



## GLOSSARY OF TERMS

### ABSTRACT

This is an extensive annotated list of definitions used in the Guidelines. It is not intended to be all-inclusive, nor is it a comprehensive dictionary. It seeks to define terms in ways that are applicable to all of the disciplines involved in disaster medicine and management. Terms included are to be used as defined for all research and evaluations using these Guidelines and Templates.

**TFQCDM/WADEM: *Health Disaster Management: Guidelines for Evaluation and Research in the “Utstein Style.”* Glossary of terms. *Prehosp Disast Med* 2002;17(Suppl 3):144–167.**

**Absorbing capacity** — the ability to absorb the free energy of an event without sustaining a loss of essential functions of the affected society. Absorbing capacity is a part of the overall resilience of a society.

**Adapt** — to make suitable for a purpose; become adjusted to new conditions.<sup>1</sup>

**Adaptation** — the adjustment of an organism or population to a new or altered environment.<sup>2</sup>

**Advocacy** — the act of pleading or arguing in favor of something, such as a cause, an idea, or a policy; active support.<sup>3</sup>

**Advocate** — a person who publicly supports or recommends a particular cause or policy.<sup>4</sup>

**Algorithm** — a process or set of rules used for calculation or problem solving.<sup>5</sup>

**Amplitude** — the degree of departure from the point of equilibrium (pre-event state);<sup>6</sup> a measure of power at a given point in time.

**Assess** — to estimate the size or quality of.<sup>7</sup>

**Assessment** — the product obtained from assessing;<sup>8</sup> An interdisciplinary process that involves the collation, evaluation, and interpretation of information from various sources concerning both direct and indirect losses, and short-and long-term effects.<sup>9</sup>

**Attenuate** — reduce in force, value, or virulence;<sup>10</sup> to lessen.

**Audit** — investigations that compare what was done or is being done with the actions prescribed by “established” standards or objectives.

**Augment** — to increase; add to.

**Avalanche** — the rapid and sudden sliding and flowage of masses of usually incoherent and unsorted mixtures of snow/ice/rock material.<sup>11</sup>

**Basic Societal Functions** — major functional components of a society that may be affected either directly or indirectly by an event resulting in a disaster: (1) Medical; (2) Public health; (3) Sanitation and water supplies; (4) Shelter and clothing; (5) Food; (6) Energy supplies; (7) Search and rescue; (8) Public works and engineering; (9) Environment; (10) Logistics and transport; (11) Security; (12) Communications; (13) Economy; and (14) Education. Each of these functional components is composed of many elements. All of the basic societal elements are linked together by a Coordination and Control function provided by the respective governments.

**Benefit** — whatever is for the good of a person or thing;<sup>12</sup> a favorable or helpful factor or circumstance.<sup>13</sup>

**Buffering capacity** — the ability of a society to cope with the damage sustained from an event and to function in spite of damage. It is the ability of a society to minimize the change in an essential function or functions for a given change in available resources (goods and/or services).

**Building codes** — ordinances and regulations controlling the design, construction, materials, alteration and occupancy of any structure, for the protection of public health, safety, and welfare. Building codes include technical standards for electrical, heating, plumbing and sanitary work.<sup>14,15,16</sup>

**Built environment** — an area in which buildings or other structures (canals, pylons, etc.) have been constructed. That part of the environment, which is predominantly constructed, as distinguished from the natural environment.<sup>17</sup>

**Capable** — competent, able.<sup>18</sup>

**Capabilities** — competencies or human abilities, of a personal, institutional, managerial or empirical nature that can reduce a designated population, structures, or a physical environment to severe loss or damage from the effects of a hazards or combination of hazards.<sup>18–20</sup>

**Capacity** — the maximum amount that can be contained or produced.<sup>21</sup>

**Capacity building** — the concept of capacity building is currently widely used, in many different domains, especially in the United Nations and other international development organizations. In general, capacity building efforts aim to provide a defined target group or an organization with skills, resources, both human and financial, or technology needed to enable it to perform to its full potential.<sup>22</sup>

**Casualty** — a person killed or injured by an event.<sup>23</sup>

**Civil society** — public forms of organisation or activity within a society, which are not military or ecclesiastical in nature.<sup>24</sup>

**Climate change** — a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forces, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

Note that the Framework Convention on Climate Change (UNFCCC), in Article 1, defines “climate change” as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over

comparable time periods”. The UNFCCC thus makes a distinction between “climate change” attributable to human activities altering the atmospheric composition, and “climate variability” attributable to natural causes. See **also**: Climate variability.

**Climate variability** — description of deviations using climate statistics for a given period of time (such as a month, season, year) from the long-term statistics relating to the same calendar period.<sup>25</sup>

**Collect** — to bring or come together.<sup>26</sup>

**Command and Control** — military term. See Coordination and Control.

**Communications** —all forms used for interchange of information.

Communications includes all public and private communication facilities (e.g., fire, police, military, government, private radio operators (HAM), newspapers, other news media, television, telephone and telex, facsimile, the Internet, satellite, and other facilities that can be used in time of disaster.<sup>27</sup> It is a basic societal function.

**Community** — a group with a commonality of association and generally defined by location, shared experience, or function. A social group that has a number of things in common, such as shared experience, locality, culture, heritage, language, ethnicity, pastimes, occupation, workplace, etc.<sup>28</sup>

**Concept** — a general notion, idea, or mental picture; ability to imagine; a set of ideas or combination of theories logically linked together.

**Contingency** — a future event or circumstance regarded as likely to occur or a influencing present action.<sup>29</sup>

**Contingency plans** — plans to meet a crisis made with the assumption that an event will happen in a specific location; just in case.<sup>30</sup>

**Co-ordination and Control** — the process that directs and coordinates all activities encumbered in the responses to a disaster. Co-ordination and Control provides the structure for all of the disaster management functions. Its main role is to assure that responses meet identified needs of the affected society.

**Conflict (inter-human)** — inter-human conflicts consist of disagreements between two or more parties that have the potential to inflict harm upon one, both, or all of the parties involved.

**Coping** — the manner in which people and organisations act, using existing resources within a range of expectations of a situation, to achieve various ends. In general, this involves managing resources, both in normal times, as well as during unusual, abnormal, and adverse conditions of a disaster event or process.<sup>31</sup>

**Coping capabilities** — a combination of all the strengths and resources available to humans in a particular location that are useful in solving, handling, or

managing a problem or a task.<sup>32</sup> Coping capacity is the capacity of humans to cope with a given situation or task.

**Cost** — a loss or sacrifice; an expenditure of resources.<sup>33</sup>

**Cost-benefit** — the benefit derived from the response relative to the costs of gaining this benefit.

**Cost-effectiveness** — the measure of how effective the response was in terms of achieving its stated goals and objectives. Cost-effectiveness is useful in comparing the results from one response with those achieved by another.

**Cost-efficiency** — a measure of the efficiency with which the response was carried out. It is useful for comparing activities within one system.

**Critical pathways** — an outline of process that defines, in step, the best practice known at the time.

**Critical threshold** — the level of a good or services below which the crude mortality rate will increase.

**Crude Mortality Rate** — the number of deaths of a given population measured as deaths/10,000/day

**Dam** — (also barrage; barrier; weir) barrier constructed across a valley for impounding water or creating a reservoir<sup>34,35,36</sup>

**Damage** — the negative result from the impact of an event.

**Data** — known facts or things used as a basis for inference or reckoning. Data are not synonymous with numerical expressions.

**Database** — a structured set of data.<sup>37</sup>

**Decision-makers** — Persons who have the ability, resources, and authority to make decisions or judgments and to act on them.

**Deforestation** — to clear of forest or trees;<sup>40</sup> Conversion of forest to non-forest.<sup>41</sup>

**Deficit** — the condition that results when the available supply is less than the rate of consumption.

**Definitive medical care** — medical treatment that includes all equipment and procedures necessary to restore the health or provide palliation, if health can not be restored, to the individual patient.

**Descriptive studies** — attempts to answer questions such as, “What happened?”, or “What is it?” Descriptive studies do not need to evaluate an intervention, they may just describe in detail what happened, how it happened, and who was involved.

**Desertification** — the process by which a semi-arid (dry land) ecosystem loses its

capacity for seasonal revival or repair and progresses towards becoming a desert.<sup>42</sup> This process causes environmental degradation well beyond its boundaries. It is a mixed event related to natural (lack of adequate rainfall, seasonal variations in evaporation, texture and structure of the soil, topography, types of vegetation, water, and wind erosion) and human-made actions (herd growth, technological interference, slash-burn agriculture). Desertification is a slow-onset type of event.<sup>43,44</sup>

**Development** — the responses to the disaster of sufficient magnitude to render the functional status of the component above the pre-event state. Development occurs when the pre-event status of a basic component of society is raised to levels greater than in the pre-event conditions.

**Development strategy** — a set of principles or plan of action designed to promote the growth and output while emphasizing sustainable development objectives. More recently, development has been increasingly defined in terms of human development, with special emphasis on poverty eradication and protection of the environment.<sup>45</sup>

**Disaster** — a serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of affected society to cope using only its own resources;<sup>46</sup> the result of a vast ecological breakdown in the relations between man and his environment, a serious and sudden event (or slow as in drought) on such a scale that the stricken community needs extraordinary efforts to cope with it, often with outside help or international aid.<sup>47</sup> A disaster results when the absorbing capacity of the affected society is unable to maintain the functionality of an essential element above a threshold.

*Health Disaster:* a precipitous or gradual decline in the overall health status of a community for which the community is unable to cope without outside assistance.

**Disaster Critical Control Point (DCCP)** — the time at which the supplies balance all of the needs in terms of the function or sub-function being evaluated. Identification of this time depends on the correct, ongoing re-assessment of needs and available supplies.

**Disaster management** — the aggregate of all measures taken to reduce the likelihood of damage that will occur related to a hazard(s) and to minimize the damage once an event is occurring or has occurred and to direct recovery from the damage; the body of policy and administrative decisions and operational activities that pertain to the various stages of a disaster at all levels.<sup>48</sup>

**Disaster preparedness** — the aggregate of all measures and policies taken by

humans before the event for reduction of the damage that otherwise would have resulted from the event, and coping with the damage sustained.

**Disaster prevention** — the aggregate of approaches and measures taken to ensure that the hazard does not cause a disaster, either by preventing the event or by mitigating activities, or by activities/structure that is able to absorb the event.

**Disaster reduction** —all actions taken to reduce the consequences of an event (measures of prevention, mitigation, preparedness, response and research).<sup>49,50</sup>

**Disseminate** — to spread widely. *Dissemination* is the noun.<sup>51</sup>

**Droughts** — period of deficiency of moisture in the soil such that there is inadequate water required for plants, animals, and human beings.<sup>52,53,54</sup>

**Duration** — the length of time over which something continues (for disasters: brief = seconds to hours; short = hours to days; intermediate = days to weeks; prolonged = months to years).

**Early warning** — some timely form of either written or verbal indication of an impending event; advance notification of a problem in time for appropriate possible actions.<sup>55,56</sup>

**Earthquake** — a sudden break within the upper layers of the earth, sometimes breaking the surface, resulting in the vibration of the ground.<sup>57</sup>

**Economy** — the wealth and resources of a community, especially in terms of production and consumption of goods and services;<sup>58</sup> the main techniques for providing the resources essential for maintaining the basic functions and infrastructure of the affected society. It includes how these resources are used by the society and the sources of these resources, e.g., agriculture, crops, industry, and the products produced, jobs, foraging, trade and transport (import/exports), value of the currency, per capita income, etc. It is a Basic Societal Function.

**Education** — the basic societal function that is responsible for the education of the citizens. It includes all resources used in educating and training the affected population. It includes the buildings, teachers, libraries, and training facilities. Thus, it also includes training of the responders or potential responders, coordination and control personnel, etc. Education is closely related to culture.

**Effects** — the results of an action.<sup>59</sup>

**Emergency** — a situation that is out of control and requires immediate attention.

**Emergency management** — a range of measures to manage risks to communities and the environment; the organisation and management of resources for dealing with all aspects of emergencies. Emergency management involves the plans, structures and arrangements which are established to bring together the normal endeavors of government, voluntary and private agencies in a comprehensive and coordinated way to deal with the whole spectrum of

emergency needs including prevention, response, and recovery.<sup>60, 61</sup>

**Endpoint** — the criterion or criteria used to judge the results of an intervention or action. *Primary endpoints* are the explicit variables that define the relationship being hypothesized. *Secondary endpoints* are measures that may result from the research or be defined by the research that are not related directly to the question(s) being studied.

**Energy** — any property with the capability to transform or change a function or parts of the environment or the society.

**Environment** — the total infrastructure of the affected society including the existence, condition, of the nature as well as social factors such as population densities, topography, culture and existing social and governmental structures, as well as living conditions and known hazards and the risks associated with each hazard.<sup>62,63</sup>

**Environmental damage** — adverse effects to the environment.<sup>64</sup>

**Environmental interference** — modification of the environment by human actions.

**Environmental risk** — risks to natural ecosystems or to the beauty or amenity of the natural world.<sup>65</sup>

**Erosion** — loosing or dissolving and removal of rock or soil as a result of water, ice or wind action.<sup>66</sup>

**Evacuation** — moving persons and supplies from an unsafe to safe area.<sup>67</sup>

**Evaluate** — to determine or fix a value to; to determine the significance or worth of, usually by careful appraisal or study.<sup>68</sup>

**Evaluation research** — the investigation to affix a value to what is being studied.

**Event** — an occurrence that has the potential to affect living beings and/or their environment; a realization of a hazard.

*Precipitating event:* event responsible for initiating the damage resulting directly from the occurrence of the event.

*Secondary events:* events that occur as a result of the damage caused by the precipitating event.

**Experimental studies** — studies that use inferential statistics to compare the outcome of a given intervention with that of a control group that does not receive the intervention.

**Explicit** — expressly stated, leaving nothing merely implied; stated in detail.<sup>69</sup>  
In research, explicit criteria are firm and based on scientific evidence (evidence-based without interpretation).



**External validity** — the ability to apply the findings of the research in other areas or applications.

**Floods** — too much water in the wrong place; overflows of areas not normally submerged with water;<sup>70</sup>

**Flood plains** — an area adjacent to a river, formed by the repeated overflow of the natural channel bed.<sup>71</sup> The land which may be covered by water when the river overflows its banks during floods.<sup>72</sup>

**Food** — edible substance containing nutrients that, on ingestion, maintain the vital functions of a person or other living organism.<sup>73</sup> Part of the Basic Societal Function Food and Nutrition.

**Function** — a mode of action or activity by which a thing fulfils its purpose.<sup>74</sup>

**Functional threshold** — the level of service/goods provided for any given component that is insufficient to allow it to continue to provide a minimum level of service essential to meet the needs of the affected population. At levels below the functional threshold, the societal component becomes dysfunctional.

**Goods**—commodities, equipment, wares, and merchandises.<sup>75-77</sup>

**Grand Poo-Bah** — a person who holds many offices simultaneously.<sup>78</sup>

**Gross Domestic Product (GDP)** — the value of all goods and services produced within a nation's boundaries, regardless of ownership.<sup>79</sup>

**Gross National Product (GNP)** — the value of all goods and services produced by a country during a given period. It includes all production by facilities owned by a nation's citizens, even if the facilities are in another country.<sup>80</sup>

**Gross World Product (GWP)** — the value of all goods and services produced on earth.<sup>81</sup>

**Guidelines** — principle or criterion guiding action; a general rule, principle, or piece of advice.<sup>82</sup> A statement or other indication of policy or procedure by which to determine a course of action.

**Habitat** — the natural home or environment of an organism;<sup>83</sup> area or type of environment in which an organism or ecological community normally lives or occurs: a marine habitat; place in which a person or thing is most likely to be found.<sup>84</sup>

**Hazard** — anything that may pose a danger; it is used in this discussion to mean a natural or human-made phenomenon or a mixture of both, that has the potential to adversely affect human health, property, activity, and/or the environment. Hazards are specific as to type, and as a general rule contain

energy.<sup>85</sup>

*Natural hazard:* Natural phenomena which occur in proximity to and pose a threat to people, structures or economic assets and may cause disaster. They are caused by biological, geological, seismic, hydrological, or meteorological conditions or processes in natural environment.

*Human-made hazard:* A condition created by humans that have in-built properties that may have disastrous consequences for a society.<sup>86</sup>

**Hazard assessment** — identification and scaling of latent conditions that represent a threat.

**Hazard identification** — the detection and identification of hazards.

**Hazard mapping** — the process of establishing geographically where and to what extent particular phenomena are likely to pose a threat to people, property, infrastructure, and economic activities. Hazard mapping represents the result of hazard assessment on a map, showing the frequency/probability of occurrences of various magnitudes or duration.<sup>87</sup> Hazard mapping comprises the cartographic depiction of possible future events accompanied by qualitative and quantitative analysis; it is not only the mapping of past events.<sup>88</sup>

**High wind** — air moving from one place to another with an extraordinarily high speed capable of producing damage on different societies and environments.

**Impact** — impact is defined as the actual process of contact between an event and a society or a society's immediate perimeter; an effect or influence, especially when strong;<sup>89</sup> Impact has a broad connotation and refers to both positive and negative influences produced by events on the environment.<sup>90</sup>

**Implicit** — implied though not plainly expressed;<sup>91</sup> implicit standards are implied, usually through judgments of experts in the field through consensus among the experts. Such standards generally are used when the science cannot provide sufficient data for the explicit definition of a standard.

**Incident command system (ICS)** — a system of command and control used in the management of incidents.

**Indicate** — to point out, make known, show; a sign or symptom of; show to be necessary.<sup>92</sup>

**Indicator** — a thing that indicates;<sup>93</sup> signs or markers that define the status of a specific component or element.

*of Effectiveness* — signs and markers that reflects the effectiveness of an intervention.

*of Function* — signs and markers that indicates the functional status of a specific component or element of the affected society.

*of Benefit* — express value of an intervention.

**Information** — the interpretation and processing of available and new data for a specific context, giving the data a purposeful meaning.

**Infrastructure** — the built environment; encompasses all societal structures including buildings, bridges, roads, sanitary facilities, railroads, waterways, water facilities, and other essential societal structures and functions.

**Intensity** — as refers to an event, the integral of the amplitudes over a given period of time (amplitudes/time interval).

**Integrate** — combine into a whole; complete by addition of parts. *Inte*

**Mass** — a large number or amount.<sup>104</sup>

**Mass casualties** — a large number of casualties.

**Medical care** — the Basic Societal Function that relates to the system that provides medical treatment to *individual* patients. The Medical System provides for the detection of signs and symptoms, and the diagnosis and treatment of patients. It includes primary, secondary, and tertiary care. It also includes psychological support and treatment.

**Methodologies** — a system of methods used in a particular field;<sup>105</sup> A body of practices, procedures, and rules used by those who work in a discipline or engage in an inquiry; a set of working methods.

**Mitigate** — to lessen or decrease the seriousness of the process to which the word is applied.

**Mitigation (disaster mitigation;)** — alterations that are achieved before an event occurs that decrease vulnerability.<sup>106</sup>

**Modify** — to make partial changes in.<sup>107</sup>

**Modification** — is the aggregate of all approaches and measures to modify the amplitude, intensity, scope, scale, and/or magnitude of an event, or measures that change the hazard and/or the risk that a hazard will evolve into an event.

**Multi-casualty event** — an event that produces many casualties, but is managed completely with the resources available within the area in which the event occurred.

**Natural resources** — material source of wealth, such as timber, freshwater, or mineral deposit, etc. that occurs in a natural state and has economic value.<sup>108</sup>

**Necessity** — an indispensable thing.<sup>109</sup>

**Need** — the difference between requirements and supplies.<sup>110</sup>

**Outcome** — the result of a specific intervention(s) or project(s) relative to their pre-established goals and objectives.

**Output** — the product of a process.<sup>111</sup>

**Quantitative techniques** — collection of data using measurements expressed as numerical values.

**Planning** — the process used to develop contingencies in preparation for an event that is likely to occur at some time. Planning includes warning systems, evacuation, relocation of dwellings (e.g., for floods), stores of food and water, temporary shelter, energy, management strategies, disaster drills and exercises, etc. Contingency plans and responses are included in the preparedness in the

sense used in this document. There are three types of planning used in anticipation that an event may occur:

*Strategic planning* — preparing the organization to respond to threats in locations that are not specified and not immediately threatened.

*Contingency planning* — planning that is site-specific and recognizes that a disaster could occur at any time.

*Forward planning* — planning that occurs when an event is imminent and some details regarding the threat are known to the crisis manager.<sup>112</sup>

**Population-at-risk** — the location and number of persons likely to be affected if the hazard becomes actualized into an event.

**Power** — the rate of energy output;<sup>113</sup> the ability to implement any intervention or action to either help or hurt the body or system or faction at question.

**Prediction (of event)** — statement of the expected time, place, and magnitude of a future event (for earthquakes and volcanic eruptions).<sup>114,115</sup>

**Pre-event health status** — description of the health situation in a society that existed before a disaster occurs.

**Preparedness** — the aggregate of all measures and policies taken by humans before the event; to be prepared for the event.

**Prevention** — to keep from happening.

**Process** — a course of action or procedure.<sup>116</sup>

**Public authorities** — government officials, or officially designated authorities at any level of government responsibility, entrusted with either policy, administrative or technical/sectoral functions.<sup>117</sup>

**Public awareness** — the state of the community of having knowledge and being well-informed.<sup>118</sup>

**Public health** — the Basic Societal Function that is concerned with the health of *groups* of people or a population.

**Public information** — information, facts, or knowledge provided or learned as a result of research or study, which is public, open to the people as a whole.<sup>119</sup>

1. Knowledge derived from study, experience, or instruction;
2. Knowledge of a specific event or situation; intelligence;
3. A collection of facts or data: statistical information;
4. The act of informing or the condition of being informed: Safety instructions are provided for the information of our passengers.<sup>120</sup>

**Public Works and Engineering** — the Basic Societal Function that includes the process of application of *technical* knowledge and assistance to develop and

maintain the infrastructure of the affected society. It involves what the society provides to sustain its infrastructure including all physical structures needed for a society to function (railroads, roads, buildings, etc.)

**Qualitative techniques** — methods used to identify phenomena that occur and to develop hypotheses about why or how they occurred. In qualitative research, hypotheses can not be proven to statistical significance relative to cause and effect (internal validity). Observations can be made and the formulation of hypotheses is a reasonable outcome. Such observations, particularly when they are supported by observations in other similar events, may have high external validity and thus, may affect responses to future events that have similar characteristics to the event being studied.

**Quasi-experimental studies** — studies that compare the effects of two similar, but not identical interventions.

**Reconstruction** — reorganization of the affected territory, reconstruction of the built environment, restoration of basic services, and the development of the economy with a view to re-establishing the pre-disaster conditions.<sup>121</sup>

**Recovery** — returning the state of an organisms to the state it had before it was temporarily reduced. For disasters this means bringing all of the societal components back to their pre-event functional status (level of function).

**Reforestation** — (=Reafforestation<sup>122</sup>) replant with trees; cover again with forest;<sup>122</sup> To replant (an area) with forest cover.<sup>123</sup>

**Rehabilitation** —recovery of human function and /or society.

**Reliability** — the extent to which a data gathering method will give the same results when the process is repeated.<sup>124</sup> Reliability includes the amount of error (random or systematic [bias]) that is inherent in the method used for data collection.

**Relief** — efforts directed at the alleviation of pain or distress.<sup>125</sup>

**Reorganize** — to organize differently.

**Requirement** — an imperative; depend on for fulfillment;<sup>126</sup> a necessity (see necessity)

**Research** — studious inquiry or examination; to investigate thoroughly; investigation *or* experimentation aimed at the discovery and interpretation of facts, revisions of accepted theories or laws in the light of new facts, or the practical application of such new or revised theories or laws.<sup>127</sup>

**Resilience** — resilience is the pliability, flexibility, or elasticity of the population/environment to absorb, buffer, and/or manage the event/damage.

**Resources** — goods (in kind), consumables and services available to achieve an end;<sup>128</sup> means available to achieve an end, fulfill a function, etc.<sup>129</sup>  
(Money is used to purchase goods and services rather than being a resource.)

**Response** — answer to a defined need or a request.

**Restore** — Bringing a function or a structure back to its original state.

**Richter scale** — Devised by C.F. Richter in 1935, an index of the seismic energy released by an earthquake (as contrasted to intensity that describes its effects at a particular place), expressed in terms of the motion that would be measured by a specific type of seismograph located 100 km from the epicentre of an earthquake. Nowadays several “magnitude scales” are in use. They are based on amplitudes of different types of seismic waves, on signal duration or on the seismic moment.<sup>130</sup>

**Risk**— the objective (mathematical) or subjective (inductive) *probability* that some thing negative will occur (happen).

*Acceptable risk* — Probability of a human and material loss of a certain degree that is perceived by the community or relevant authorities as tolerable compared to actions necessary to minimize this probability. *syn.* calculated risk.<sup>131</sup>

*Calculated risk* — Potential that an event will take place is perceived as so small that the benefits from the hazard than cause this event (even if the hazard is enormous) outweighs the possibility that the event will happen.

**Risk assessment (risk analysis)** — prediction and estimation of risk.<sup>132</sup>

**Risk factor** — a factor that modifies the risk.

**Risk management** — human actions that are directed towards modification of the probability that a hazard will be converted into an event and eventually into a disaster.

**Risk marker** — the presence of an attribute of the hazard that is associated with an increased probability that an event *may* occur and can be used as an indicator of an increased or increasing risk that the specific hazard will occur.<sup>133</sup>

**Risk mapping** — the presentation of the result of risk assessment on a map, showing the levels of expected losses which can be anticipated in specific areas, during a particular time period, as a result of particular disaster hazards.<sup>134</sup>

**Risk reduction** — A selective application of appropriate techniques and management principles to reduce either likelihood of an occurrence or its consequences, or both.<sup>135</sup>

**Scale** — intensity of an event over a given geographical area.

**Scope** — a real or abstract border or limitation of actions, processes or a

geographical area; extent to which it is possible to range.<sup>136</sup>

**Search and rescue** — the process of finding and freeing (disengaging) persons (or animals) affected by a disaster. The Basic Societal Function that provides search and rescue.

**Security** — the state of being protected from injury inflicted by other beings or natural events; Security is the basic societal function that is responsible for the security of a given (defined) population.

**Seismic** — is the adjective derived from the noun *seism*, which is derived from the Greek meaning *earthquake*.<sup>137</sup> In the context of disaster, seismic means related to vibrations of the earth and its crust. Such vibrations are produced either by movement of the tectonic plates of the earth, volcanic eruptions, or from artificial causes as result from explosions.<sup>138</sup> (Secondary event includes tsunamis.)

**Service** — the act of helping or doing work for another or for a community.<sup>139</sup>

**Shelter** — anything that serves as a shield or protection from danger, bad weather, etc; A place of refuge provided.<sup>140</sup> Sheltering is an action that consists of providing asylum or provisional lodgings to an individual or group.<sup>141</sup>

**Shelter and Clothing** — the Basic Societal Function that encompasses the provision of protection against harmful environmental elements.

**Stabilization** — to stabilize means to achieve a stable state.<sup>142</sup> To bring a situation, a function or a structure to stay functionally or statically between defined lines or limits.

**Standard** — an object or quality or measure serving as a basis or example or principle to which others conform or by which others conform or should conform or by which the accuracy or quality of others is judged.<sup>143</sup>

**Storm surge** — a sudden rise of sea as a result of high winds and low atmospheric pressure; sometimes called a storm tide, storm wave, or tidal wave. Generally affects only coastal areas, but may intrude some distance inland.<sup>144</sup>

**Structure** — a set of interconnecting parts of any complex thing; a framework;<sup>145</sup> the equipment and personnel, and the way in which these resources are organized.

**Surveillance** — continuous observation, measurement, and evaluation of the progress of a process or phenomenon with the view to taking corrective measures.<sup>146</sup>

**Susceptibility** — the degree of ease by which a person is affected by a given phenomenon; synonymous with vulnerability. Individuals and populations have different susceptibilities to different types of events. Susceptibility is used



in this document to denote the degree of ease by which a person or a population is affected by a given phenomenon; susceptibility and vulnerability are used interchangeably.

**Sustainability** — the ability to maintain or keep going continuously.

**Technological event** — the result of realization of human-made hazards. They do not occur in nature. Such events may be predictable or non-predictable, be accidental, intentional or caused by negligence. The hazards associated with such events may be known prior to the occurrence of the event or may become known only after the event has occurred.

**Terrorism** — an act to create extreme, persistent fear or intimidation.

**Threshold** — a limit below which a stimulus causes no reaction; a limit below which no reaction occurs.<sup>147</sup> In these Guidelines, it signifies a level of functional status or resources that separates two different levels of function. (See *critical* threshold and *functional* threshold.)

**Training** — the act or process of teaching or learning a skill or discipline.<sup>148</sup>

**Transport** — conveyance of an object from one place to another.

**Triage** — is the sorting into pre-established priorities. In reference to medical care and disasters, it means that scarce resources will be used to provide the maximum benefit to the population at large. The traditional triage is the transversal triage (takes place within a short time frame). Longitudinal triage means sacrificing victims at the moment for the benefit of future victims.

**Tsunami** — a sea wave that may become one or more massive waves of water as it makes landfall. It is a secondary event caused by another natural event, usually an earthquake or underwater volcanic eruption or landslide.<sup>149</sup>

**Volcano** — vent or chimney to the earth's surface from a reservoir of molten matter, known as magma, in the depths of the crust of the earth;<sup>150</sup> The mountain formed by local accumulation of volcanic materials around an erupting vent.<sup>151</sup>

*Volcanic eruption:* The discharge (aerial explosive) of fragmentary ejects, lava and gases from a volcanic vent.<sup>152</sup>

**Vulnerability** — the susceptibility of the population and environment to the nature of an event; the susceptibility of an individual or population to injury or contagion;<sup>153</sup> the degree of possible/potential loss to a given element at risk resulting from a given hazard at a given intensity.<sup>154</sup>

**Water (potable)** — potable water is the provision of adequate supplies of water suitable for drinking and for the preparation of food.

**Water and Sanitation** — the Basic Societal Function that includes the application

of measures and techniques aimed at ensuring and improving environmental health in a community through the collection and distribution of water and the evacuation, and disposal of rain and liquid and solid wastes and human waste with or without prior treatment.<sup>155</sup> In this context, potable water is the provision of adequate supplies of water suitable for drinking and for the preparation of food regardless of means.

**Wind** — air in more or less rapid natural movement (see also High Wind)

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