REPUBLIC OF THE PHILIPPINES
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TECHNICAL NOTES
Compendium of Philippine Environment Statistics 2012 – 2021
Component 4: Extreme Events and Disasters

I. Introduction

Compendium of Philippine Environment Statistics (CPES)

The compendium covers a core set of environment statistics which is grouped into six components namely: 1) environmental conditions and quality; 2) environmental resources and their use; 3) residuals; 4) extreme events and disasters; 5) human settlements and environmental health; and 6) environment protection, management, and engagement.

As described in Framework for the Development of Environment Statistics (FDES), the Basic Set of Environment Statistics has been set up following a progression of three tiers, based on the level of relevance, availability, and methodological development of the statistics. Tier 1 is the core set of environment statistics that serve as an agreed and limited set of environment statistics that are of high priority and relevance to most countries. Tier 2 includes environment statistics which are of priority and relevance to most countries but require greater investment of time, resources, or methodological development. It is recommended that countries consider producing them in the medium term. Tier 3 includes environment statistics which are either of lower priority or require significant methodological development. It is recommended that countries consider producing them in the long term.

Component 4: Extreme Events and Disasters

An extreme event is one that is rare within its statistical reference distribution at a particular location while disaster is often described as a result of exposure to an extreme event (United Nations [UN], 2013). This component organizes statistics on the occurrence of extreme events and disasters and their impacts on human well-being and the infrastructure of the human subsystem.

Two sub-components of Component 4

Subcomponent 4.1: **Natural Extreme Events and Disasters**
This subcomponent organizes statistics on the frequency and intensity of extreme events and disasters deriving from natural phenomena and their impact on human lives. Statistics on natural extreme events and disasters are important to policy makers, analysts, and civil society not only to assess the impact of an ongoing disaster, but also to monitor the frequency, intensity, and impact of disasters over time (UN, 2013). The topics under this subcomponent are the occurrence and the impact of natural extreme events and disasters.

Subcomponent 4.2: **Technological Disasters**
This subcomponent organizes statistics on extreme events resulting from human intent, negligence or error, and/or faulty or failed technological applications. Statistics on human induced disasters are important to policy makers, statistical analysts, and civil society to identify the immediate and potential impacts, to understand who is primarily responsible and to assess and mitigate future risks. Records of global technological disasters show increasing frequency and impact on humans, infrastructure, and environment. The topics under this subcomponent are the occurrence and the impact of technological (human-induced) disasters.

II. Compilation Methodology and Data Sources

Following the structure and statistics listed in FDES 2013, data available within the national statistical system were identified and requested from the Office of Civil Defense (OCD). The collected data were checked for consistency and formatted into statistical tables.

III. Definition of Terms

Component 4 of the Compendium of Philippine Environment Statistics glossary of terms:

a. Affected Population – Sum of categories of selected direct human impacts: deaths, missing, injured, ill, evacuated, relocated and otherwise affected. Annotation: People can be affected directly or indirectly. Affected people may experience short-term or long-term consequences to their lives, livelihoods or health and to their economic, physical, social, cultural and environmental assets. In

addition, people who are missing or dead may be considered as directly affected.[1]

b. Damages - Material impacts that could be recovered, in principle, through future repairs.[1]

c. Direct impacts - Impacts happening during or shortly following disaster directly triggered by a hazard. Direct impacts include impacts to humans, and material impacts.[1]

d. Disasters – Are unforeseen and often sudden events that cause great damage, destruction, and human suffering. They often exceed local response capacities and require external assistance at the national or international level. A disaster is often described as a result of exposure to an extreme event. Depending on their cause, disasters can be both natural and technological.[2]

e. Displacement - Movement of the population as a direct result of a hazard, including evacuations and permanent relocations of people due to a disaster.[1]

f. Indirect impacts - Consequences of a disaster for which causality is not directly observed and therefore must be estimated via application of some assumptions and analysis. Consists of various forms indirect consequences to the people, social condition, the economy, or the environment. From United Nations (UN) (2015), indirectly affected are: “people who have suffered consequences, other than or in addition to direct effects, over time due to disruption or changes in economy, critical infrastructures, basic services, commerce, work or social, health and psychological consequences.”[1]

g. Injured - The number of persons whose health or physical integrity is affected as a direct result of the disaster. Does not include victims who die.[1]

h. Missing - The number of persons whose whereabouts since the disaster is unknown. It includes people who are presumed dead.

[1] Disaster-related Statistics Framework Glossary
[2] FDES 2013 Glossary

After some amount of time, missing become part of the count of deaths.[1]

i. Technological Hazard – "Originate from technological or industrial conditions, dangerous procedures, infrastructure failures or specific human activities. Examples include industrial pollution, nuclear radiation, toxic wastes, dam failures, transport accidents, factory explosions, fires, and chemical spills. Technological hazards also may arise directly as a result of the impacts of a natural hazard event."[1]

IV. Dissemination of Results and Revision

The Compendium of Philippine Environment Statistics is published biennially with three (3) components released and posted on the PSA website every year. The web release material includes press release, statistical tables, infographics, and social cards.

List of Statistical Tables:

Table No. 4.1.1	Occurrence of Natural Extreme Events and Disasters by Type for Minor Incidents
Table No. 4.1.2	Occurrence of Natural Extreme Events and Disasters by Type for Major Disasters
Table No. 4.2.1	Occurrence of Human-Induced Disasters by Type for Minor Incidents
Table No. 4.2.2	Occurrence of Human-Induced Disasters by Type for Major Disasters
Table No. 4.3.1	Number to Deaths due to Natural Extreme Events and Disasters by Type for Minor Incidents
Table No. 4.3.2	Number to Deaths due to Natural Extreme Events and Disasters by Type for Major Disasters
Table No. 4.4.1	Number of Deaths due to Human-Induced Disasters by Type for Minor Incidents
Table No. 4.4.2	Number of Deaths due to Human-Induced Disasters by Type for Major Disasters
Table No. 4.5.1	Number of Injured due to Natural Extreme Events and Disasters by Type for Minor Incidents

Table No. 4.5.2	Number of Injured due to Natural Extreme Events and Disasters by Type for Minor Incidents
Table No. 4.6.1	Number of Injured due to Human-Induced Disasters by Type for Minor Incidents
Table No. 4.6.2	Number of Injured due to Human-Induced Disasters by Type for Major Disasters
Table No. 4.7.1	Number of Missing due to Natural Extreme Events and Disasters by Type for Minor Incidents
Table No. 4.7.2	Number of Missing due to Natural Extreme Events and Disasters by Type for Major Disasters
Table No. 4.8.1	Number of Missing due to Human-Induced Disasters by Type for Minor Incidents
Table No. 4.8.2	Number of Missing due to Human-Induced Disasters by Type for Major Disasters
Table No. 4.9.1	Number of Affected People due to Natural Extreme Events and Disasters by Type for Minor Incidents
Table No. 4.9.2	Number of Affected People due to Natural Extreme Events and Disasters by Type for Major Disasters
Table No. 4.10.1	Number of Affected People due to Human-Induced Disasters by Type for Minor Incidents
Table No. 4.10.2	Number of Affected People due to Human-Induced Disasters by Type for Major Incidents
Table No. 4.11.1	Number of Damaged Houses due to Natural Extreme Events and Disasters by Type for Minor Incidents
Table No. 4.11.2	Number of Damaged Houses due to Natural Extreme Events and Disasters by Type for Major Disasters
Table No. 4.12.1	Number of Damaged Houses due to Human-Induced Disasters by Type for Minor Incidents
Table No. 4.12.2	Number of Damaged Houses due to Human-Induced Disasters by Type for Major Incidents
Table No. 4.13.1	Damages due to Natural Extreme Events and Disasters by Economic Activity for Minor Incidents

Table No. 4.13.2	Damages due to Natural Extreme Events and Disasters by Economic Activity for Major Disasters
Table No. 4.14.1	Damages due to Human Induced Disasters by Economic Activity for Minor Incidents
Table No. 4.14.2	Damages due to Human Induced Disasters by Economic Activity for Major Disasters
Table No. 4.15 to 4.16	Major Natural Extreme Events and Disasters
Table No. 4.17	Major Human Induced Disasters

V. Citation

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