Statistical Challenges in Advancing the Compilation of Disaster Expenditure Accounts on Disaster Risk Reduction

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Disaster Statistics and Framework

what is a Disaster

→ **- is a serious disruption of a functioning of community or society due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to human, material, economic and environmental losses and impacts.**

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Disaster Statistics and Framework

what is a Disaster Risk

→

- is the **potential loss of life, injury or destroyed or damaged assets** which could occur to a **system, society or a community** in a specific period of time, determined as a function of hazard, exposure, vulnerability and capacity

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Disaster Statistics and Framework

Disaster-related Statistics

Before, During, and After a Disaster

BEFORE			
Risk Assessment			
Exposure	**Vulnerability**	**Hazard**	**Coping Capacity**
• Population/density • Land cover/use • GDP per capita • Household income	• Age structure • Poverty • Disabled • Gender • Slums • Median income	• Elevation map • Meteorological data • Data from past hazards • Distribution of soil type • Value for surface roughness • Slope and river flow variables (flood) • Annual precipitation index (drought) • Annual precipiation and geological data (landslide)	• Preparedness (household level) • Early warning systems • Investment in DRR

DURING AND AFTER	
Disaster Impact	
Human Impact	**Dwellings**
• Death/Missing • Injured/Ill • Evacuated/Relocated • People affected by dwellings damaged/destroyed • Loss of jobs • People received aid • Otherwise affected	• Buildings and structures • Machinery • Valuables • Natural Resources • Critical goods and services • Crtitical infrastructure • Cultural heritage • Economic impacts

Data Sources
Population Census/Household Surveys
Household Surveys
Geophysical/Meteorological organisations
National accounts
Disaster Management Agency Assessment
Ministry of Environment/Mapping Agency

DRR Activity		
Transfers from Central to local government		
International Transfers (ODA) into country	Evaluations Relocations People receiving aid	Reconstruction and recovery
International Transfers (ODA) outflows		
Total expenditure by DRRCA category		
Total Expenditure on DRRCA by government		
Total Expenditure on DRRCA by non-government		
Beneficiaries on Total Expenditure		
Beneficiaries of Total Transfers Received		

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Disaster Statistics and Framework

FRAMEWORK

Sendai Framework (goals & targets)

- serves as their focal point in developing disaster statistics
- initiated by the United Nations International Strategy for Disaster Reduction (UNISDR)

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Philippine Initiatives on DRR Statistics

❑ **UNISDR** – initiated the development of the Sendai Framework (open-ended working group)

❑ **UNESCAP**

- **Establish an expert group of statisticians and DRR experts**

- **Developed the basic range of disaster-related statistics and Disaster Related Statistics Framework (DRSF) in May 2014.**

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Philippine Initiatives on DRR Statistics

Who compiles DISASTER STATISTICS in the Philippines?

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Philippine Initiatives on DRR Statistics

The Disaster Risk Reduction Statistical Framework (DRSF)

The framework identified the compilation Disaster Risk Reduction Expenditure (DRRE) Accounts including the statistics that supports the DRRE for better analysis of the occurrence of disaster that would result in a more effective disaster reduction risk management .

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Philippine Initiatives on DRR Statistics

❑ **The pilot testing of the DRSF in the Philippines was spearheaded by the PSA;**

❑ **DRSF serves as guide for the data assessment & define the key issues on addressing data problems as well as recommendations to address data problems.**

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Philippine Initiatives on DRR Statistics

DRSF Tables

Sendai Goals-Categories/Description		Total tables	Number of tables with data			% data compiled by category
			2013	2014	2015	
A	Events by hazards types	3	1	1	1	33
B	Selected background statistics by hazard types	4	2	2	2	50
C	Affected population	11	5	5	5	45
D	Direct material impacts	3	2	2	2	67
E	Direct material impacts in monetary terms	3	0	0	0	0
F	Direct cultural impacts	3	0	0	0	0
G	Direct environmental impacts	3	0	0	0	0
DRRE	Disaster risk reduction satellite accounting	2	0	0	0	0
TOTAL		32	10	10	10	

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Proposed DRR Expenditure Accounts

Framework

The aim of the DRRE tables is to start developing a special account or a satellite account of the national accounts that are linked with the System of National Accounts (SNA) and the System of Environment-Economic Accounts.

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Proposed DRR Expenditure Accounts

Data and Data Sources

- **Annual Financial Report (AFR) - Commission on Audit (COA)**

- **National Expenditure Program (NEP) - Department of Budget and Management (DBM)**

- **Consolidated Report on Official Development Assistance (ODA) Programs and Projects and ODA Portfolio - National Economic and Development Authority (NEDA)**

- **Reports of the Office of Civil Defense - NDRRMC**

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Proposed DRR Expenditure Accounts

Other Data Sources:

- **National Expenditure Program (NEP)** - **Department of Budget and Management (DBM)**
- **Consolidated Report on Official Development Assistance (ODA) Programs and Projects and ODA Portfolio** - **National Economic and Development Authority (NEDA)**
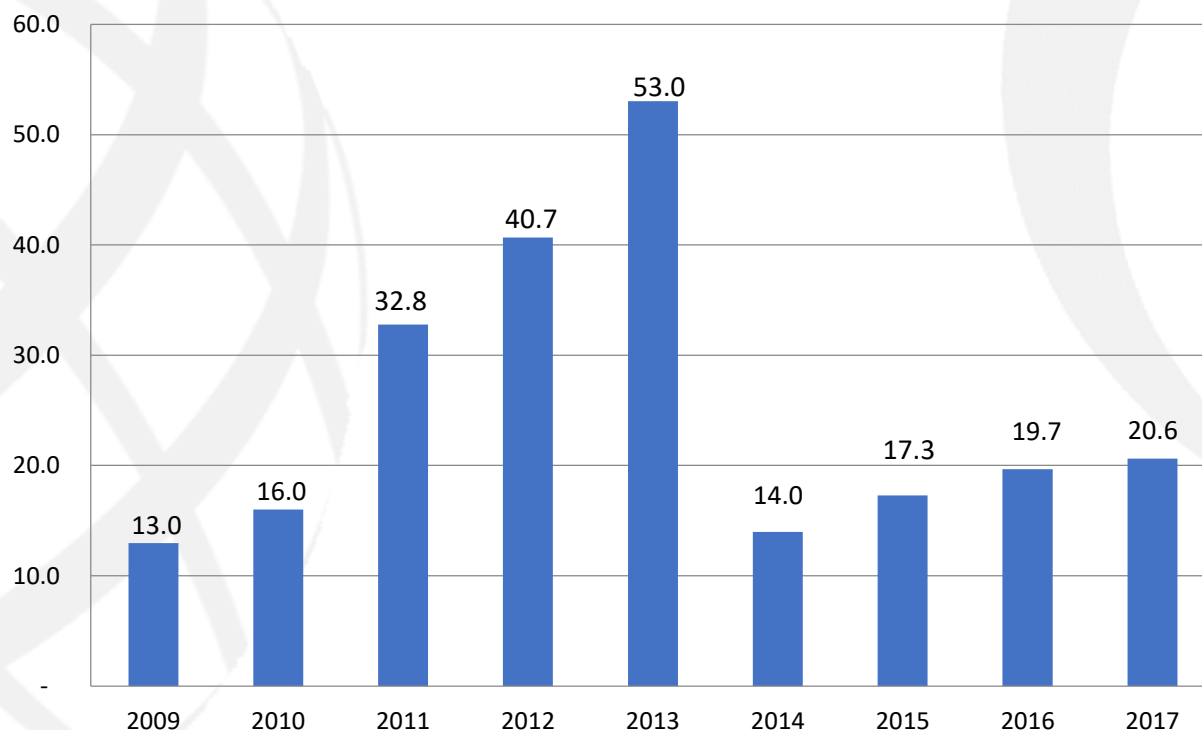
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Proposed DRR Expenditure Accounts
Compilation Process

- **Define from the reported expenditures of the NDRRMF all the DRR activities and categorize them into four (4) thematic areas;**

- **The thematic areas are: (a)disaster prevention and mitigation; (b) disaster preparedness; (c) disaster response; and (d) disaster rehabilitation and recovery.**

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Some Indicative Results on DRRE

The highest government expenditures from 2009 to 2017 was recorded in 2013 at 53.0 billion pesos!

Bar chart of government expenditures (billion pesos) by year:

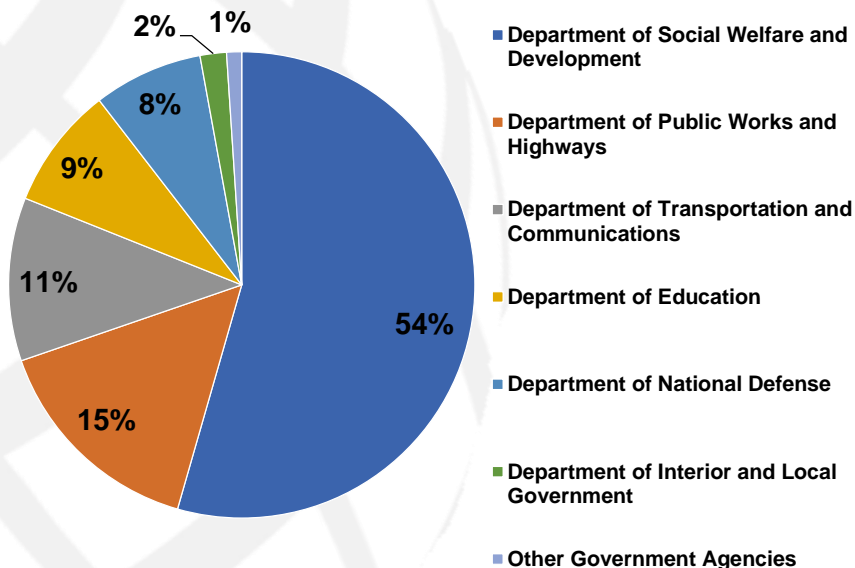| Year	Value
2009	13.0
2010	16.0
2011	32.8
2012	40.7
2013	53.0
2014	14.0
2015	17.3
2016	19.7
2017	20.6

Some Indicative Results on DRRE

In 2016, total actual government spending for disaster risk reduction was highest at 82.3 percent to finance disaster rehabilitation and recovery!

Disaster Thematic Area	2016 Expenditures (in 000 pesos)	Share to Total Expenditure (in Percent)
Prevention & Mitigation	1,852,442	9.41
Disaster Preparedness	692,689	3.52
Disaster Response	932,485	4.74
Rehabilitation & Recovery	16,197,736	82.32
TOTAL DRR Expenditure	19,675,352	100.00

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Some Indicative Results on DRRE

Share to Total DRR, 2009-2017 (In %)

- Department of Social Welfare and Development
- Department of Public Works and Highways
- Department of Transportation and Communications
- Department of Education
- Department of National Defense
- Department of Interior and Local Government
- Other Government Agencies

54%
15%
11%
9%
8%
2%
1%

Government spending in disaster risk reduction was recorded by the agencies on engaged in social welfare, public works and highways as well as transportation!

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Some Indicative Results on DRRE

DRR Expenditure w/ ODA

In 2016, the country received 18.8 billion pesos from the Official Development Assistance (ODA) on disaster risk reduction, almost close to the total government spending of 18.8 billion pesos!

DRR Expenditure	Amount (000 Php)
Total DRR Expenditure	19,675,352
Official Development Assistance**	18,786,560
Total DRR Expenditure with ODA	38,461,912

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The **_Disaster Related Statistical Framework (DRSF)_** and the **_Disaster Risk Reduction Expenditure (DRRE) Accounts_** are valuable documents that will help in the _production of disaggregated data related to disasters and strengthen evidence-based policy-making at all levels_ for disaster risk reduction and climate change adaptation.

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