peacetime. The term "civil defence" is now used increasingly.

Climatic change - change observed in the climate on a global, regional or subregional scale caused by natural processes and/or human activity.

Contributions in kind - non-cash assistance in materials or services offered or provided for disaster needs.

Crop moisture ratio - the ratio of precipitation to the potential evapotranspiration. An index for assessment of agricultural drought.

Crop failure - abnormal reduction in crop yield such that it is insufficient to meet the nutritional or economic needs of the community.

Current meter (water) - instrument for measuring the velocity of water.

Cyclone - a large-scale closed circulation system in the atmosphere with low barometric pressure and strong winds that rotate counter clockwise in the northern hemisphere and clockwise in the southern hemisphere. The system is referred to as a cyclone in the indian ocean and south Pacific, hurricane in the western Atlantic and eastern Pacific and typhoon in the western Pacific.

- D -

Dam (also barrage; barrier; weir) - barrier constructed across a valley for impounding water or creating a reservoir. H

Damage classification - evaluation and recording of damage to structures, facilities, or objects according to three (or more) categories: 1) "severe damage", which precludes further use of the structure, facility, or object for its intended purpose. 2) "moderate damage", or the degree of damage to principal members, which precludes effective use of the structure, facility, or object for its intended purpose, unless major repairs are made short of complete reconstruction. 3) "light damage", such as broken windows, slight damage to roofing and siding, interior partitions blown down, and cracked walls; the damage is not severe enough to preclude use of the installation for the purpose for which was intended. OFDA

Damping - limitation of movement or dissipation of energy.

Data collection platform (DCP) - automatic measuring facility with a radio transmitter to provide contact and transmission of data via satellite. H

Debris flow - a mass movement involving a rapid flow of debris including rock, soil, vegetation and water. Specifically, a high-density mud flow with abundant coarse-grained materials.

Declaration of disaster - official issuance of a state of emergency immediately upon the occurrence of a large-scale calamity, in order to activate measures aimed at the reduction of the disaster's impact.

Deforestation - the clearing or destruction of a previously forested area.

Depression (Low, Low-pressure area) - region where the barometric pressure is lower relative to that in the surrounding regions at the same level.

Depth (total) of runoff - runoff volume from a drainage basin, divided by its area.

Desertification - the processes by which an already arid area becomes even more barren, less capable of retaining vegetation, and progressing towards becoming a desert.

Design earthquake - earthquake selected as maximum probable event for structural analysis and code requirements.

Design flood - flood hydrograph or peak discharge adopted for the design of a hydraulic structure or river control. H

Design storm - rainfall amount and time distribution adopted over a given drainage area, used in determining the design flood. H

Detention reservoir (also flood-control reservoir) - flood storage reservoir with uncontrolled outlets.

Disaster - a serious disruption of the functioning of a society, causing widespread human, material, or environmental losses which exceed the ability of affected society to cope using only its own resources. Disasters are often classified according to their speed of onset (sudden or slow), or according to their cause (natural or man-made).

Disaster area survey team (DAST) - a group that is deployed in an area after a disaster to ascertain the extent of damage to population and property and to recommend appropriate responses.

Disaster epidemiology - the medical discipline that studies the influence of such factors as the life style, biological constitution and other personal or social determinants on the incidence and distribution of disease as it concerns disasters.

Disaster insurance - government sponsored or private insurance policies for protection against economic losses resulting from disaster. PAHO

Disaster legislation - the body of laws and regulations that govern and designate responsibility for disaster management concerning the various phases of disaster.

Disaster management - the body of policy and administrative decisions and operational activities which pertain to the various stages of a disaster at all levels.

Disaster medicine - the study and collaborative application of various health disciplines to the prevention, preparedness, immediate response and rehabilitation of the health problems arising from disaster, in co-operation with other disciplines involved in comprehensive disaster management.

Disaster mitigation - see Mitigation.

Disaster phases (syn. disaster cycle, disaster continuum) - pre- and post-disaster periods subdivided into particular actions. OFDA

Disaster team - multidisciplinary, multisectoral group of persons qualified to evaluate a disaster and to bring the necessary relief.

Disaster response - a sum of decisions and actions taken during and after disaster, including immediate relief, rehabilitation, and reconstruction.

Discharge (syn. flux; rate of flow) - volume of water flowing through a river (or channel) cross-section in unit time. H

Disease control - all policies, precautions and measures taken to prevent the outbreak or spread of communicable diseases.

Displaced person - persons who, for different reasons or circumstances have been compelled to leave their homes. They may or may not reside in their country of origin, but are not legally regarded as refugees.

Dome - lava which is too viscous to flow laterally and therefore forms a dome above the erupting vent.

Drainage basin (syn. catchment; river basin; watershed) - area having a common outlet for its runoff.

Drought - period of deficiency of moisture in the soil such that there is inadequate water required for plants, animals and human beings.

Drought index - computed value which is related to some of the cumulative effects of a prolonged and abnormal moisture deficiency.

Dry spell - period of abnormally dry weather. Use of the term should be confined to conditions less severe than those of a drought. M

Duststorm (Sandstorm) - dust (sand) energetically lifted to great heights by strong and turbulent winds. M

Dynamic testing - analysis of the response of structures under simulated loads of the type imposed by natural hazards.

- E -

Earth flow - a mass movement characterized by slow down slope translation of soil and weathered rock within a landslide.

Earthquake - a sudden break within the upper layers of the earth, sometimes breaking the surface, resulting in the vibration of the ground, which where strong enough will cause the collapse of buildings and destruction of life and property.

Earthquake forecasting - see Forecast.

Earthquake hypocentre (focus) - the place inside the earth where the faulting, which is associated with the earthquake, originated. AD

Earthquake intensity - see Intensity.

Earthquake magnitude ("Richter scale") - see Magnitude.

Earthquake swarm - a series of minor earth tremors (none of which may be identified as the main shock) that occurs within a limited area and time.

Ecosystem - basic ecological unit formed by the living environment of the animal and vegetable organisms interacting as a single functional entity.

Ejecta - material thrown from a volcano, including large fragments (bombs), cindery material (scoria), pebbles (lapilli) and fine particles (ash).

El Nino - an anomalous warming of ocean water off South America, usually accompanied by heavy rainfall in the coastal region of Peru and Chile, and reduction of rainfall in equatorial Africa and Australia.

Elements at risk - the population, buildings and civil engineering works, economic activities, public services and infrastructure, etc.

Emergency - a sudden and usually unforeseen event that calls for immediate measures to minimize its adverse consequences.

Emergency medical system (EMS) - the aggregate of resources and personnel needs to deliver medical care to those with an unpredicted, immediate health need outside established medical facilities.

Emergency medicine - the specialized institutional system and resources required to meet immediate and unexpected medical needs.

Emergency operations center (EOC) - officially designated facility for the direction and co-ordination or all activities during the response phase a disaster.

Environmental degradation - unfavourable modification of the ecological state and environment through natural processes and/or human activities.

Epicenter - that point on the earth's surface directly above the place of origin (i.e., focus, or hypocenter) of an earthquake.
OFDA

Epidemic - 1. an unusual increase in the number of cases of an infectious disease which already exists in the region or population concerned. 2. the appearance of a significant number of cases of an infectious disease introduced in a region or population that is usually free from that disease.

Epidemiology - see Disaster epidemiology.

Erosion - loosing or dissolving and removal of rock or soil as a result of water, ice or wind action.

Evaluation - post disaster appraisal of all aspects of the disaster and its effects.

Evapotranspiration - the combined loss of water from a given area, by evaporation from the soil and by transpiration from plants.

Exceedance probability - that a given magnitude of an event will be equalled or exceeded.

Explosivity index - scale to quantify the volume of volcanic eruption products and energy with which they are dispersed.

Exposure time - the time period of interest for seismic risk calculations, seismic hazard calculations, or design of structures. For structures , the exposure time is often chosen to be equal to the design lifetime of the structure. GS

Eye (of the storm) - the calm center of a cyclone.

- F -

Fall - see Rockfall, Rockslide.

Fallout - the deposition of radioactive particles from the atmosphere arising from 1) natural causes, 2) nuclear bomb explosions and 3) induced radioactivity and atomic reactor accidents.

Famine - a catastrophic food shortage affecting large numbers of people due to climatic, environmental and socio-economic reasons.

Fault - a planar or gently curved fracture in the earth's upper layers across which displacement occurs.

Firewall - walls which are intended to be fire barriers.

First aid - the immediate but temporary care given on site to the victims of an accident or sudden illness in order to avert complications, lessen suffering, and sustain life until competent services or a physician can be obtained.

Flash flood - a sudden and extreme volume of water that flows rapidly and causes inundation, and because of its nature is difficult to forecast.

Flood - significant rise of water level in a stream, lake, reservoir or a coastal region.

Flood-bypass channel, also floodway - channel built to divert flood flows from a point upstream of a region to a point downstream.

Flood control - the management of water resources through construction of dams, reservoirs, embankments, etc. to avoid floods. OFDA

Flood forecasting - procedure for estimation of stage, its discharge values, time of occurrence, and duration of a flood, especially of its peak discharge.

Floodplain - an area adjacent to a river, formed by the repeated overflow of the natural channel bed. OFDA

Floodplain zoning - a plan that defines the main zones of a potential flood area, usually accompanied by housing restrictions or other recommendations to prevent flood damages.

Flood alarm level - water level which is considered to be dangerous and at which warnings should commence.

Flood-bypass channel, also floodway - channel built to divert flood flows from a point upstream of a region to a point downstream.

Flood proofing - techniques for preventing flood damage to the structure and contents of buildings in a flood-hazard area. H

Flood routing (reservoir routing or stream flow routing) - procedure of determining of the flood hydrograph change by the flood movement through the river channel, reservoir or other storage.

Flood wave - rise in streamflow to a crest to such a magnitude that it causes flooding, and its subsequent recession.

Focal depth - vertical distance from the earth's surface to the place of origin (hypocenter, focus) of an earthquake.

Focus - the point beneath the Earth's surface where an earthquake rupture starts and from which waves radiate.

Forecast - statement or statistical estimate of the occurrence of a future event. This term is used in different meaning in different disciplines, as well as "prediction".

Foreshock - earthquake which is distinctive in its own right or often part of a sequence which precedes and originates close to the focus of a large earthquake (main shock).

Forest/grassland fire - fires in forest or brush grasslands that cover extensive areas and usually do extensive damage. They may start by natural causes such as volcanic eruptions or lighting, or they may be caused by arsonists or careless smokers, by those burning wood, or by clearing a forest area. OFDA

Front (atmospheric) - (1) the interface or transition zone between air masses of different physical properties (temperature, humidity). (2) Line of intersection of the surface separating two air masses usually with the ground.

Fujita-Pearson scale (FPP scale) - a 3-digit scale for tornadoes devised by Fujita (F scale) and Pearson (PP scale) to indicate tornado intensity (0-5), path length (0-5) and path width (0-7). M

- G -

Gale - wind with a speed between 34 and 40 knots (Beaufort scale wind force 8). M

Global Observing System-GOS - the co-ordinated system of methods, techniques and facilities for making observations on a world-wide scale within the framework of the World Weather Watch. M

Ground motion - movement of the ground at a particular point, recorded by accelerograph or seismograph in order to determine the vibrational characteristics and energy of an earthquake or explosion.

Groundwater level - the level at which soil and porous rock begins to be saturated with water.

Gust - sudden, brief increase of the wind speed over its mean value. M

- H -

Ham radio - the international amateur radio network, frequently a valuable contribution by the community to disaster response.

Hazard a threatening event, or the probability of occurrence of a potentially damaging phenomenon within a given time period and area.

Hazardous material - a substance or material which has been determined by an appropriate authority to be capable of posing an unreasonable risk to health, safety and property (see UNEP definition).

Heatwave - a long lasting period with extremely high surface temperature.

Hydrograph (syn. discharge hydrograph; flood hydrograph; sediment hydrograph; stage hydrograph; well hydrograph) - graph showing the variation in time of some hydrological data such as water stage, discharge, sediment load, etc. Hydrograph is mostly used for stage or discharge.

Hydrological forecast - statement of expected hydrological conditions for a specified period.

Hydrological warning - emergency information on an expected hydrological phenomenon which is considered to be dangerous.
H

Hypocenter - see Focus.

- I -

Ice-breakup - ensemble of the phenomena associated with the disappearance of the icecover due to climatic (temperature, wind) and hydrological (waves, currents, tides) factors.

Ice storm (Glaze storm) - intense formation of ice on objects by the freezing, on impact of rain or drizzle. M

Ice jam (syn. ice dam; ice gorge) - accumulation of ice at a given location which, in a river, restricts the flow of water.
H

Induced seismicity - earthquake activity resulting from man-made activities such as mining, large explosions, or forcing large values of liquid deep into the ground, e.g. oilfields, waste disposal or reservoir filling.

Information report - report with the same content as that of situation report but issued by un agency in the event that international assistance has not been subject of an official request by the government.

Infestation - a pervasive influx and development of insects or parasites affecting humans, animals, crops and materials.

Intensity (macroseimic) - a number by which the consequences of an earthquake at a particular place are scaled by its effects on persons, structures, and earth materials. Intensity scales in most common use are the modified Mercalli (MM) and Medvedev, Sponheuer and Karnik (MSK), both having twelve degrees.

Isobar - a line represented on a map or chart, connecting points on the surface that have equal barometric pressure over a given time or period. OFDA

Isohyet - a line drawn on a map or chart connecting points with equal amounts of precipitation.

Isoseismal - a line surrounding geographic points at which the observed macroseismic intensity is or is expected to be the same; thus, an isoseismal separates observations of different intensity degrees.

Isotherm - line drawn on a map or chart connecting points with equal temperature.

- L -

Lahar - see Debris flow.

Land degradation - progressive deterioration of land quality or land forms resulting from natural phenomena or human activity.

Landslide - downhill sliding or falling movement of dry soil and rock.

Landslide stabilization - measures to prevent the falling or sliding of soil or rock.

Lava flow - molten rock which flows downslope from a volcanic vent, typically moving at between a few metres to several tens of kilometres per hour.

Lead time - period of a particular hazard between its announcement and arrival, also used for the resources needed in relief operations.

Levee (syn. bund; dike; embankment; stop bank) - water-retaining earthwork used to confine streamflow within a specified area along the streamor to prevent flooding due to waves or tides.
H

Lifelines - the public facilities and systems that provide basic life support services such as water, energy, sanitation, communications and transportation.

Liquefaction - the transformation, usually by strong earthquake shaking, of a water saturated sandy soil to a soft, muddy state into which heavy objects sink.

Locust + Locust control - the use of monitoring techniques and remedial actions to control locust infestations (see infestation). M

Logistics - the range of operational activities concerned with supply, handling, transportation, and distribution of materials. Also applicable to the transportation of people.

- M -

Magma - the molten matter including liquid rock and gas under pressure which emerges from a volcanic vent.

Magnitude ("Richter scale") - an index of the seismic energy released by an earthquake (as contrasted to intensity that describes its effects at a particular place.) Devised by C. F. Richter in 1935. Magnitude is expressed in terms of the motion that would be measured by a specific type of seismograph located 100 km from the epicentre of an earthquake.

Main shock - the biggest of a particular sequence of earthquakes.

Malnutrition - a diseased state resulting from an absence or deficiency in the diet of one or more essential nutrients, either manifest or detectable by tests. Kwashiorkor, marasmus, oedema, wasting are some manifestations of malnutrition. Malnutrition can also be due to an excess of the wrong food.

Mass wasting - a general term for the dislodging and downslope transport of soil and rock material under the direct application of gravitational body stresses. OFDA

Maximum probable flood (see design flood; standard project flood) - greatest flood that may be expected, taking into account all pertinent factors of location, meteorology, hydrology and terrain. H

Mean return period - the average time between occurrences of a particular hazard.

Mercalli scale - see Intensity.

Microzonation - (microzoning) subdivision of a region into areas where similar hazard-related effects can be expected. OFDA

Mitigation - measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment.

MM scale - see Intensity.

Mobile Satellite Communication System (SATCOM) .- used after breakdown of other communication facilities in disaster affected areas by disaster aid teams to perform via Satellite exchange of detailed information by telex, phone, fax with their headquarters concerning detailed requirements ensuring a most effective way for the delivery of appropriated relief supplies.

Monitoring (syn. surveillance) - system that permits the continuous observation, measurement and a valuation of the progress of a process or phenomenon with a view to taking corrective measures.

Monsoon - seasonally heavy rains and wind, particularly in the Indian Ocean and South Asian areas.

MSK scale - see Intensity.

Mudflow - the downslope transfer of fine earth material mixed with water.

- N -

Non-governmental Organization (NGO) - non-profit making organization operating at the local, national, or international levels. Distinct from a governmental organization, having no statutory ties with a national government.

Non-structural flood mitigation - system for reduction of the effects of floods using non-structural means, e.g.land-use planning (flood plain zoning), advance warning systems, flood insurance. H

Nowcast - short-period prediction of weather phenomena based on current observations from a system (such as radar) capable of detecting mesoscale features. M

Non-structural elements - those parts of a building (e.g. partitions, ceilings, etc.) which do not belong to the load-bearing system.

Nuclear accident - accidental release of radiation occurring in civil nuclear facilities, exceeding the internationally established safety levels.

Nuee ardente - see Pyroclastic flow.

N-year event (see also return period) - magnitude of an event, the return period of which is N years.

- O -

Oil spill - the contamination of a water or land area by oil.

- P -

Palmer index - a mathematical representation of drought conditions.

Peak discharge (syn. maximum discharge; peak flow) - maximum discharge for a given hydrograph.

Permafrost - layer of soil or rock in which the temperature has been continuously below 0 C for at least some years. H

Plate tectonics - the concept that the earth's upper layers are made up of several large rigid plates whose boundaries are fault zones along which slippage takes place.

Polar front - quasi-permanent atmospheric front of great extent, in middle latitudes, which separates polar air and tropical air. M

Polder - a mostly low-lying area artificially protected from surrounding water and within which the water table can be controlled. H

Pollution - degradation of one or more elements or aspects in the environment by noxious industrial, chemical or biological wastes, from debris of man-made products and from mismanagement of natural and environmental resources.

Population at risk - a well-defined population whose lives, property, and livelihoods are threatened by given hazards. Used as a denominator.

Potable water (drinking water) - water that is agreeable to drink, free from health hazards and of which the quality is normally regulated by the responsible authority. In disaster situations measures can be employed to render contaminated water potable.

Precipitation gauge; precipitation gage - general term for any device that measures the amount of precipitation; principally a rain gauge or snow gauge. H

Precipitation intensity (rainfall intensity) - amount of precipitation collected in unit time interval. H

Precursor - phenomenon indicating a probable occurrence of an earthquake or a volcanic eruption.

Prediction - a statement of the expected time, place and magnitude of a future event (for earthquakes and volcanic eruptions).

Predictor - meteorological or hydrological element, or an index compiled from several elements, which is known (often empirically) to be highly correlated with a quantity which is to be forecast and is used to forecast it. M

Preparedness - activities designed to minimize loss of life and damage, to organise the temporary removal of people and property from a threatened location and facilitate timely and effective rescue, relief and rehabilitation. See also "prevention".

Prevention - encompasses activities designed to provide permanent protection from disasters. It includes engineering and other physical protective measures, and also legislative measures controlling land use and urban planning. See also "preparedness".

Probable (possible) maximum precipitation (PMP) syn. extreme rainfall -amount of precipitation that is the upper limit for a given duration over a particular basin.

Public awareness - the process of informing the community as to the nature of the hazard and actions needed to save lives and property prior to and in the event of disaster.

Pyroclastic flow - high density flow of solid volcanic fragments suspended in gas which flows downslope from a volcanic vent (at speeds up to 200 km/h) which may also develop from partial collapse of a vertical eruption cone, subdivided according to fragment composition and nature of flowage into: ash flow, glowing avalanche, nuee ardente, pumice flow.

- Q -

Quicksand - saturated sandy deposits which, under the influence of hydrostatic pressures, are buoyant and are able to flow.

- R -

Radar - radio method of determining at a single station the direction and distance of an object.

Raingauge - see Precipitation gauge.

Rating curve (rating table) see also stage-discharge relation - curve showing the relation between water stage and discharge of a stream at a flow gauging station. If digitised, it is a rating table.

Reconstruction - actions taken to reestablish a community after a period rehabilitation subsequent to a disaster. Actions would include construction of permanent housing, full restoration of all services, and complete resumption of the pre-disaster state. OFDA

Refugees - according to international legislation persons having a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion mostly outside the country of nationality and unable to return or avail himself of the protection of that country. Includes mass exodus of peoples for reasons of conflict and natural disasters plus moving outside their country of origin.

Rehabilitation - the operations and decisions taken after a disaster with a view to restoring a stricken community to its former living conditions, whilst encouraging and facilitating the necessary adjustments to the changes caused by the disaster.

Relief - assistance during or after disaster to meet the life preservation and basic subsistence needs. If can be of emergency or protracted duration.

Remote sensing - the study of an area, object or phenomenon from an aerial distance, frequently using data collected by satellite.

Resettlement - actions necessary for the permanent settlement of persons dislocated or otherwise affected by a disaster to an area different from their last place of habitation.

Rescue - see search and rescue.

Return period (syn. recurrence interval)- see "mean return period".

Richter scale - see magnitude.

Risk - lives lost, persons injured, property damaged, and economic activity disrupted due to a particular hazard. Risk is the product of hazard and vulnerability.

Rockfall - free-falling or precipitous movement of a newly detached segment of bedrock of any size from a cliff or other very steep slope.

Rockslide - a downward, usually sudden and rapid movement of newly detached segments of bedrock over an inclined surface or over pre-existing features. OFDA

Routing - see "Flood routing".

Rupture zone - area of fault breakage corresponding to a particular earthquake sequence.

Sanitation - the application of measures and techniques aimed at ensuring and improving general hygiene in the community, including the collection, evacuation and disposal of liquid and solid wastes, as well as measures for creating favourable environmental conditions for health and disease prevention.

Satellite applications - the use of satellite technology for the purpose of communications or data transmission for monitoring, warning and dissemination of information pertinent to emergency response and/or disaster management.

Search and rescue - the process of locating and recovering disaster victims and the application of first aid and basic medical assistance as may be required.

Sea surge - a rise in sea level that results in the inundation of areas along coastlines. These phenomena are caused by the movement of ocean and sea currents, winds and major storms. OFDA

Secondary hazards - those hazards that occur as a result of another hazard or disaster, i.e., fires or landslides following earthquakes, epidemics following famines, food shortages following drought or floods.

Seiche - a free or standing wave oscillation of the surface of water in an enclosed basin that is initiated by local atmospheric changes, tidal currents or earthquakes. OFDA

Seismic-activity rate - the mean number per unit time of earthquakes with specific characteristics (e.g., magnitude 6) originating on a selected fault or in a selected area. GS

Seismic belt - an elongated earthquake zone; usually located along the boundaries of tectonic plates.

Seismic isolation - systems used to limit the transfer of strong ground motion to a structure.

Seismic zone - an area within which grand motion and seismic-design requirements for structures are similar. GS

Seismicity - the distribution of earthquakes in space and time. UNDRO

Seismograph - an instrument for recording vibratory motion of the ground. OFDA

Severe weather threat index - SWEAT index (threat score) - an index used to predict thunderstorms and tornadoes. M

Simulation exercise - decision making exercise and disaster drills within threatened communities in order to represent disaster situations to promote more effective coordination of response from relevant authorities and the population.

Shear wall - a structural element which resists lateral forces.

Shelter - physical protection requirements of disaster victims who no longer have access to normal habitation facilities. Immediate post-disaster needs are met by the use of tents. Alternatives may include polypropylene houses, plastic sheeting, geodesic domes, and other similar types of temporary housing.

Situation Report - a brief report that is published and updated periodically during a relief effort and which outlines the details of the emergency, the needs generated, and the responses undertaken by all donors as they become known. Sitreps are issued by UNDRO, by UNHCR, ICRC and LRCS.

Slide - see landslide.

SMS/GOES (synchronous meteorological satellites/global-observing environmental satellites) - satellites orbiting over the equator at the same rate as Earth's rotation and providing images of visible and infrared portions of the spectrum for the same area every 30 minutes. The satellites can collect and distribute environmental data from remote unattended data collection platforms on land, in water, or in the atmosphere and quickly transmit these data to ground receiving stations.

Soil conditions - the conditions of earth (moisture content, desegregation, density, etc.) that may mitigate or intensify disaster agents, such as drought, flooding, or seismic movement. OFDA

Soil creep - the gradual and steady movement of soil and loose rock material down a slope that may be gentle but is usually steep; it is also called surficial creep. OFDA

Soil moisture - content of water in the portion of the soil which is above the table water including water vapour present in the soil pores. In some cases refers strictly to moisture within the root zone of plants.

Squall - atmospheric phenomenon characterized by an abrupt and large increase of wind speed with a duration of the order of minutes, and a rather sudden decrease in speed. It is often accompanied by showers or thunderstorms. M

Staple food - a food that is regularly consumed in a country or community and from which a substantial proportion of the total calorie supply is obtained. OFDA

Starvation - the state resulting from extreme privation of food or of drastic reduction in nutrient intake over a period of time leading to severe physiological, functional, behavioral, and morphological differences.

Stockpiling - the process of prior identification, availability and storage of supplies likely to be needed for disaster response.

Storm - an atmospheric disturbance involving perturbations of the prevailing pressure and wind fields, on scales ranging from tornadoes (1 km across) to extratropical cyclones (2-3000 km across). M

Storm surge - a sudden rise of sea as a result of high winds and low atmospheric pressure; sometimes called a storm tide, storm wave, or tidal wave. Generally affects only coastal areas but may intrude some distance inland. OFDA

Structural flood mitigation - structural system for reduction of the effects of floods using physical solutions, including reservoirs, levees, dredging, diversions, and flood-proofing. H

Subsidence - collapse of a considerable area of land surface, due to the removal of liquid or solid underlying or removal of soluble material by means of water.

Synoptic chart (Weather chart, Weather map) - chart on which meteorological data, analyzed or forecasted for a specific time, are presented to describe the atmospheric conditions. M

- T -

Technology transfer (or cooperation) - information and equipment provided by one country or area to another, along with the responsibility of training individuals in the use of that information, technology and/or equipment. OFDA

Telemetry - the use of data communications devices from the sensors in situ, to a receiving station.

Temporary housing - see Shelter.

Tephra - see Ejecta.

Terracing - horizontal cuts, benches or embankments made along hillsides to reduce erosion, improve cropping, hold back runoff, improve infiltration of rain, or carry out some other conservation function. OFDA

Tidal bore (wave) - an abrupt rise of tidal water (caused by atmospheric activities) moving rapidly inland from the mouth of an estuary. OFDA

Tornado - localized, violently destructive windstorm occurring over land. Characterized by a long funnel-shaped cloud composed of condensation and debris extending to the ground and marking the path of greatest destruction.

Torrent control - structures (rock or other materials) constructed to halt the erosion of stream channels. OFDA

Trauma - injury of any nature.

Tremor - a shaking movement of the ground associated with an earthquake or explosion. OFDA

Triage -

Tropical cyclone - a storm originating over tropical seas with destructive winds rotating around a low pressure area. Most commonly observed in the Northern Hemisphere from May to November and in the Southern Hemisphere from December to June.

In the Northern Hemisphere, winds spin counterclockwise around a warm center core. In the Southern Hemisphere, the rotation is clockwise.

Tropical storm - see "Storm".

Tsunami - a series of large sea waves generated by sudden displacement of seawater (caused by earthquake, volcanic eruption or submarine landslide); capable of propagation over large distance.

- V -

Vector control - measures taken to decrease the number of disease carrying organisms (vectors) and to diminish the risk of their spreading infectious diseases.

Volag - see Voluntary agencies.

Volcanic eruption - the discharge (aerially explosive) of fragmentary ejecta, lava and gases, from a volcanic vent.

Volcano - the mountain formed by local accumulation of volcanic materials around an erupting vent.

Voluntary agencies (or volags) - nongovernmental agencies or organizations that exist in many countries throughout the world. Some possess personnel trained to assist when disaster strikes. Some volags have capabilities that extend from the local to national and international levels. OFDA

Vulnerability - degree of loss (e.g. from 0 percent to 100 percent) resulting from a potentially damaging phenomenon.

- W -

Warning - dissemination of message signalling imminent hazard which may include advise on protective measures; see also "alert".

Water management system (also water system) - group of water engineering structures and related water bodies serving one or more purposes and managed as a unified whole.

Water management system (also water system) - group of water engineering structures and related water bodies serving one or more purposes and managed as a unified whole. H

Water policy - collection of legislation, legal interpretations, governmental decisions, agency rules and regulations, and cultural responses by which a country's actions concerning the quantity and quality of water are guided. H

Watershed - all land within the confines of a drainage divide. This is also called a "catchment ", or "drainage basin".

Watershed divide (syn. drainage divide) - boundary line separating adjacent drainage basins.

Weathering - the break up of mechanical, chemical and biological processes.

Windbreak - a barrier used to decrease the wind speed.

Wind force - number on a Beaufort scale corresponding to the effects produced by winds within a range of speeds.

Wind pressure (Wind load) - the total force exerted upon a structure by wind. For flat surface it is the sum of the dynamic pressure exerted on the windward side and the pressure decrease, or suction, produced on the sheltered side. M

World Weather Watch-WWW - the world-wide, co-ordinated, developing system of meteorological facilities and services provided by WMO Members for the purpose of ensuring that all Members obtain the meteorological information required both for operational work and research. The essential elements of the WWW are: The Global Observing System; The Global Data-processing System; The Global Telecommunication System. (used also for transmission of seismic information in the far East). M

- Z -

Zonation - the division of an area, country, or region into zones according to its disaster incidence rate or intensity.

Zoonosis - any disease of animals that can be transmitted to man (e.g. rabies).

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