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Al servicio
de las personas
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GLOSARIO DE TÉRMINOS

DEL SISTEMA DE LA DEFENSA CIVIL

CUBA

GLOSSARY OF TERMS OF THE CIVIL DEFENSE SYSTEM

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Based on the terms on Disaster Risk Reduction.
Glossary of terms. Macroproject "Hazard, vulnerability and risk scenarios of Cuban coastal areas associated to sea level increase for 2050-2100"

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Preface

The purpose of this document is to compile a set of the main terms that, due to their relevance and use in the different spheres of scientific and professional work, especially in the management of disaster risk reduction, are related to the work carried out by the System of Civil Defense.

This document is based on two previous versions, prepared in 2002 and 2006, which retained a provisional nature, hence the importance of providing this tool, prepared by the National Civil Defense Staff together with the Ministry of Science Technology and Environment and its Environment Agency, scientific institutions, the Ministry of Foreign Affairs and the Cuban National Society of the Red Cross, with the participation of the Central Administration of the State.

As part of the agreements of the Third United Nations World Conference on Disaster Risk Reduction, held from March 14 to 18, 2015 in Sendai, Japan, the Sendai Framework for Disaster Risk Reduction 2015-2030 was approved, in a concise, specific, prepared, forward-looking and action-oriented manner. At the same time, the Working Group of Intergovernmental Experts was created to formulate indicators and update the terms that the United Nations will use in the field of disaster reduction, of which our country is a part.

The terms of the United Nations International Strategy for Disaster Reduction (UNISDR) are intended to promote an understanding and common use of concepts related to disaster risk reduction, addressed to authorities, experts and the public in general.

Based on this initiative, an exhaustive review of our terminology has been carried out, with the consensus of including new terms, fundamental for the current understanding and the application of experiences in disaster risk reduction, since the integration level of our nations has increased, through international civil protection organizations.

There is an increase in the collaboration from our country in other latitudes, in different fields of social and economic life, as well as the accompaniment of the United Nations System in the efforts we make in disaster reduction, which forces us to use terms in according to international use. In this context, this glossary serves as a contribution from the Civil Defense System, to the increase and exchange of knowledge, and to the perception of our citizens and communities in the face of disaster risks.

Terminology

Abertal: Cracked ground as a result of drought.

Absolute humidity: Mass of water contained in the unit of humid air volume.

Abundant cloudiness: Presence of many clouds in different layers. Situation associated with bad weather.

Acceptable risk: According to the definition from UNISDR, it is the level of potential losses that a society or community considers acceptable, according to their existing social, economic, political, cultural, technical and environmental conditions. In terms of engineering, acceptable risk is also used to evaluate and define the structural and non-structural measures needed to reduce potential damage to population, heritage, services and systems to a tolerable level, according to codes or "accepted practices" based on the known probabilities of an arising danger.

Accident: An unpremeditated but often foreseeable event that occurs suddenly, which can change the regular course of events, can injure and/or cause death to people and cause damage to their property and environment.

Acid rain: Aqueous precipitation whose high acidity harms the ecological environment in which it falls. Attacks the flora of forests and fields, fauna of rivers and lakes, human being, buildings, monuments, etc. It can be considered a form of serious contamination.

Affected: Person, system, ecosystem or territory over which a phenomenon whose effects produce disturbance or damage acts.

Agricultural drought: It occurs when the amount of precipitation and its distribution, the water reserves of the soil and the losses due to evaporation, are combined to cause considerable decreases in the yield of crops and livestock.

Aircraft accident: Any event related to the use of planes, which occurs in the period between the moment a person carries out the embarking

operation with the intention of flying and the moment in which all the persons have carried out the operation of disembarking, during which:

a) Any person suffers fatal or serious injuries as a result of being inside the aircraft or by direct contact with any part, even those that have detached from it.
b) The aircraft suffers damage or breakage that affects its structural strength or flight characteristics.
c) The aircraft disappears or is totally inaccessible.

Anemometer: Instrument used to measure the strength and speed of the wind, or jointly its speed and direction.

Anticyclone: Atmospheric phenomenon characterized by the movement of soft winds around a center of high barometric pressures and lower temperature than in the surrounding areas. The direction of the anticyclones is opposite to that of the cyclones, as are their barometric and thermal characteristics. That is why an anticyclone avoids the normal evolution of the cyclones when both phenomena interact.

Assessment of the chemical situation: Multi-sectoral and multilateral study and analysis process to determine the nature and magnitude of the contamination of land, water, air and the different objects and elements of the environment by hazardous chemicals in a given area, and the determination of the danger degree of this contamination for the population.

Assisted: Person who, due to the impact of a disaster hazard, receives state assistance to survive. Included in this category are people who lose their homes due to the impact of extreme hydro-meteorological events, high intensity earthquakes, fires or other disaster situations, those who receive home water service or food aid and those who are unharmed in a catastrophic transport accident and need to return to their place of origin.

Atmosphere stability: Condition of the atmosphere that opposes the development of cumulus and cumulonimbus clouds. It is characterized by states of clear sky or with the presence of stratiform clouds.

Atmospheric circulation: Atmospheric movement that extends over a part or over the entire earth. The two motor grades of the atmospheric circulation are the terrestrial rotation and the solar radiation. To them, along with the distribution of lands and seas, the organization of large

planetary flows is due, as well as the presence of permanent, quasi-permanent, semi-permanent or seasonal action centers.

Atmospheric disturbance: Alteration of atmospheric conditions caused by the variation of temperature and pressure. It is general said of any storm, front, storm or synoptic configuration that originates bad weather.

Atmospheric Instability: Phenomenon opposite to stability. It is called the existence of strong vertical air currents, which are the producers of clouds of vertical development and atmospheric disturbances. When there is instability the air masses of the lower layers are warmer and therefore less dense than the high ones, so they are forced to climb continuously, since they cool less than the environment they find at each level.

Avenue: Significant increase in the water level of a watercourse, reservoir lake or coastal region.

Barometer: Instrument used to measure atmospheric pressure.

Beaufort Scale: Scale of wind force originally based on observations of the sea state and numbered from 0 to 12. Scale of wind force measured from 0 (calm) to 12 (wind with hurricane force).

Behavior rules of Civil Defense: Set of actions to be met by workers, students and the general population, based on knowledge and practical habits that guarantee adequate reaction to extreme situations caused by the enemy's aggression or during different potential disaster situations.

Biological agents: viable microorganisms or their products, prions and other organisms that cause or may cause diseases to humans, animals and plants.

Biological aggression: Intentional and hostile use of biological agents to affect the population, animals and plants. In time of peace it has been masked as an anomalous situation of unintentional origin, making it difficult to discover the real causes.

Biological contamination: Contamination of any of the elements of the environment by agents or other biological materials in the vicinity of biohazard targets or in any place where these agents are not expected to be present, in quantities that exceed the expected levels being indigenous or exotic.

Biological security: A set of scientific-organizational measures, such as human and technical-engineering measures, including physical ones, designed to protect the worker of the facility, the community and the environment from the risks involved at work with biological agents or the release of organisms into the environment, whether they are genetically modified or exotic, consequences in case of contamination, adverse effects, leaks or losses.

Cam sea: Sudden increase of the sea as a result of great winds and low atmospheric pressures, sometimes called storm surges or tidal waves. It generally affects only coastal areas but may include some distances inland.

Catastrophic transport accident: Event of natural origin or caused by the human being, accidentally or voluntarily, in which a means of transportation (land, air or maritime) has intervened, affecting people in a massive way (more than 10 people) and producing a number of victims (including injured and deceased), whose magnitude exceeds the response capacity of the community in which it occurs and in which it is necessary to carry out rescue and medical care actions in the area or with the support of neighboring territories.

Celsius degree: One-hundredth of the scale between fixed points 0 and 100 where 0 corresponds to the melting temperature of water saturated with pressurized air of 760 mmHg, and 100 to the boiling point of water under the same conditions.

Celsius temperature scale: Scale that assigns a freezing temperature of 0 Celsius degrees for water at sea level and a boiling point of +100 Celsius degrees. Its use is widespread in countries that use the metric system as a standard. Created by Andrés Celsius in 1742, it is also known as centigrade.

Chemical accident: Event or circumstance that results in the uncontrolled emission of one or several dangerous chemical products during their use, production, storage and transportation, and which may lead to chemical emergencies.

Chemical contamination focus: Sector of the territory in which soil, water, objects and air are contaminated with dangerous chemicals in liquid, solid or gaseous state, either by enemy actions or by spills, leaks or

explosions, and in which people, animals, crops and other economic interests are likely to be damaged.

Chemical contamination sector: Area of the territory where toxic concentrations occur due to the propagation of the polluted air cloud created as a result of the escape of gases, volatile liquids or toxic aerosols from a stationary or mobile deposit or from the place where there was a chemical problem. It is created to leeward (side towards which the wind blows) the place of pollution emission.

Chemical contamination: Contamination of water, land, facilities or air with chemical products in the vicinity of industrial areas, which cause organic disorders that can be fatal to humans, or cause external conditions with permanent effects on the skin or some other organ.

Chemical risk: Probability that the release and exposure of a chemical product or waste to the environment may cause adverse effects to human health and the environment.

Chemical safety: State or condition derived from the prevention and correction of adverse effects on human health and the environment that, in the short and long term, result from activities related to the handling of hazardous chemicals and facilities during their cycle of life.

Cirrus: A genus of high clouds formed by ice crystals, whose appearance is silky or fibrous and can appear in the form of separate elements, consisting of delicate white filaments, or in banks or narrow bands, mostly white.

Civil Defense Measures: A set of activities and tasks carried out by state bodies and agencies, economic entities and social institutions, as well as by workers and the population in general, in order to achieve their protection in relation to with an armed aggression or before the imminence or occurrence of potential disaster situations of natural or technological origin.

Civil Defense Warning: It is the signal that warns the population or the management bodies about the imminence of affectations by a destructive phenomenon of natural or technological origin, which can seriously damage the social and economic activity of a community, region or country. It includes, in relation to the military aggression, the aerial alarm to the population, as well as the warning of other types of

hazards to the bodies of the Central State Administration and the mass organizations.

Civil Defense: It is a system composed by all the forces and resources of society and the State in order to protect people and their goods, social infrastructure, economy and natural resources, from the disasters hazards, consequences of climatic changes and war.

Civil protection: Denomination in different countries of the systems or organizations that are intended for the same purposes as Civil Defense. Additional Protocol Nb. 1 from the Geneva Conventions of August 12, 1949 on International Humanitarian Law offers the denomination of Civil Protection. There are countries such as Spain where they have Civil Defense and Civil Protection, one aimed at the protection of citizenship for war and the second for disasters.

Classification of disaster victims (triage: from the French triage that means classification): Method used in emergency medicine for the selection and classification of victims, prioritizing on the care, according to the survival possibility and to the therapeutic needs and available resources.

Climate alteration: Changes caused to climate as a result of human activities in a minimum period of ten years, on a global, regional or sub-regional scale.

Climate change adaptation: According to the Intergovernmental Panel on Climate Change (IPCC), adaptation to climate change is defined as the adjustment of human or natural systems to new or changing environments.

Climate change: The Intergovernmental Panel on Climate Change (IPCC) defines climate change as a change in climate status that can be identified (for example by using statistical tests) as a result of a change in the average value and/or in the variability of its properties which persists for a prolonged period, usually decades or longer time.

Climate: Characteristic condition of the atmosphere (temperature, pressure, precipitation, humidity and winds) of a place, deduced from long periods of observation.

Climatic anomaly: Difference between the value of a climatic element for a given place and the average value of that element on the latitude parallel of that place.

Climatic fluctuation: Climatic inconsistency consisting of any form of systematic change, whether regular or irregular, except for trends and discontinuities. It is characterized by two maxims (or minimums) and a minimum (or maximum), at least, including those corresponding to the final points of the record.

Climatic season: Long period of a specific type of weather that characterizes part of the year, occurring with some regularity, especially at low latitudes.

Cloud: Agglomeration of water particles in overcooled or frozen liquid state, suspended in the air. The World Meteorological Organization has defined ten genres of clouds, each of which has a different shape and can be associated with different hydrometeors or photo-meteors.

Cloudiness: Number of clouds expressed in eighths of the sky covered by them. Presence of clouds.

Coastal flooding: This is the name given to the flood that occurs due to the accumulation of seawater over low areas of the coast. Its origin is linked to meteorological phenomena such as tropical cyclones and extratropical lowlands that produce strong waves over sea level rise and the consequent affectation to facilities and houses on the coast. In years with ENSO events, the value of sea height can increase up to 4 cm above the normal level.

Coastal zone: It is the maritime-terrestrial space where the interaction of the earth, the sea and the atmosphere occurs through processes that generate exclusive forms of its relief, and whose limits to the sea is in all cases the edge of the insular platform of the Cuban territory, and towards the land the dimensions vary depending on the type of coast and it is established in the Law of Coasts. The protection of the elements of the coastal zone such as the mangrove forests and coral reefs play a very important role in the protection against the penetrations of the sea. The distance from the normal water level to the construction line is defined in the Master Plan and is subsequently specified as a result of the environmental impact and disaster risk studies.

Cold front: Phenomenon that occurs when a mass of cold air moves towards lower latitudes and its edge is introduced as a wedge between the ground and hot air. When this system passes, vertical development clouds can be observed, which could cause showers or snowfalls if the

temperature is very low. During its movement, the mass of air that displaces the warmer air, causes rapid decreases in the temperatures of the region through affected.

Collapse: Fall of parts or all the components of a building as a result of the combined action of various types of damage or overload acting on its most important elements.

Commission for the evacuation of the population: A group created to plan, organize, secure and direct the evacuation of the most vulnerable population and its reception in the foreseen areas.

Compatibility of economic and social development with the interests of Civil Defense: Process aimed at achieving the harmonization of the country's socio-economic development with the interests of protecting the population and the economy, in relation to risks of military aggression or the imminence or occurrence of disaster situations. It covers various activities related to the use of land, the investment process, different projects and plans, introduction of new technologies and other fields. It includes the set of activities that are carried out from the initial comprehensive analysis to achieve the materialization of the requirements that must be taken into account in the execution of investments, acquisition and production of equipment, provision of services and carry out of other productions, studies and scientific research –techniques.

Cone of the torrent: Column or cloudy cone below the base of cumulonimbus with torrent.

Cone or collapse area: It is the surface that the debris of a building after collapsing would occupy, and its radius is supposed equal to half of the height of the building.

Convection: Vertical movement of air. Ascent movement of air due to temperature or the presence of mountain ranges.

Convective activity: Upward movement of air caused mainly by the heating effect of solar radiation on the earth's surface. This phenomenon causes the formation of cumulus clouds, which can be converted into cumulonimbus clouds if the convection is very strong.

Convective rain: Rain produced by the rise of a hot air column. In the ascent, the air cools to reach the temperature of the environment and descends. During the descent, it becomes warm again until it reaches the

temperature necessary to rise again. This cycle of ascent and descent causes very powerful currents that keep in the air large drops of water that come to freeze in height. It is the mechanism of storms.

Coping capacity: The ability of the population, organizations and systems, to face and manage adverse conditions or disaster situations through the use of available resources and skills.

Corrective management of disaster risk: Management activities that address and seek to correct or reduce the risk of disasters that already exists. This concept seeks to distinguish between the risk that is already present, and must be managed and reduced, and the possible risk to develop in the future, if no policies are established for its reduction or prevention.

Counter-epizootic measures: Actions that are carried out with the animals, their products and derivatives, with the purpose of preventing, controlling or eradicating the diseases, as well as the contamination accidentally or intentionally originated with biological means that affect the different species. These measures include the study of the epizootic situation, the diagnosis of the entity and the patients present, sanitary actions (such as the sacrifice of animals, incineration, burying of corpses, disinfection, rat extermination, disinfestation, prophylactic vaccinations and others). The establishment of quarantine and general and specific epizootic surveillance programs are also included.

Crater: Depression of circular shape, less than two kilometers in diameter, usually located on the top of a volcano and formed by the explosion or collapse associated with a volcanic eruption.

Cumulonimbus clouds: An exceptionally dense and vertically developed type of cloud. These clouds resemble mountains or huge towers. If they reach the top of the troposphere, the upper parts scatter and resemble an anvil. They are commonly known as “tronadas”.

Cumulus clouds: Cloud of vertical development, flat base and top as dome. The cumulus clouds are convective clouds that originate from the rising air in a localized way due to the heating of the Earth's surface by solar radiation. They develop turbulent movements of great intensity that cause showy volutes.

Cyclone: Large scale closed system of circulation, in the atmosphere, with low barometric pressure and strong winds that rotates counterclockwise in the northern hemisphere and clockwise in the southern hemisphere.

Cyclonic circulation: Atmospheric circulation associated to a system of low pressures.

Damage: Value of the affected physical assets calculated from the replacement cost at market price, just before or after the event. It includes possible price alterations.

Danger area: Area where there is the probability of occurrence of a natural, technological or health potentially harmful origin event, in a given period.

Dangerous zone: These are areas particularly exposed to the disasters hazards.

Deconcentrated: Person protected by his displacement during a relatively short period of time, outside a risk area, until controlling the danger that forced his protection.

Deconcentration: Organized transfer of people to nearby, protected or less risk places.

Degree of exposure: The degree of exposure is an approximate measure of the magnitude of the intervention of a phenomenon or event on a person or group of people, properties, systems or other elements present in areas where hazards exist, and therefore they are exposed to experiencing potential losses, which can be identified as disaster zones in order to calculate losses qualitatively and quantitatively.

Destruction Focus: Sector of a territory in which the affectations due to the use of the enemy weapons or by a disaster of natural or technological origin are concentrated, and in which there are massive destructions and big amount of people wounded, bruised, contaminated and deceased. Its magnitude is variable, depending on the means of aggression used or the destructive factors of the phenomenon that occurred, as well as the vulnerability of the elements exposed to such threats.

Dimension: Height of a point on a freely chosen surface. Figure representing the altitude at a point with respect to the reference level surface.

Direction of the Civil Defense System: It is the influence exercised on the elements of the Civil Defense System through planning, organization,

management and control, as well as adequate information to guarantee compliance with Civil Defense measures. This direction is carried out in a normal situation, in situations of disaster and when exceptional situations are declared.

Disaster hazard analysis: A process to estimate the probability of potentially destructive phenomena to take place, at a given time and place, with a severity degree capable of creating a disaster situation, due to the degree of damage to the population, the economy, infrastructure and other socioeconomic factors. It includes, as a first step, the identification of each of the possible hazards with respect to the vulnerable element (s) in question and each of the accidental events caused by a given hazard. It must provide specific quantified results that make it possible to effectively cope with vulnerability studies. The hazard analysis is the first step to study vulnerability and risk.

Disaster hazard: It is a probable extraordinary or extreme event, of natural, technological and/or sanitary origin, particularly harmful, that can occur at a given time and place, and that with a given magnitude, intensity, frequency and duration, it can affect human life, the economy or the activities of society, to the point of causing a disaster. In the technological field it also refers to elements with potentially dangerous forces that, when triggered by some cause, could cause a disaster situation. Internationally, the term "threat" is also used. The most widespread opinion is to consider both terms as synonyms in disaster terminology.

Disaster management: The body of policies and administrative decisions and operational activities that belong to the different stages of the disaster reduction cycle at all levels.

Disaster Medicine: The study and collaboration applied to the different disciplines of health to protect, prepare, give rehabilitation and give immediate responses to health problems resulting from a disaster. It is combined with other disciplines related to global disaster management.

Disaster prevention: Measures that are part of the disaster reduction process, in particular the management of disaster risk reduction, and that must be carried out at an early stage of the investment process and the planning of economic and social development in general, in order to avoid damage and losses that lead to potential disaster situations, which must be achieved by eliminating the risk. It is carried out through long-

term programs and policies to prevent or eliminate the effects of disasters occurrence, reflected in the legal (legislative), physical planning, public works, architecture and scientific-technical research areas. The process of reconciliation of economic and social development with the interests of Civil Defense provides important management in disaster prevention. It can be considered as the most economical form of disaster reduction, because however the confrontation and recovery are effective, they will always be much more expensive, both because of the effects they may cause to the population and because of the expenditure of material resources and human resources that are used and the impact on economic indicators.

Disaster reduction cycle: It is the multidisciplinary and multi-hazard continuous analysis process that is carried out to raise the degree of protection of the population and the economy goods in case of any disaster, at the lowest possible cost, aimed at achieving sustainable development. This cyclical sequence comprises four stages: prevention, preparation, response and recovery. Internationally it is included as one of the mitigation stages.

Disaster Reduction Plan: Set of textual and graphic documents that determine the planning of compliance with measures for the protection of the population and the economy based on the identified hazards, the degree of vulnerability or susceptibility to these perils and the risk level. These measures are planned by deadlines or stages, based on the differentiated use of existing forces and means, intended to act in potential disaster situations. It is elaborated starting from the corresponding methodological documentation in the basic institutions, territories, the different instances of the organizations and state bodies, economic entities and social institutions, up to the national level.

Disaster reduction: Internationally, the term "disaster management" has also been used to refer to all activities of various kinds that are carried out with the objective of achieving disaster reduction and that include prevention and mitigation activities, preparedness, response, rehabilitation and reconstruction. Its purpose or objective is to avoid or reduce the impact and consequences of disasters in society. In Cuban legislation this definition includes the cycle of activities of prevention, preparedness, response and recovery stages, established in order to protect the population and the economy from the destructive effects of disasters.

Disaster risk analysis: It is the scientifically based process for calculating (estimating) risk by using proper methods and techniques, based on probabilistic analysis and reliable statistics, that guarantee an effective result quantified in relation to the socioeconomic activity that is the object of analysis. Although it constitutes a whole, it includes hazard analysis, vulnerability analysis and integrated risk analysis. It is a team work, which must be carried out by specialized personnel, duly prepared for these tasks.

Disaster risk management: It is the systematic process of organization and development of operational capacities to execute administrative and political guidelines to strengthen the coping of harmful events, in order to reduce the adverse impact of the different hazards and the possibility of a disaster to occur.

Disaster risk reduction: According to the definition from UNISDR, it is the practice of reducing disaster risk through systematic efforts aimed at analyzing and managing the causal factors of disasters, including reducing the degree of exposure to threats, the decrease of the people vulnerability, sensible management of the soil and the environment, and the improvement of preparedness in the face of adverse events.

Disaster risk study: This refers to the process of research, identification, characterization, qualitative and quantitative estimation of hazards, vulnerability of exposed elements and risk, as well as the evaluation of these results. It can refer to a certain type of risk or to all possible ones, whether natural, technological or sanitary. When they are carried out covering all types of risks, they are called Comprehensive Disaster Risk Studies.

Disaster risk: Expected losses, caused by one or several particular hazards that simultaneously or concatenately affect one or more vulnerable elements at a given time, place and conditions. It can be expressed as a relation between the frequency (probability) of manifestation of a particular disaster hazard and the consequences (losses) that can be expected. Theoretically, the risk can be represented by a mathematical equation: Danger x Vulnerability = Disaster risk. According to the elements exposed to the risk, this is expressed in the number of people affected or expected damages and economic losses and can be considered for a given time or for a specific period of time.

Disaster situation: It is defined as one in which a disaster hazard manifests itself in an element or several ones with a certain degree of vulnerability, causing significant losses and damage, but without the occurrence of a situation characterized as a disaster. Different agencies of the United Nations and specialists from other countries call this situation "Emergencies", a term that is not used by the Cuban Civil Defense in order to avoid being confused with the "State of Emergency" which is one of the Exceptional Situations included in our Constitution. Cuba defines the disaster situation as a state in which preparatory, response and recovery measures are adopted before, during and after the impact of a natural, technological or sanitary event, in the national territory or in a part of it, with the objective of mitigating the affectations that can lead to the occurrence of a disaster.

Disaster: According to the definition by UNISDR, it is a serious interruption in the functioning of a community or society that causes a large number of deaths as well as losses and material, economic and environmental impacts that exceed the capacity of the community or the affected society to deal with the situation by using its own resources. In the Civil Defense legislation of Cuba, it is defined as a disaster, the situation that is created in a part of the national territory as a result of the impact of a natural, technological or health event, characterized by such severe effects on economic activity that disrupts the normal development of the society and exceeds the response and recovery capacities of the affected territory or territories. They can be classified according to the hazards originated in: natural, technological and sanitary origin disaster.

Disasters of a sudden nature: It includes disasters caused by natural hazards of difficult prognosis, chemical and radiological accidents, explosions and accidents in means of transportation. These disasters, despite being caused by different reasons and provoking different consequences have surprise, the emergence and sudden outcome as a common denominator, which demands an organized and rapid response.

Disasters zone: It is an affected part (population and environment), which due to the impact of a disaster (disastrous event) of natural or technological origin suffers damages, problems and deterioration in its structure and normal functioning. The extent of disaster areas can be diverse e.g. a neighborhood, an economic objective, a town or province and varies according to different factors:

- The type of event
- The strength and its duration
- The vulnerability of the affected system

Dome: Accumulation of viscous lava in the form of a dome.

Doppler radar: A meteorological radar that measures the direction and speed of a moving object, determining whether the horizontal atmospheric movement is in the direction to or from the radar. The Doppler effect measures the speed of the particles. It takes the name of J. Cristian Doppler, Austrian physicist, who in 1842 explained why the siren of an approaching train has a sharper sound than when the train is leaving.

Douglas Scale: Numeric scale from 0 to 9 that indicates the condition of the sea.

Downstream: Indicates the direction of a river flow or watercourse. Direction in the sense of the current.

Drought: Condition of the environment in which humidity deficiency is registered, due to the fact that during a more or less prolonged time, rainfall is scarce. The hydrological cycle is destabilized, to the extent that the available water becomes insufficient to satisfy the needs of the ecosystems, which decreases the alternatives of survival and interrupts or cancels multiple activities associated to the use of water.

Dry year: Year of drought, during which rainfall or water courses flow are significantly lower than usual.

Dual use: Term used by the activity of investments compatible with the interests of the defense, to give multiple use possibility to new facilities or part of them and reduce investment costs. It can also refer to chemicals that are used for prohibited and non-prohibited purposes. In the context of biological weapons, dual use refers to the possibility that biological agents and technology have to be used both for peaceful purposes and for improper purposes (military or hostile).

Early Warning Point (EWP): Early Warning Points provide feedback to the Risk Reduction Management Centers when sending information about the situation in the communities and the characteristics and variables of the different hazards that may affect them. With this information, the

municipal government can evaluate the situations and adopt the necessary measures.

Early Warning System (EWS): According to UNISDR, it comprises four fundamental elements: risk knowledge; close follow up (or monitoring), analysis and forecasting of threats (hazards); communication or dissemination of alerts and warnings, and local capacities to respond to the alert received. Cuban legislation defines it as the process composed by surveillance, monitoring and analysis of natural variables and other origins, which may constitute a danger for the population and the economy. The evaluation of these variables facilitates decision making and compliance with the measures approved in the disaster reduction plans, in order to allow people and communities threatened by a danger to prepare and act appropriately and with enough time in advance to reduce the possibility of loss or damage.

Earthquake: Abrupt and transient shaking of the earth's crust by the release of accumulated energy in the form of seismic waves. The most common are produced by the rupture of geological faults, sudden rupture of the upper layers of the earth that sometimes extends to the surface of this and produces vibration of the ground, which if strong enough will cause the collapse of buildings and the destruction of lives and property. The magnitude of the earthquakes is measured by the Richter scale and the intensity using the Mercalli scale.

Economic entity: Non-military center of production, services, research or administration, which is characterized by its integrity and territorial continuity. It does not necessarily correspond to the economic categories of company, establishment, unit, etc.

Economic objective with chemical danger (EOCD): Industry, warehouse or other center where dangerous chemical products are handled in sufficient quantities, which, under certain conditions, gives rise to a chemical contamination location that may affect workers and the population in a specific risk area.

Economic objective with radiological hazard: Facility where radioactive materials (open or closed) are stored, processed and used, which due to accidents can lead to overexposure of people and/or contamination of the environment.

Economic vulnerability: These are the possible damages and losses as a result of the insufficient satisfaction of the economic and financial needs to face the response and recovery before the impact of an event or phenomenon.

El Niño Phenomenon: El Niño, Southern Oscillation (ENSO) phenomenon is the cyclical warming of the water temperature of the Eastern Pacific, which can result in significant changes in climate organization in different parts of the world. It is defined as a portion of generally hot water, located from the tropical west of the Pacific Ocean, which is the west coast of South America. The introduction of abnormally hot water in this area inhibits the rise to the surface of cold, nutrient-rich waters, and alters the distribution of precipitation in the Pacific basin. In parallel, the trade winds from the southwest and the easterly winds from the Pacific are significantly weakened and reversed.

Element(s) at disaster risk: It refers to something that due to its intrinsic vulnerability to a certain type of hazard, in given conditions and time, is potentially susceptible to damage or loss of importance.

Emergency aid: Help (food, medicines, blankets, clothes, tents, specialized personnel) that is sent to face emergency situations, natural technological, health disasters or war conflicts.

Endemic species: That are only found in that place. An endemic species is one that only exists in a specific geographic area, of variable extension, but generally restricted in regard to the size of the species areas with which it is compared.

Endemic: Continuous presence of a disease within a geographical area established in a given time. It can also mean the usual prevalence of a certain disease within that area.

Environmental accident: Natural or anthropogenic origin event or circumstance that directly or indirectly affects the environment. The environmental monitoring networks are the ideal elements for the prevention of accidents.

Environmental impact study: Process in which the environmental consequences of a proposed project or program are evaluated before and after the occurrence of a disaster. The study is widely used in national programs and in international development assistance projects. An environmental impact study should include a detailed risk

assessment and provide alternatives, solutions or options for the problems identified.

Environmental impact: It is the effect produced by human activity on the environment and also extends to the effects of a catastrophic natural disaster. Technically, it is the alteration of the environmental baseline.

Environmental management: Planning and implementation of actions aimed at improving the quality of life of the human being. Mobilization of resources or use of measures to control the use, improvement or conservation of natural and economic resources and services, in a way that minimizes the conflicts caused by such use, improvement or conservation.

Environmental monitoring: Continuous or repeated attention of environmental agents to evaluate exposure and health risk, to compare it with reference values, based on knowledge of the probable relationships between exposure and adverse effects.

Environmental study: Study that aims to give recommendations to prevent and reduce the environmental impact that can be generated from industrial operations or other human activity. The preparation of an environmental impact report that allows identifying, predicting, evaluating and communicating effects, alterations or changes that occur or could occur on the environment due to the location, construction, operation and closure or dismantling of an enterprise.

Environmental vulnerability: Susceptibility and incapacity of the natural relief of the territory and the ecosystem, taking into account the indirect action of the human being, to internally self-adjusting to compensate for the direct effects of the impact of a disaster hazard.

Epicenter: Point on the surface of the earth directly above the focus or hypocenter of the earthquake. To accurately determine the epicenter of an earthquake it requires the support of several seismological stations.

Epidemic: Calamity of health origin consisting of an infectious-contagious disease that spreads to a large number of people in a very short period and clearly exceeds the expected normal incidence. When dealing with diseases that affect plants, humans or other animals, the words epiphyte, epidemic and epizootic are used respectively.

Epidemiological monitoring: It is a dynamic system that is used to permanently observe all the factors that condition the health-disease

phenomenon, by identifying the facts, collecting, analyzing and systematically interpreting the data and distributing the results and the necessary recommendations.

Epidemiology of disasters: Medical discipline that studies the influence of factors, such as lifestyle, biological constitution or other personal or social determinants in the incidence and distribution of diseases that are related to the disaster.

Epiphytic: Phenomenon consisting of a disease simultaneously affecting a large number of plants of the same species in the same region. It may be due to chemical, physical or biotic agents. Plant diseases cause 10 to 15% of losses in world crops.

Epizootic (epidemic): An epizootic is a contagious disease that attacks an unusual number of animals at the same time and place and spreads rapidly. Its equivalent term in medicine is epidemic. The number of cases indicating the presence of an epizootic varies according to the agent, the size and type of species exposed, previous experience or lack of exposure to the disease, and the time and place of occurrence.

Epizootiological monitoring: It is the continuous process that consists of following, observing, investigating, analyzing, evaluating and studying constantly and carefully the development of the relevant changes and the unfavorable tendencies of the epizootic situation and of the influencing factors with the objective of anticipating and to discover the unexpected risks in time, to determine the places and critical times, in order to predict the threatening epizootic danger.

Epizootiology: It is the science that studies the origin, development and extinction of health and disease of animals in the field of herds and populations, as well as the factors that influence them. Based on its analysis, the methods to create, protect, improve and recover collective health are defined.

Erosion: Set of phenomena that disintegrate and modify the surface structures or relief of the earth's crust. The agents that produce erosion are of climatic type (wind, water and ice)

Evacuated: Person transferred to facilities designated as shelters while the danger conditions that gave rise to their protection persist. Such facilities must meet the hygienic-sanitary and safety conditions required to protect life, certified by the evacuation commissions.

Evacuation of the population: Organized transfer of the most vulnerable population to safe areas and less threatened places, on foot or by means of transportation. It is defined according to the appreciation of the actions of the enemy during a military aggression, as well as a disaster of natural or technological origin. Also, when the living conditions are seriously affected and it is carried out with the objective of protecting the population living in large cities or rural communities from the consequences of an enemy aggression or a disaster of natural or technological origin.

Evacuation: Security measure procedure by distancing the population from the hazard zone, in which the collaboration of the civilian population should be foreseen individually or in groups. Process of mobilization of people, animals or others, from areas of danger or imminent risk, in order to minimize loss of life and damage, in addition to providing rescue, relief and rehabilitation during this time, by means of controlled measures.

Evaluation of a building: It is the basis of the forecast. Indicates the pathological state and is carried out through a sequence of steps in which it must be determined if it is repairable or not. The starting point for the evaluation of physical vulnerability.

Exotic species: Species that are not specific to the place or country, the opposite is the native species. Species introduced by the human being into an ecosystem (plants, animals and microorganisms) in which they did not exist in a natural way.

Extensive risk: According to the definition from UNISDR, it is the generalized risk that is related to the exposure of dispersed populations to repeated or persistent conditions with a low or moderate intensity, often of a highly localized nature, which can lead to a very disasters debilitating accumulative impact. Extensive risk is primarily a characteristic of rural areas and urban limits.

Facility with greater danger: The entire area of operations that is under the control of a certain owner and in which one or several dangerous chemical products are present in the process areas, including infrastructures or common or related activities, of the type and in such quantities to constitute potential sources of major accidents.

Fahrenheit Temperature Scale: It is the temperature scale where water at sea level has a freezing point of +32 degrees F (Fahrenheit) and a boiling

point of +212 degrees F. It is a common term in areas that use the English system of measurements. It was created by Gabriel Daniel Fahrenheit (1696-1736) in 1714, a German physicist who invented alcohol and mercury thermometers.

Fire Barrier: Any obstacle that prevents the spread of a fire.

Fire in rural areas: Uncontrolled fire that may occur suddenly, gradually or instantaneously in five or more hectares of forest areas, which is followed by material damage to entities, facilities or homes of the population, which may interrupt the process of production, cause injuries or loss of human lives and environmental deterioration.

Fire management: All activities required to protect forests and other types of vegetation prone to fire, as well as the use of fire to meet the purposes and objectives of soil management.

Fire: Uncontrolled fire that can occur suddenly, gradually or instantaneously, which is followed by material damage that can interrupt the production process, cause injury or loss of human life and environmental deterioration. In most cases the human factor participates as a causal element provoking fires.

Firewall line: Layout in which the combustible materials have been removed on the surface and the organic layer of the ground until reaching the mineral soil. Also called belt, fire line, defense line or line.

Firewall: Barrier existing or prepared before a fire occurs, from which all or most of the flammable materials have been removed, designed to stop superficial fires of little importance or to serve as a baseline for working and starting firewalls, if necessary, as well as facilitating the movement of personnel and material in firefighting operations.

First aid: Immediate help at the accident site that is provided to a victim by professional or non-professional personnel that has been previously instructed. This aid is provisional, until medical assistance can be provided and it is carried out by three methods: self-care, mutual assistance and healthcare.

Flood area: Territory that is affected as a result of intense and/or prolonged rains that cause rivers, ravines, dams to overflow and creates flooding in low areas with little runoff. Floods can also occur as a result of ruptures in the curtains of the dams. According to its characteristics, the flood areas are classified as:

- Dangerous: when the flood does not occur suddenly and the height of the water does not exceed one meter.
- Very dangerous: when the flood occurs suddenly and the height of the water exceeds one meter.

Flood-tide: State of the tide when reaching its maximum height. This level may be the exclusive effect of periodic tides or may be added to the effects of prevailing weather conditions. Maximum level reached in a rising tide.

Flood zone: It is the territory that is calculated to be flooded, either because it is at a level below the curtain of a dam (micro-dams), as a result of its the rupture or overflow, or lands that border a river and are subject to flooding with a similar frequency, or coastal areas with flood hazard due to weather events, or also the low areas of low runoff, vulnerable to intense rains.

Flood: Effect generated by the flow of a stream when it exceeds the conditions that are normal and reaches extraordinary levels that cannot be controlled in the natural or artificial deposits that contain it, which results in damage to in urban areas, productive lands and in general in valleys and low places. Attending to the places where the floods take place, they can be: coastal, fluvial, lacustrine and pluvial, as they are registered in the maritime coasts, in the zones bordering the margins of the rivers and lakes and in terrains of flat topography because of the excessive rains and the nonexistence or defect of the drainage system, respectively. Flood levels depend not only on rainfall but also on the degree of saturation of the soil and the days it has been raining.

Fujita-Pearson Scale: Three-digit scale for tornadoes invented by Fujita (Scale F) and Pearson (PP Scale) to indicate the intensity of the tornado (05 = path length, 0.5, and path width 0.7)

Fumarole: Emanation of gases - sulfur dioxide (SO2), carbon dioxide (CO2) and water vapor, usually at high temperatures, that comes from fractures or cracks on the surface of a volcano or an area with volcanic activity.

Functional vulnerability: Influence of structural and non-structural vulnerability on the instability or paralysis of production and services during and after the occurrence of the specific hazard. It is important to note that a failure in the structural and non-structural elements, without

reaching the limit of the building collapse, can produce an interruption in the operation of this, provoking what is called "functional collapse".

Gauging station: Station for the regular measurement of the volume of a water current. According to the facilities and methods used to measure the volume, the gauging stations can be classified into:

1. Stations with gauging dam.
2. Stations with control meter.
3. Speed stations by area, constituted by a control, a limnígrafo and a capacity section.

Geological fault: Crack or fracture between two blocks of the earth's crust along which there is a relative vertical or horizontal displacement. A fault occurs when the rocks of the earth's crust have been subjected to strong tensions and tectonic comprehensions beyond a point of rupture. Faults are classified as active and inactive, the former provoke serious risks to structures and are the causes of major problems of landslides that threaten human settlements.

Greenhouse effect gases: Gaseous chemical compounds such as carbon dioxide and methane, which, when discharged into the atmosphere contribute to the unbalance between the reception of solar radiation and the emission of infrared radiation into space. These gases retain part of the energy that the planetary surface emits because of solar radiation heating and prevents it from being immediately returned to space, producing an effect similar to that observed in a greenhouse, at a planetary scale.

Greenwich Mean Time: Average solar hour on which the day starts at midnight on the Greenwich meridian. It is abbreviated GMT or Z. Also called Universal Time Coordination (UTC) it is the main standard of time by which the world regulates clocks and time.

Groups at risk: People who are considered exceptionally vulnerable.

Guaranteeing Civil Defense measures: Set of logistical activities that state bodies and agencies, economic entities and social institutions comply with, aiming at guaranteeing successful compliance with Civil Defense measures in normal, disasters and war situations. They are planned and organized in a normal situation and are punctuated by the imminence or occurrence of potential disaster situations. The main guarantees of the Civil Defense measures are: medical, phytosanitary, veterinary,

transport, communications, engineer, fire, traffic regulation and public order, fuel and food.

Hawaiian eruption: Type of eruption common in volcanoes from the Galápagos. They may have a low level of explosiveness. It is characterized by the emission of lava, large amounts of gas and few ashes.

Hazard evaluation: It is the process by which the probability of occurrence and the severity of an event is determined in a given time and in a certain area.

Hazard study: The prediction or presumption of the environmental impact of a specific activity or project, and the proposal of alternatives to prevent or mitigate the degrading effects or environmental deterioration that may be generated in its execution. Designed to identify, predict, interpret and communicate information about the action impact on human health or well-being.

Hazardous chemical product: Any chemical substance, whether isolated or mixed, manufactured or obtained from nature that, by the quantity, dangerous characteristics or combination of both, represents a danger to human health or the environment.

Hazardous waste: Substances coming from different activities and in any physical state that, due to the magnitude or modality of their characteristics (corrosive, toxic, poisonous, harmful, explosive, flammable, biologically harmful, infectious, irritant or others) represent a danger for the human health and environment.

High atmospheric pressure: Distribution of the atmospheric pressure field where the center has a pressure higher than that one existing around it and at the same height. A high pressure zone is a region where the atmospheric pressure is maximum and the isobars contain the highest values. The winds rotate in clockwise direction in the northern hemisphere. It generates preferably clear skies, areas with little winds and absence of clouds and storms. High atmospheric pressure or anticyclone is the opposite of cyclone or low atmospheric pressure.

High cloud: Cirrus, cirrocumulus; they are almost invariable high level clouds.

High pressure zone: Isobaric figure in the form of irregular area more or less extensive, with high pressures inside and without defined centers.

Hurricane: Higher stage or stage of maturity of a tropical cyclone, which denotes a well-organized circulation of winds over a center called eye or vortex, the speed of the winds exceeds 118 km/h and there is a strong fall of barometric pressure.

Hydrological drought: When there is a continuous deficit in surface runoff and reaches a level below normal conditions or when the level of groundwater decreases.

Hydrometeorology: Study of atmospheric and terrestrial phases in the hydrological cycle, especially its interrelations. Meteorology branch that deals with water in the atmosphere, precipitation and its subsequent effects, such as floods, overflows, etc.

Hydrometric station: Station which obtains data on the water of rivers, lakes or reservoirs, referred to one or more of the following elements: level, volume, transport and sediments deposition, temperature and other physical properties of the water, characteristics of the ice layer and other chemical properties of the water. Hydraulic installation consisting of a set of mechanisms and devices that record and measure the characteristics of a water current.

Hygienic-veterinary treatment: Set of measures and activities that pursue the elimination or reduction to a permissible degree of radioactive, chemical or biological contamination of animal's body surface, by bathing and rubbing with water and suitable substances or solutions.

Hypocenter of the earthquake: Focus of an earthquake. Place within the earth where the fault associated with the earthquake or the release of energy that gives rise to it originates.

Incident of process security: It is the real, unplanned or uncontrolled loss of the primary containment, understood the latter as the border provided by design for the containment of dangerous chemicals during normal operation, which:

a) has an effect on people, facilities or the environment;
b) is above the threshold amount established by the regulatory authority for its report.

Intense rains: Severe hydro-meteorological event whose most destructive manifestation is linked to the continuous, persistent and heavy rains in a relatively short period of time on a given territory, which causes the exit of its channel from streams, ravines and rivers, large avenues and

flood areas. The level of these precipitations is, at least, of the order of 100 millimeters in 24 hours.

Intensity: A qualitative or quantitative measure of the severity of a seismic movement in a specific area. It is expressed in different seismic scales, with the Modified Mercalli (MM) and the MSK scales, both of twelve degrees and with a similar structure, being better known.

Intensive risk: According to the definition from UNISDR, it is the risk associated to the exposure of large concentrations of population and economic activities to intense events related to existing threats (dangers), which can lead to the emergence of potentially catastrophic impacts of disasters which would include a large number of deaths and loss of assets. Intensive risk is primarily a characteristic of large cities or densely populous areas, which are not only exposed to intense threats (hazards), but also have high levels of vulnerability to them.

Isobar: Line represented in a chart or map that joins two points on the surface that have the same barometric pressure during a given period of time. Line drawn on a synoptic map linking the places with identical pressures.

Kelvin temperature scale: Temperature scale with a freezing point of + 273 degrees K (Kelvin) and a boiling point of + 373 degrees K. It is used mainly for scientific purposes. It is also known as the Absolute Temperature scale. It was proposed in 1848 by William T. Kelvin, First Baron of Largs (1824-1907), a Scottish mathematical physicist born in Ireland.

La Niña Phenomenon: Corresponds to one of the extreme phases of an oscillatory phenomenon, not periodic, which characterizes the ocean-atmosphere system of the equatorial Pacific (Southern Oscillation), and whose most significant manifestations are the decrease in sea surface temperature and an intensification of the trade winds associated to a greater difference in pressure between the coast of South America and Oceania. The opposite (warm) phase is called the El Niño phenomenon.

Lahares: Flow of mud, debris, vegetation, volcanic materials, etc., that descends through the gorges of the volcano. It usually goes down when there is heavy rain, there is a lake in the crater or when a glacier melts due to the heat of the pyroclastic flows.

Latitude: Parallel imaginary lines that surround the globe, both north and south of the equator. The poles are located at 90º latitude north and south and the equator at zero latitude.

Lava: Magma that reaches the surface through a crater or wind. It is liquid and contains little gas.

Length: East or West distance on the earth surface, measured by the angle in degrees that the meridian passing over the observation site makes with the standard Greenwich or Paris meridian. It is positive in the eastern hemisphere and negative in the western hemisphere with respect to the reference standard meridian. Angular distance measured on a parallel arc, which is between a point on the earth's surface and a meridian, taken as a base or origin.

Life cycle of hazardous chemical products: It is the set of phases or stages through which hazardous chemical products go through which include the obtaining, manufacturing or formulation, import, export, transportation, storage, commercialization, use, treatment and final disposal.

Liquefaction: Loss of soil resistance, below groundwater level, related to the increase in pore pressure caused by a cyclic deformation. It is a phenomenon induced by strong earthquakes in the granular saturated sediments of water, particularly in sandy ones, which are transformed from the solid state to the viscous liquid.

Loss: These are the expenses or income not received as a result of the changes in the economic flows generated by the disaster, evaluated until complete recovery. It is expressed in current monetary values. It includes salaries and rents paid without work activity, income not received, increase in operating costs and unexpected additional expenses, such as those dedicated to the protection of resources, transfer of personnel, etc.

Low cloud: Stratus or stratum, stratocumulus; they are almost invariable clouds of low level.

Low pressure zone: Isobaric figure in the form of irregular area more or less extensive, with low pressures inside and without defined centers.

Low pressure: It is a system of concentric closed isobars in which the minimum pressure is located in the center. The circulation of the winds is counterclockwise in the northern hemisphere. This phenomenon

causes convergence or convection so it is associated to the presence of large cloudiness and showers. The low pressure or cyclone is the opposite of the high pressure or anticyclone.

Low tide: Minimum level of a descending tide or maximum descent of the tide.

Magma: Molten rock that contains a liquid phase, dissolved gases, mineral crystals and eventually gas bubbles.

Magnitude of an earthquake: Measurement of the energy released in the seismic source. It is determined from the instrumental records of earthquakes and is expressed in different scales, the Richter scale being better known. The magnitude is expressed in regard to terms of the amplitude of a given period wave, measured at a certain distance with a specific instrument.

Major accident: Any incident of the process, such as a large leak, spill, fire or explosion that occurs as a result of the loss of control over a certain process during the operation of an installation and poses a serious danger to human health and the environment, causing serious damage, whether immediate or later; both inside and outside the facility, and which involves one or more hazardous chemical products. With the potential to cause, as a whole or separately, any of the following events:

a) Death, serious injury or total and/or permanent disability to one or more persons as a result of the loss of the processes control.
b) Serious damage to the environment, understood as significant, inferred to the environment or to one or more of its components, which:
   Is permanent or long-term, whose recovery exceeds the term of three years. Cause the loss or decrease the environment capacity to provide environmental goods and services.
c) Severe damage to the integrity of the facility or its component parts.

Major hazard: It has the condition of being a potential source for occurrence of large magnitude accidents.

Management body: Organization that is activated to lead measures, activities and actions aimed at protecting the population and the economy in the face of an armed aggression or in situations of disaster. Its composition varies depending on the level of the event as such and the missions it fulfills.

Management of process safety: Application of management principles to the identification, understanding and control of the hazards of the process, with the aim of avoiding major incidents and accidents.

Maximum Attention Zone (MAZ): This is the area that includes the seas adjacent to Cuba and the entire Cuban archipelago, that is why, as its name indicates, a zone of maximum attention. The exact limits of such zone are the following: (18.5 ºN, 72.3 ºW); (18.5 ºN, 70.0 ºW); (20.0 ºN, 80.0 ºW); (20.0 ºN, 85.0 ºW); (21.2 ºN, 86.8 ºW); (23.0 ºN, 86.0 ºW); (24.0 ºN, 85.0 ºW); (24.7 ºN, 81.6 ºW); (23.5 ºN, 77.0 ºW); (21.0 ºN, 72.3 ºW); (18.5 ºN, 72.3 ºW).

Meeting and boarding point: Pre-selected place, which is timely set up to guarantee the organization, registration and control of the population that is evacuated or received in a war situation or disaster threat.

Mercalli Scale (MSK): It is a measure of the effects produced by an earthquake on people, animals, structures and soil, in a particular place. It is the scale of 12 degrees that measures the intensity registered in a specific place. For the same tremor usually several intensities are reported, which decrease as the epicenter distance increases. Level I corresponds to events recorded only by highly sensitive instruments and XII corresponds to total destruction. It was created by the Italian seismologist Guiseppe Mercalli in 1902, which, once revised in 1931, is known as the Mercalli Modified Scale.

Meteoric wake: Phenomenon that accompanies a space object (meteorite) as it passes through the Earth's atmosphere, such as the wake and bright flash, the ionized wake, etc.

Meteorological drought: When rainfall is much lower than expected in a large area and for a long period of time, causing a serious hydrological imbalance.

Meteorological element: Variable or atmospheric phenomenon that allows to characterize the weather in a specific place and at a given time (air temperature, pressure, humidity, wind, cloudiness, storm, fog, etc.).

Meteorological monitoring: Monitoring of meteorological variables to establish the moment in which they can threaten the country.

Meteorological station: Site where the current weather conditions are evaluated. It consists of a garden with special features (outdoors or indoors) where the meteorological instruments are installed, among

which the rain gauge, the evaporation meter and the vane are very frequently used.

Meteorological warning: Meteorological message issued when the actual or anticipated weather conditions do not constitute a risk but may cause concern or worry.

Meteorology: Science that studies the atmosphere. It includes the study of time and climate and deals with the physical, dynamic and chemical study of the Earth's atmosphere.

Mid-level cloud: Cloud that is on the middle level. Altocumulus clouds are, almost without exception, middle clouds.

Minimum radius of sanitary protection: It is the minimum distance of security established between the emission sources of pollutants from the environment and the limits of the rest areas of the population and the important economic resources to be protected.

Mitigation: According to the definition by UNISDR, it is the reduction or limitation of the adverse impacts of hazards and related disasters. Often, all the adverse impacts of the hazards cannot be prevented entirely, but their scale and severity can be considerably reduced by various strategies and actions. The mitigation measures include engineering techniques and constructions resistant to hazards, as well as better environmental policies and greater public awareness.

Monitoring station: Used to measure the essential concentration levels of air pollutants that are significant for a given region. The main task of these stations is to monitor long-term changes in the composition of the atmosphere of a given region.

Monitoring: One or several articulated institutions assume the permanent monitoring and processing of variables that allow timely delivery to the authorities, in the face of an increased danger, an integrated forecast on the impact of a disaster event, supported by standardized procedures and protocols for the integration of its services.

Monitoring: System that allows the observation, measurement and continuous evaluation of the progress of a process or phenomenon to take corrective measures.

National platform for disaster risk reduction: According to the definition from UNISDR, it is a generic term that is used in the national mechanisms

of coordination and normative orientation on disaster risk reduction, which must be of a multi-sectorial and interdisciplinary nature, and in which the public and private sectors, civil society and all interested entities in a country must participate. In accordance with Cuban legislation, the Civil Defense System fulfills this mission.

National Staff of Civil Defense: It is the main body for direction and control of the Civil Defense System in the Republic of Cuba, responsible for guaranteeing compliance with civil defense measures for the protection of the population and the economy, international standards and conventions related to civil protection of which the Republic of Cuba is a party, and in charge of coordinating cooperation programs and international assistance in case of disasters with the Ministry of Foreign Trade and Foreign Investment. In addition, it organizes, coordinates and controls the work of state bodies and agencies, economic entities and social institutions in order to protect the population and the economy against armed aggression and any type of disaster situations.

Needs: It is the sum of the necessary expenses to compensate the damages and the additional costs to replace them with better quality and eliminating future risks.

Non-structural vulnerability: Refers to the susceptibility to damage of those parts that do not constitute the structure (architectural subsystem, equipment, furniture, technical networks, etc.) but that compromise the integrity of the system in a situation of failure. In the case of the study of the territory, it is the susceptibility to failures in the vital systems (electricity, water, gas, communications, roads, sewerage).

Organizational vulnerability: Insufficiency in the level of preparation, obsolescence and rigidity in the structures and organizations that prevent or hinder compliance with protection measures.

Pandemic: Epidemic with global character or that at least affects a continent or several countries. Eg: epidemics of influenza, dengue.

Panzootia: It is an epizootic process characterized by relatively high values of an intensity and extension in a given territory and with very high propagation. It is reflected in a very high number of secondary sprouts in the form of a wave (panzootic wave) and affecting the susceptible animal population in a national or international territorial extension, within a relatively short period of time.

Partial cloudiness: Means the fraction of the sky covered by clouds of a certain kind, species, variety, layer or a certain combination of clouds.

People evacuation plan: It is a set of graphic and textual documents in which the evacuation-reception of the population in time of war or natural or technological origin disasters is planned, organized and controlled. It is elaborated at the national, provincial, municipal and Defense Zone levels, depending on the characteristics of each situation or territory.

Person to assist: Person who, due to the impact of a disaster danger, needs state aid to survive. This category includes people who lose their homes due to the impact of extreme hydro-meteorological events, high intensity earthquakes, fires or other disaster situations; those who must receive domiciliary water service or food aid and those that suffer no damage after a catastrophic transport accident and need to return to their place of origin.

Person to be deconcentrated: Person who is planned to protect by moving outside the risk area, until the danger that gave rise to protection is controlled.

Person to evacuate: Person who is planned to be moved to designated facilities such as evacuation centers (public institutions, tunnels, adapted caves, land rods) while the dangerous conditions that gave rise to their protection persist. These centers must meet the hygienic-sanitary and safety conditions required to protect their lives, certified by the corresponding evacuation commissions.

Person to move to other homes: Person who is planned to move in dangerous situations to another home located in a lower risk area or structurally more secure, to protect their lives for a relatively short time.

Person to relocate: Tourist who may reside in structurally vulnerable facilities or located in risk areas, and is planned to move to another, outside the influence area of the event destructive effects. The peak number of the season for each facility is taken, as data for planning.

Person to return: Person who temporarily resides in a place and who, for various reasons, plans to return to his residence in dangerous situations. This category includes students of schools in the countryside, children in pioneer camps and vacationers in camping sites or other tourist facilities. The planning of this category is based on the statistical data available in the territory.

Phase: Situation established for the phased adoption of measures to protect the population and the economy from the imminence of the impact of a dangerous event or when it occurs. The phases are: Warning phase. Informational phase. Alert phase. Alarm phase. The criteria and deadlines for its establishment are regulated according to Decree Law 170 and to Directive Nb. 1 of 2010 from the president of the National Defense Council for Disaster Reduction, April 8, 2010.

Physical vulnerability: Susceptibility to suffer any type of damage, from the location of human settlements and buildings for any type of use in areas exposed to hazards and the deficiencies of the physical environment to resist the its effects, in certain magnitudes and during a certain time.

Plague: It is a population of organisms that grows in an uncontrolled way causing economic damage or transmitting diseases to people, plants and animals. They usually cause massive damage.

Plant quarantine: It is a system of measures that is applied internationally in order to safeguard the phyto-sanitary status of each country. It arises before the possibilities of dissemination of harmful agents such as insects, fungi, bacteria, viruses, micro-plasms and undesirable weeds, from its center of origin to other geographical areas. It is given by a series of measures that are taken before the discovery or manifestation of exotic organisms or endemic organisms that entail greater virulence, aggressiveness or resistance to pesticides.

Plinian eruption: Type of violent and explosive eruption that expels large amounts of ash and other pyroclastic materials continuously into the atmosphere. It forms a column of eruption greater than 10 kilometers in height. It can cause pyroclastic flows.

Polar air mass: Air mass originating in the middle latitudes, between 40 and 60 degrees of latitude, either on an ocean or on the interior of a continent. When these masses originate near the poles, they are no longer polar but Arctic or Antarctic.

Population warning system: Set of measures and organization activities and technical means of warning, automated and manual, related to each other, that form part of the warning system of the country, and has as objective to inform the population on the different alarm signals about possible enemy actions or the danger of a natural phenomenon

influence or the consequences of a technological accident or other causes.

Possible destruction area: Part of the territory that may be more affected by the impact of enemy weapons or by different disaster hazards and for which appropriate protection measures are established.

Preparation for the response: This is the name given to the organizational activities that guarantee, given the threat or occurrence of a disaster situation, the appropriate systems, procedures and resources. Guaranteeing its disposition in a timely moment and the necessary place to help the affected ones, in order to decrease the adverse effects of a hazard by means of preventive character actions. At the same time, there is an appropriate organization and supplies of emergency materials after the impact of a disaster, the creation and improvement of the legal base and the disaster management system.

Preparation of Civil Defense: Instruction system targeting all population groups with the aim of training them to achieve greater efficiency in compliance with Civil Defense measures and activities that correspond to everyone in order to face the imminence or occurrence, both of an armed aggression as of different disaster situations, and act during the recovery. It includes the dissemination to the population, through mass media and direct work with mass organizations, of the behavior rules, protection procedures and diverse actions to guarantee the greatest protection against the threat of aggression and during it, as well as regarding potential disaster situations.

Prevention measures: They are carried out permanently and constitute the most effective stage of disaster reduction. They include measures related to the reduction of all kinds of vulnerabilities and are contained in the Disaster Reduction Plans and the strengthening of surveillance and forecasting systems. It also includes compliance with the requirements imposed on investments from the project stage, during the process of reconciliation of economic and social development with the interests of Civil Defense.

Process safety: Achievement of adequate operating conditions, prevention of process incidents or major accidents and mitigation of their consequences, which result in the protection of workers, the population and the environment against the hazards of major accidents.

Prospective management of disaster risk: Management activities that address and seek to avoid the increase or development of new disaster risks.

Protection measures: Procedures, actions and means foreseen in the plans, in order to avoid or mitigate the immediate and deferred consequences of major accidents for the population, the personnel of the action groups, the affected facilities and the material goods.

Protection of animals: System of zoo-technical and veterinary measures that are put into practice to guarantee that each of the existing species in the country can efficiently fulfill the purposes for which they are intended.

Protection of plants (phyto-sanitary): Group of technical and organizational activities that are planned and carried out in a timely manner by prepared forces and means, in order to protect the agricultural economy and the environment against the consequences of an armed aggression or the impact of different types of hazards.

Protection of the economy: Group of measures, activities, procedures and actions organized with the aim of avoiding or diminishing the consequences of the enemy's actions, in case of armed aggression, or the impact of different types of hazards or threats of disasters, as well as the use of biological agents against the agricultural economy in peacetime. It includes prevention measures that are materialized through state management, as well as through the process of reconciliation of socioeconomic development with the interests of Civil Defense. Arrangements of organizational nature to face extreme situations due to the impact of an aggression or different hazards; confrontation or response activities, characterized by protective measures and protective and recovery actions, in order to avoid that in future situations the degree of vulnerability of the elements at risk is lower.

Protection of the population and the economy: Main missions assigned to the Civil Defense in normal situation, in case of enemy aggression and in potential disaster situations, whose fulfillment requires the planning and realization of an important group of preventive protection measures, and they also include compliance with different protection procedures by the general population. The measures for the protection of the

population and the economy are established in Law Nb. 75 from the National Defense.

Protection: Set of measures of an applicable and quantified system that is carried out for the benefit of the population, its assets and its environment in the form of prevention, of impacts mitigation, of different procedures to maintain safety, of assistance during the disaster and recovery, once the situation generated by the destructive phenomenon has been overcome. It applies not only to people but also to the assets of the population and economic resources.

Protective work: Fortification work to guarantee the protection of the population and the reserves of material means against the action of the destruction sources from the enemy or natural disasters.

Public Awareness/sensitization: The degree of common knowledge about disaster risk, the factors that lead to them and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards in order to raise the risk perception.

Pyroclastic flow: Hot mixture of gases, ash and rock fragments that descend the flanks of a volcano. It goes down at high speeds between 75 and 150 km/h. They usually occur in large explosive eruptions and reach temperatures of 300 to 800 Celsius degrees.

Quarantine: System of anti-epidemic and regime measures that is carried out in order to prevent the spread of infectious diseases of epidemic outbreak and eliminate it. Restriction of healthy people or animal's activities, who have been exposed to an individual with transmissible diseases during the incubation or contact period, in order to prevent the transmission of the disease. It foresees the strict movement limitation or prohibition for the population and/or animals towards the outbreak or the exit, the discovery and isolation of patients, sanitary treatment, immunization, disinfection and others. The duration of the quarantine is measured from the report of the last patient.

Radar: Acronym for Radio Detection And Ranking. System for detecting and locating targets capable of reflecting radio frequency waves, receiving back an echo from a target, from which several parameters can be determined based on the characteristics of the received signal.

Rare species: Species of small populations worldwide, which are not threatened or are not vulnerable at present, but may be at risk. These

species are located in geographically restricted areas or specific habitats, or are sparsely dispersed on a large scale.

Reconstruction: Included in the recovery stage. This is the name given to the construction or permanent replacement of the physical structures seriously damaged by the disaster situation, the total restoration of all services and local infrastructure and the revitalization of the economy, including agriculture and livestock. This stage should be integrated into the current development plans, considering the risks of future disasters to take into account the possible reduction of vulnerability with the incorporation of prevention and mitigation measures.

Recovery: Stage included in the cycle of disaster reduction that begins when the risk to which it was subjected by a disaster situation has finished for a community, entity or institution, territory or for the whole country. This stage includes those that are internationally known as rehabilitation and reconstruction stages. It is directly managed by the Government at the different instances and its duration can be more or less prolonged, according to the level of losses and damages suffered.

Region of evacuees' location: Territory in which the evacuated population of the cities and dangerous places is located, which is established in houses and, if necessary, in shelters and other facilities.

Rehabilitation: Included in our recovery concept. It is commonly called the measures that are adopted later and as a consequence of a disaster situation, to help the victims to repair the houses with partial damages; enable the restoration of health, electricity, gas, communications, water supply and waste disposal infrastructures, to facilitate the restart of the operation of basic services, as well as to develop the most urgent jobs that contribute to the restoration of economic activities. Its purpose is to allow more or less normal life patterns to restart, and it is considered a transitory phase between the emergency aid offered during the response and the reconstruction.

Reinforced Monitoring Zone (RMZ): It is an area relatively close to Cuba, in which the monitoring of any tropical cyclone that forms or transits through it is reinforced. The Reinforced Monitoring Zone limits to the east with the meridian 60 ºW and to the west with the meridian 89 ºW, while to the north it limits with the parallel 24 ºN and to the south with the coasts of Venezuela and Central America. The following points determine the perimeter of this area with accuracy: (10 ºN, 60 ºW); (19.3

ºN, 60 ºW); (24.2 ºN, 63.1 ºW); (24.2 ºN, 89.0 ºW), (15.2 ºN, 89.2 ºW), and continues along the Central American coast, Colombia and Venezuela bordering the Caribbean Sea.

Relative humidity: The percentage ratio between the mole fraction of water vapor at a given pressure and temperature and the molar fraction that air would have if it were saturated with water at the same pressure and temperature.

Relocated: Tourist in structurally vulnerable facilities or located in risk areas that are relocated, in another building, outside the area of influence of the destructive effects of the event.

Rescue and saving: Emergency actions in the area affected by a disaster, which consist in the extraction of people who are in danger, either for being under the debris produced by a collapse (including that of protective works), under or inside of road accidents, both on land and in water, within areas contaminated by dangerous substances and other circumstances; its removal from the focus of destruction, provision of first aid and its transfer to the place where it can get primary or higher level medical assistance.

Reservoir: Natural or artificial site used for the storage, regulation and control of water resources.

Residual risk: The risk that has not yet been managed, even when there are effective measures for disaster risk reduction and for which the response and recovery capacities must be maintained.

Resilience: The ability of a system, community or society exposed to a threat to resist, absorb, adapt and recover from its effects in a timely and effective manner, including the preservation and restoration of its basic structures and functions.

Response to disasters: Measures to protect the population and economic resources to cope with potential disaster situations. It includes the direction exercise and the carrying out of emergency operations, the security and the assurances for its realization; the notice, search, rescue and saving people affected; the preservation of the personal goods of the population and economic resources; the evacuation and shelter of the population in safer places; the transfer of the animals to safe places; medical health care for the injured and affected; the help to the victims; the orientation to the population about the behavior rules to be

maintained in the given situation and the good management of the information; the extinction of fires, the maintenance of public order and the control of the road traffic, as well as the immediate determination and preliminary evaluation of losses as they occur.

Response: Measures and actions that begin when the impact of a potentially destructive event is imminent or when it occurs. It is defined as the exercise of direction and command to conduct actions, based on the decisions and disaster reduction plans approved in each instance. It is planned taking into account the establishment of the phases planned for each disaster hazard.

Returned: Person who is temporarily in a place and for different reasons its return to his residence is decided. This category includes students from schools in the countryside or who perform productive tasks, children in pioneer camp and vacationers in camping sites or other tourist facilities.

Richter scale: It corresponds to the scale of an earthquake magnitude. It is an open-side scale, however, the largest earthquake registered so far reached a magnitude of 9.5, corresponding to a break of the order of 1000 km long by 200 km wide, with an average displacement of 20 m. At the other end of the scale, negative magnitudes are achieved in laboratories with millimeter ruptures. It was proposed in 1935 by California geologist Charles Richter.

Risk area: Areas in which the flora, fauna and their habitat are exceptional or especially valuable because of their special nature or their role in the ecosystem which could be easily altered or degraded by human activities or by urban developments. These are areas that due to their geographical characteristics, the degree of exposure to people and the existing vulnerabilities of any types have been conceptualized by the studies of territorial vulnerability and risk hazard.

Risk assessment: Methodology applied in the territories and entities to determine the nature and degree of risk, through the analysis of possible hazards and vulnerability that could potentially harm the population, property, services, exposed livelihoods and the environment.

Risk map: This is the name given to maps (plans, diagrams) of diverse scale, in which the levels of risks to which the territory, community, entity or institution is subject to are represented, by means of symbols, making clear its stratification and highlighting the elements vulnerable to different hazards.

Risk perception: The degree of common knowledge about disaster risk, the factors that lead to these and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

Risk Reduction Management Center: It is a physical space with modular equipment, designed to facilitate to authorities of the territory the management of disaster risks, to control the reduction of vulnerabilities and to promote a culture of disaster reduction in the population, as well as influencing the preparation and participation of the population in response and recovery to disaster situations. Its main objective is the effective management of information by facilitating its access, collection and transmission. They use the most appropriate technologies that support the decision making of local governments, with the objective of reducing the loss of human lives and economic goods and contributing to the improvement of the life quality and local sustainable development.

Risk reduction management: Social process whose objective is knowledge, reduction and permanent control of disaster risk in society, consistent and integrated to economic, social and environmental development. It admits, in principle, different levels of coordination and intervention that go from global, comprehensive, sectoral and macro-territorial to local, community and family.

Risk transference: According to the definition from UNISDR, it is the process of formally or informally transferring the financial consequences of a particular risk from one party to another, through which a family, community, company or state authority will obtain resources from the another part after a disaster occurs, in exchange for continuous or compensatory social or financial benefits that are provided to the other party. Insurance is a well-known means for the transfer of risk, in which the coverage of a risk is obtained by an insurer in exchange for the payment of continuous amounts to it.

Runoff: From the rainwater, melted snow or irrigation water that flows through the land surface and finally returns to the streams.

Sanitary gap: It is the lack or interruption, in a given place or time, of some of the measures conceived in the systems of counter-epizootic (biosecurity) protection established in the so-called Objectives with Biological Hazard (OBH), which leads to increased un-controlled risk.

Sanitary Vulnerability: Susceptibility of Public Health, Veterinary and Plant Health systems in compliance with surveillance actions, affecting their levels of resolution, interaction and timely diagnosis, as well as the possibility of suffering any type of damage under the influence of danger. In the case of the territories, it also refers to the breach of the hygienic-sanitary norms and of the infestation indexes foreseen. This type of vulnerability is closely related to environmental vulnerability.

Saturation: Condition of the air that occurs when the amount of water vapor it contains is the maximum possible for the existing temperature.

Search and rescue: It is the process of locating and rescuing the victims of disasters and the provision of first aid and basic medical assistance that may be required.

Seismic acceleration: Acceleration of the ground movement produced by seismic waves generated by an earthquake.

Seismic belt: Region of the earth with high and continuous seismic activity. Elongated earthquake zone, usually located along the boundaries of a tectonic layer.

Seismic station: Real-time data collection center, equipped with sensors that measure the speed of the ground, from where the information of the earthquakes is sent to the observatories.

Seismic swarm: Grouping of seismic events in which a major earthquake is not distinguished. This type of grouping corresponds to zones with highly heterogeneous materials and highly concentrated stress distribution.

Seismic waves: They are a type of strong elastic wave in the propagation of temporary disturbances of the tensions field that generate small movements in the tectonic plates. They can be generated by natural earthquakes (waves caused by an earthquake) or artificial (use of explosives). There are three types of them: P (primary), S (secondary) and L (love waves, superficial).

Seismographic station: Site where one or more seismographs are monitored.

Severe drought: Period of abnormally dry weather conditions, long enough for the lack of rainfall to cause a serious hydrological imbalance in one or more provinces, leading to economic and social non satisfaction of water resources demands for the year in which this period occurs or

compromises these demands for next one, creating a complex hygienic-sanitary situation and affects food security due to the considerable decrease in yield and production in the agricultural sector.

Shear line (línea de cizalla): Line along which there is an abrupt change of the component of horizontal wind speed parallel to this line.

Shear: It is the air current created by a rapid change in direction with respect to altitude.

Shearing: Refers to flat fractures that completely cut the layers.

Shelter for evacuees: Facility used to protect people at risk in disaster situations. It must be chosen outside hazardous areas and meet the technical constructive and service conditions to guarantee maximum safety and stability of people under this regime, according to the characteristics of the hazards that are faced.

Shower: Precipitation of water drops that fall from cumulonimbus-type clouds. It is characterized because it starts and ends suddenly, due to very abrupt variations in intensity and because the condition of the sky quickly changes.

Sliding: Abrupt movement of earth and rocks on a slope in response to the gravity force.

Social or economic drought: It is attributed to natural effects, but also to social ones. It is represented by the shortage of water induced by a lack of balance in the supply and demand of this resource.

Social Vulnerability: Predisposition of social factors to suffer damages and losses before the impact of an event. The elements that define it are: exposed population, its perception of risk, attitude towards the occurrence of events (compliance with protection measures and behavior rules).

Species and subspecies threatened: Species or subspecies that could be in danger of extinction if the factors that cause the deterioration or modification of the habitat or that diminish their populations still impact them.

Species in danger of extinction: Species whose survival is remote, as long as the causal factors of their extinction continue in operation. It includes those whose number has been reduced to a critical level or whose inhabitants have been reduced so drastically that they are considered in

immediate danger of extinction. Species that are possibly extinct, but have been permanently relegated to their wild habitat in the past fifty years are also included.

Spillway: Element of the dams that allows the evacuation of their flows. Upper area where the surface waters of the reservoir are dislodged.

Spiral rain bands: Bands of thundering that encircle a hurricane.

Squall line: Line that sometimes precedes a cold front along which squalls or storms are recorded.

Storm cloud: dense cloud, with a considerable vertical development, in the form of mountain or huge towers. Part of its top is usually smooth, fibrous or striated and almost always crushed; this part often extends in the form of an anvil or a vast plume. Below the mass, often very dark, of this cloud may appear low, torn clouds, linked or not with it and precipitations sometimes in the form of virga (hydrometeor that falls from a cloud but that evaporates before reaching the ground).

Storm surge or upwelling: Consists of the combination of the upwelling with the astronomical tide present in the place where the phenomenon is occurring, giving rise to the greater over-elevation of the mean sea level in the presence of a high tide. To the devastating effects of this harmful natural phenomenon is added the height reached by the waves caused by the tropical cyclone, which move above the storm tide and is higher when the more intense the organism is and softer the profile of the sea bottom. In Cuba it was the cause of the greatest natural disaster in our history when the sea rose 6.5 meters' height in Santa Cruz del Sur in 1932, which produced 3500 deaths, although episodes of upwelling in Playa Cajío in 1944 are also well known and in other beaches on the south coast of the country.

Storm: Precipitation in the form of shower, accompanied by strong winds, which is caused by a cloud of the cumulonimbus type. Very intense precipitation of rain, snow or hail, accompanied or not by wind, associated to another differentiated meteorological phenomenon.

Stratiform cloud: Cloud extended in a layer or horizontal mantle of great extension in the form of stratum. Such a cloud belongs to the stratiform species. This term is applied to the Altocumulus, Stratocumulus and occasionally to the Cirrocumulus.

Stratovolcano: Stacking lava flows, ash and other volcanic materials. They have a characteristic cone shape. A volcano is either built and destroyed as it erupts.

Strombolian eruption: Type of minor and constant explosive eruption, which usually occurs after a major eruption. It produces large amounts of ash and slag.

Structural vulnerability: Susceptibility of a property of any use to suffer some type of damage in those parts that constitute the structure of the building, due to the non-compliance or incorrect application of norms and construction codes. The design resistance diagnosed to the building, given in the project, is taken as a starting point. In the case of the study of a territory, it refers to the susceptibility of the built heritage on the basis of the general characterization of properties, type and constructive condition.

Synoptic map: Geographic map in which the meteorological data, analyzed or planned for a given moment, to describe atmospheric conditions on a synoptic scale (also called a large scale or cyclonic scale), is a horizontal length scale of the order of 1000 km. or more).

Technical networks: Set of linear and support facilities, which guarantee the services of water supply, drainage and sewerage, electricity and communications of a human settlement or economic objective.

Technological accident: Event or series of unexpected events that occur in industrial facilities and cause fires, explosions, leaks, environmental pollution, floods, collisions, subsidence or other phenomena with damage, directly and indirectly to the population and the economy. They are called a major accident when the damage caused is close to that of a disaster.

Technological vulnerability: Use of inefficient, obsolete and polluting technologies in productive processes and/or services at the institutional and territorial level that prevent achieving productivity, efficiency, saving resources, clean productions and competitiveness of their productive processes and/or services. Insufficiencies in the application of science and technology, inability to incorporate the most appropriate technology to the particular circumstances of each branch of the sector and the transition to new and better practices within sustainable development.

Tectonic plates: Part of the earth's surface that behaves like a simple rigid unit. The plates are between 100 and 150 km thick. They are formed by a continental crust or oceanic crust or both, on top of the upper mantle. The plates move in relation to the axis of the earth and with each other. There are seven large plaques:

- African
- Euro-Asian
- Indian-Australian
- Pacific
- North American
- South American
- Antarctic

  And several smaller ones.

Threat: According to the UNISDR, it is a phenomenon, substance, human activity or dangerous condition that can cause death, injury or other health impacts, as well as damage to property, loss of livelihoods and services, social and economic upheavals or environmental damages. In the Civil Defense legislation of Cuba this term is not used. Danger of disaster are used instead.

Tide scale: Graduated ruler in meters, decimeters and centimeters or also in feet and tenths of a foot. It is placed vertically, next to the tide gauge and it directly reads the height of the sea level.

Time or local time: The time corresponding to a region on the terrestrial globe according to the geographical longitude with respect to the standard reference meridian: The Greenwich meridian or the Paris meridian. Each 5º of length corresponds to one hour of time.

Tornado: Whirlpool or rotating column of air associated or not to the presence of a funnel cloud that starts from the base of a cumulonimbus, of ephemeral life, erratic trajectory and diameter not greater than 400 meters, where the wind speed generally exceeds 250 km/h. It is popularly known as cloud tail or wind sleeve. If it occurs in the sea they are called waterspouts. In general, they are associated to other meteorological phenomena of greater dimension, in particular to the lines of severe local storms. In Cuba, they predominate in the afternoon and early evening hours, most frequently in the rainy season.

Total cloudiness: Fraction of the celestial cupola hidden by all visible clouds.

Traffic accident: Event involving a motor vehicle on the public or private road with public access, used for the transit of vehicles, people and/or animals and which, as a consequence of its circulation, or for violation of a legal precept or regulation, causes damage to the physical integrity of a person.

Trajectory: Place of successive positions of a moving air particle. Curve, place of successive positions of the center of a given synoptic system, such as a depression.

Transfer to other homes: Person transferred in dangerous situations to another home located in a lower risk area or structurally more secure, to protect their life for a relatively short time.

Tropical cyclone: Non-frontal cyclone of synoptic scale and hot core that originates over tropical or subtropical waters, endowed with organized deep convection and closed circulation of surface winds around a well-defined center. The winds move counterclockwise in the northern hemisphere. The tropical cyclone has an extensive area of influence that can reach a diameter of 800 to 1000 km. Tropical cyclones have three dangerous elements that must be considered:

- Strong winds
- Heavy rain
- Storm or upwelling and wind waves.

The stages of tropical depression, tropical storm and hurricane are included within the term tropical cyclone. According to the winds speed it is classified as: tropical depression (maximum sustained winds up to 62 km/h), tropical storm (maximum sustained winds between 63 and 118 km/h) and hurricane (maximum sustained winds exceeding 118 km/h.

Tropical depression: First stage or immature situation of a tropical cyclone, whose winds do not exceed 63 km/h and its center is poorly defined and organized. In it, a significant drop in atmospheric pressure does not usually occur. It is a phenomenon where the main damage factor is that of the accompanying rains.

Tropical storm: Meteorological phenomenon that is part of the evolution of a tropical cyclone. This is the name given to the stage of tropical cyclones, when the sustained velocity of maximum surface winds during one minute is 63 to 118 km/h. In this evolutionary phase it is assigned a

name in order of annual appearance and in terms of the alphabet, according to the relationship determined for the whole year by the Hurricane Committee of the Regional Association. Generally, the most important destructive factor of tropical storms is that of heavy rains.

Tropical wave: Disturbance of the trade winds which travels with them to the west at an average speed of 15 km/h. It can produce cloudiness by low clouds, showers and thunderstorms. Generally, it is more intense and organized in the lower part of the troposphere.

Trough: Area or zone of low pressure, that does not get to constitute a closed center. It gives rise to the formation of clouds of great vertical development and the consequent rains. They are frequent in tropical regions.

Tsunami: Long wave of the ocean, usually caused by movements of the ocean floor during an earthquake. These waves reach heights of up to 20 meters above the mean sea level. The height of these waves in the open sea is almost imperceptible and can take catastrophic dimensions on the coast depending on the configuration of the latter. They are also called tsunamis, the latter term, derived from Japanese, is the one that has been accepted almost universally in all languages. Waves of great size and destructive force, produced by an earthquake at the bottom of the sea, due to the effect of underwater volcanic activity or landslides on the seabed, usually reach great heights and penetrate several kilometers inland.

Turbulence: It is a sudden change in the speed and direction of the winds, caused by natural obstructions to the passage of air or by excessive heating of the earth's surface, which leads to the formation of cumuliform clouds.

Variable cloudiness: The amount of clouds in the sky varies with time and area.

Vector control: Measures taken to reduce the number of disease carriers (vectors) and reduce the risk of the spread of infectious diseases.

Vento: Orifice through which the volcanic material exits. It can be a fissure in the ocean or be in a side area of a volcano. It is not necessarily at the top.

Victim: Person affected by a disaster who has suffered personal injury or damage and/or its property, in which he/she and relatives may be left

without accommodation or housing, in whole or in part, permanently or temporarily, for what they receive shelter and temporary food aid from the community and its authorities, until the recovery of normal environmental conditions and the rehabilitation of the area affected by the disaster.

Vital support: Measures and standardized techniques to support the vital functions of a victim.

Vital systems: Systems that are operationally essential and support the normal functioning of society, community and economy, both in normal situations and disasters. They include water supply, energy, medical attention, processing centers and access roads.

Volcanic conduit: Underground passage through which magma rises from a magmatic chamber towards the surface.

Volcanic eruption: Abrupt and violent emission on the surface of the earth, or in any other planet, of materials that come from the interior. Mostly, volcanic eruptions are caused by the presence of volcanoes, although there are some exceptions such as the geyser (thermal source emitting very hot water and periodically erupting) and mud volcanoes (the material comes from hydrocarbon deposits).

Vortex: Big whirlpool in a body of water. Rotational movement that occurs within a fluid in motion.

Vulcan eruption: It is formed by explosions of short duration that expel ash and gas into the atmosphere. It can reach an altitude of up to 10 kilometers. It can emit pyroclastic flows.

Vulnerability analysis: A technique that, based on the study of the physical and geographical, biological and socioeconomic situation of a place, detects its sensitivity to the impact of a destructive phenomenon.

Vulnerability and capacity analysis (VCA): Investigative process of participatory community diagnosis, aimed at determining the risk and the actions necessary to reduce it. It includes the identification of the threats or dangers and the vulnerabilities that the community presents, as well as the capacities to face them.

Vulnerability study: Analysis process that determines the risk of potential damage to a structure.

Vulnerability: According to the definition from UNISDR, vulnerability is summarized as the characteristics and circumstances of a community, system or that make them susceptible to the harmful effects of a threat. There are several aspects of vulnerability that arise from various physical, social, economic and environmental factors. Examples include inadequate design and poor construction of buildings, improper protection of assets, lack of information and public awareness, limited recognition of risk and preparedness, and neglect of management sensible or prudent environmental. For Cuban legislation, it is the degree of susceptibility (physical, social, cultural, economic, etc.) of an element or set of elements (human life, heritage, vital services, infrastructure, agricultural areas) to the impact of a disaster hazard of a given magnitude.

Vulnerable species: Living beings classified as "threatened" in the near future, if the causal factors of the threat continue to operate. It includes those species whose majority or the entire population is decreasing due to overexploitation, extensive destruction of their habitat or other environmental disturbances; or to populations that have been seriously reduced, whose security has not been achieved; and the distribution of populations that are still abundant but that are under treatment of severe adverse factors throughout their range.

Water level: Level of water accumulated in the subsoil on a waterproof layer of the ground; they can be exploited by means of wells. This name is also given to the subsoil layer that contains and stores them.

Weather conditions: Weather conditions, which are measured, documented and studied to determine variables and forecasts.

Weather monitoring: Long-term observations of the variables of magnitudes (for example: temperature, CO2 concentration, precipitation) that describe the state of the atmosphere and the earth's surface.

Weather radar image: Digitally generated product obtained from information of observation radars. Subsequently, the information is processed in equipment that maintain the deployment of digital images in which variables are plotted, such as potential rain, wind speed and direction, position and height of the cloud, mainly.

Weather satellite image: Digital images obtained by means of meteorological satellites. There are different types of images according to the band of the electromagnetic spectrum detected by the sensors. In regard to meteorology, there are three main study bands: The visible/The infrared/The so-called with water vapor. Each of these has a specific application. Infrared is the most used by the weather forecast.

Wet year: Year in which precipitation or flow is significantly higher than normal.

Work sectors: Areas or parts in which a focus of destruction or affectation is divided to facilitate the direction and realization of the rescue and saving actions.

Zoonosis: Generic name of the infectious diseases of animals, which can be transmitted to humans. They are usually enzootic (disease that covers a specific geographical area) or epizootic (disease circumscribed to certain geographical areas), but which exceeds the normal expected level.

Acronyms and abbreviations

ACS: Association of Caribbean States

ADPC: Asian Disaster Preparedness Center

ADRC: Asian Disaster Reduction Center

ADRRN: Asian Disaster Reduction and Response Network

AIOGDPC: Asociación Iberoamericana de Organismos Gubernamentales de Defensa y Protección Civil.

ALNAP: Active Learning Network on Accountability and Results of Humanitarian Action

AMA: Cuba Environment Agency, belongs to CITMA

APELL: Awareness and Preparation for Emergencies at Local Level.

BCPR: Bureau for Crisis Prevention and Recovery

CADRI: Capacities for Disaster Reduction Initiative

CAMEO: Computer-aided Emergency Operations Management

CAPRADE: Andean Committee for the Disaster prevention and care.

CARICOM: Caribbean States Community

CB: Distinctive sign approved for the Cuban Fire Department, Minint

CBD: Convention on Biological Diversity

CDEMA: Caribbean Disasters Emergencies Management Agency.

CELAC: Community of Latin American and Caribbean States

CENAIS: National Center for Seismological Research

CEPAL: Economic Council for Latin America

CEPREDENAC: Coordination Center for the Prevention of Natural Disasters in Central America

CGB: Cuba ranger bodies

CIED: Research Center on Disaster Epidemiology

CIIFEN: International Center for the Investigation of the El Niño Phenomenon

CNSN: National Center for Nuclear Safety

COP 21: United Nations Climate Conference, Paris 2015

CRDAC: Capacity Building Center for Disaster Risk Reduction and Adaptation of Climate Change

CRID: Regional Disaster Information Center for Latin America and the Caribbean

CUREE: Consortium of Universities for Research in Earthquake Engineering

DC: Distinctive sign of the Civil Defense approved by Resolution Nb. 2 of the Chief of the National Civil Defense Staff, dated May 27, 2005

DEWA: Division of Early Warning and Evaluation

DIPECHO: Disaster Preparedness Program of the European Commission

DMTP: United Nations Disaster Management Training Program

ECHO: European Commission Department of Humanitarian Aid and Civil Protection

EMI: Earthquake and Mega Cities Initiative ETI / RD: Inter-Agency Task Force on Disaster Reduction

EWC III: Third World Conference on Early Warning

FAO: United Nations Food and Agriculture Organization

GEF: Global Environment Fund

GEOSS: Global Earth Observation System or Earth Observation Group

GFMC: Global Fire Monitoring Center

GIEWS: Global Information and Early Warning System

GRID: World Resource Database

GRIP: Global Risk Identification Program

IAEA: International Atomic Energy Agency

IASC: Interagency Standing Committee

ICLEI: Local Government for Sustainability

ICPAC: Climate Applications and Predictions Center

ICPO: International Civil Protection Organization

ICRC: International Committee of the Red Cross

IDO: Institute of Oceanology

IFAD: International Fund for Agricultural Development

IFRC: International Federation of Red Cross and Red Crescent Societies

IGAD IEWP: International Early Warning Program

IGAD: Intergovernmental Authority for Development

IGOS: Integrated Global Observation Strategy

IHAM: International Humanitarian Assistance Mechanisms

ILO: International Labor Organization

INRH: National Institute of Hydraulic Resources of Cuba

INSARAG: International Search and Rescue Operations Advisory Group

INSMET: Institute of Meteorology of Cuba

INTEGRATE: Central American Integration Network for Corporate Social Responsibility

IOM: International Organization for Migration

IPF: Institute of Physical Planning of Cuba

ISC: International Science Council

ISDR: International Strategy for Disaster Reduction

ISO 26000: 2010

ITU: International Telecommunication Union

IUCN: International Union for the Conservation of Nature and Natural Resources

MAH: Hyogo Framework for Action

MCEER: Multidisciplinary Center for Seismic Engineering Research

MDO: Millennium Development Objectives

NAPA: National Adaptation Program of Action

New ISO 26000 Standard: 2010

NGO Care:

NGO Oxfam:

NGO Save the Children:

NGO: Non-Governmental Organization:

OCHA: United Nations Office for the Coordination of Humanitarian Affairs

OPCW: Organization for the Prohibition of Chemical Weapons

PAHO: Pan American Health Organization

PERI: Public Entity Risk Institute

PEWP: Platform for Early Warning Promotion

PICC: Intergovernmental Panel on Climate Change

PREANDINO: Andean Regional Program for the Prevention and Mitigation of Risks

RADIUS: Risk Assessment Tools for the Diagnosis of Urban Areas against Seismic Disasters

REDULAC: University Network of Latin America and the Caribbean for Disaster Risk Reduction

SCR: Cuban Society of the Red Cross

SDO: Sustainable Development Objectives

SELA: Latin American and Caribbean Economic System

Sendai Declaration and Sendai Action Framework for Disaster Risk Reduction 2015-2030: adopted at the Third UN International Conference on Disaster Risk Reduction

Social Responsibility IRI: International Institute for the Research on Climate and Society

SOPAC: Commission of Applied Geosciences of the South Pacific

START: System for Analysis, Research and Capacity on climate change.

UNCCD: United Nations Convention to Combat Desertification CITMA: Ministry of Science Technology and Environment

UNCRD: United Nations Center for Regional Development

UNDAC: United Nations Damage Assessment and Humanitarian Aid Coordination Team

UNDAF: United Nations Development Assistance Framework

UNDG: United Nations Development Group

UNDP: United Nations Development Programme

UNEP: United Nations Environment Program

UNESCO: United Nations Organization for Education, Science and Culture

UNFCCC: United Nations Framework Convention on Climate Change

UNFPA: United Nations Fund of Population

UN-HABITAT: United Nations Program for Settlements (UN-Habitat) UN / ISDR: Inter-Agency Secretariat of the International Strategy for Disaster Reduction

UNHCR: (**ACNUR)** United Nations High Commissioner for Refugees

UNICEF: United Nations Fund for Children

UNISDR: United Nations Office for Disaster Risk Reduction

UNITAR: United Nations Institute for Vocational Training and Research

United Nations Decade on Biodiversity: 2011-2020

UNOSAT: UNOSAT Satellite Operations Program of the United Nations Institute for Vocational Training and Research

UNU: United Nations University

UN-Water: UN-Water UNV: United Nations Volunteers Program

WFP: World Food Program

WHO/PAHO: World Health Organization/Pan American Health Organization

WMO: World Meteorological Organization

WTO: World Tourism Organization

WTO: World Trade Organization

Sustainable Development Objectives 2015-2030

OBJECTIVE 1:
End poverty in all of its forms throughout the world.

OBJECTIVE 2:
End hunger, achieve food safety and nutrition improvement and promote sustainable agriculture.

OBJECTIVE 3:
Guarantee a healthy life and promote well-being for everyone in all ages.

OBJECTIVE 4:
Guarantee an inclusive, equitable and quality education and promote lifelong learning opportunities for everyone.

OBJECTIVE 5:
Achieve gender equality and the empowerment of all women and girls.

OBJECTIVE 6:
Guarantee water availability and its sustainable management and sanitation for everyone.

OBJECTIVE 7:
Guarantee access to affordable, safe, sustainable and modern energy for everyone.

OBJECTIVE 8:
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for everyone.

OBJECTIVE 9:
Build resilient infrastructures, promote inclusive and sustainable industrialization and encourage innovation.

OBJECTIVE 10:
Reduce inequality in and between countries.

OBJECTIVE 11:
Make cities and human settlements be inclusive, safe, resilient and sustainable.

OBJECTIVE 12:
Guarantee sustainable consumption and production modalities.

OBJECTIVE 13:
Adopt urgent measures to fight climate change and its effects.

OBJECTIVE 14:
Preserve and sustainably use oceans, seas and marine resources for sustainable development.

OBJECTIVE 15:
Protect, restore and promote the sustainable use of terrestrial ecosystems, carry out sustainable management of forests, fight desertification, stop and reverse land degradation and curb the loss of biological diversity.

OBJECTIVE 16:
Promote peaceful and inclusive societies for sustainable development, facilitate access to justice for everyone and create effective, responsible and inclusive institutions at all levels.

OBJECTIVE 17:

Strengthen execution means and revitalize the World Alliance for Sustainable Development.