REPUBLIC OF THE PHILIPPINES
PHILIPPINE STATISTICS AUTHORITY

TECHNICAL NOTES
Compendium of Philippine Environment Statistics 2010 – 2019
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), 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 (UN FDES, 2013). There are two subcomponents: Subcomponent 4.1: Natural Extreme Events and Disasters; and Subcomponent 4.2: Technological Disasters. The former organizes statistics on the frequency and intensity of extreme events and disasters deriving from natural phenomena and their impact on human lives. The latter, on the other hand, organizes statistics on extreme events resulting from human intent, negligence or error, or faulty or failed technological applications.

Four sub-components of Component 4

Subcomponent 4.1: Natural Extreme Events and Disasters
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 (FDES 2013). The topics under this subcomponent are the occurrence and the impact of natural extreme events, and disasters.

Subcomponent 4.2: Technological Disasters
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. Based on the FDES 2013, there are two topics under this subcomponent, namely: Occurrence, and Impact of technological disasters. Although there are no core statistics under this subcomponent, the report of the Office of Civil Defense (OCD) covers data on the number of human induced disasters, their types, number of deaths and economic loss and location. Location data for this publication is specified, and indicated places where major events happened.

II.   Data Sources

The Component 4 of the Compendium of Philippine Environment Statistics (CPES) data on Extreme events and disasters comes from the Office of Civil Defense (OCD) reports provided to the Philippine Statistics Authority (PSA).

III.   Estimation Methodology

1. Compile the occurrence of disasters by type that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium. Two tables are compiled for this statistic, showing occurrences of disasters by type from 2010 to 2019.

2. Consolidate the number of deaths of disasters by type that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium.

3. Compute the total number of deaths of disasters by type that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium. Two tables are compiled for this statistic, showing the total number of deaths of disasters by type from 2010 to 2019.

4. Consolidate the amount of damages due to disaster by economic activity that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium.

5. Compute the amount of damages due to disaster by economic activity that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium. Two tables are compiled for this statistic, showing the total damages due to disaster by economic activity from 2010 to 2019.

6. Compile the major disasters that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium. Two tables are compiled for this statistic, showing the major disasters from 2010 to 2019.

7. Consolidate the number of injured due to disasters that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium.

8. Compute the number of injured due to disasters that was sourced from Office of Civil Defense (OCD) for years following the updating of the compendium. Two tables are compiled for this statistic, showing the total number of injured due to disasters from 2010 to 2019.

IV.   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 {United Nations General Assembly (UNGA), 2015}.

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

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

d. Disaster - "A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts." {United Nations International Strategy for Disaster Reduction (UNISDR), UNGA, 2015}.

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

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."

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.

h. Missing - The number of persons whose whereabouts since the disaster is unknown. It includes people who are presume deaf. After some amount of time, missing become part of the count of deaths.

V.   Dissemination of Results and Revision

The Compendium of Philippine Environment Statistics is published bi-annually with three (3) components are release and posted in PSA website every year. The web release material includes press release, statistical tables, infographics, and social cards.

List of Statistical Tables:

1. Occurrence of natural extreme events and disasters
2. Occurrence of human induced disasters
3. Number of deaths due to natural extreme events and disasters
4. Number of deaths due to human induced disasters
5. Damages due to natural extreme events and disasters
6. Damages due to human induced disasters
7. Major natural extreme events and disasters
8. Major human induced disasters
9. Number of injured due to natural extreme events and disasters
10. Number of deaths due to human induced disasters

VI.   Citation

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