

## ANNEX

### BASIC RANGE OF DISASTER-RELATED STATISTICS TABLES

Statistical tables are organised into worksheets according to basic components in the DSRF. The variables represent queries from a disaster-related statistics database. The tables are comprehensive of the Basic Range of Disaster-related Statistics and can be used by national agencies as a tool for assessing gaps and identifying opportunities to produce new statistics for disaster risk reduction.

**Geo regions** are officially designated geographic regions of relevance to the reporting, such as national (aggregate), regional or province (admin 02), district (admin 03), or other geographic regions important to the compilation or analysis, e.g. river catchments.

The relevant **time period** varies by tables and according to the analysis. For most impact statistics, a time period of at least 3-5 years is the most relevant given randomness and large year-to-year fluctuations in disaster occurrences and their impacts. DRRE tables, on the other hand, should be compiled annually, as with other national accounts.

#### A Summary tables of disaster occurrences

A1 Summary table of disaster occurrences, by hazards types, scale, and geographic region

A tables count numbers of occurrences according to the hazards, scale and geographical classifications. Disaster occurrences are background statistics, i.e. they are useful for providing context variables for statistics in other tables

#### B Selected Background Statistics and Exposure to hazards

B1a Population Background Statistics and Hazard Exposure by geographic regions

B1b Population Exposure by social groups

B2 Exposure of Land and Infrastructure by Hazard Type

B3 Coping Capacity Background Statistics

B tables are for assessing availability of background statistics (sometimes also called "baseline statistics") as well as hazard exposure statistics, which are compiled prior to disaster occurrences, and updated over time according to the relevant categories (hazard types and geographic zonings). Exposure statistics serve multiple purposes, in particular for calculating indicators of risk, as well for assessing impacts.

#### C Summary tables of human impacts

C1 Summary table of human impacts by hazards types

C2 Summary table of human impacts by geographic regions

C3 Summary table of human impacts by demographic and social categories

C tables are for compiling data related to affected populations (impacts on people) according to hazard types, geographic regions (national total, regions/states, municipalities, or river catchments), and demographic and social categories (age, gender, urban and rural, poor, and disabled). Selected optional sub-categories of impacts (e.g. major or minor injuries) are included in the table for compilation and compilers may wish to insert additional sub-categories according to the data availability and demand for statistics.

**D Summary tables of direct material impacts in physical terms**

- D1a Summary table of direct material impacts by hazards types
- D1b Summary table of direct material impacts by hazards types and geographic regions
- D2a Disruption of basic services from a disaster by hazard type
- D2b Disruption of basic services from a disaster, by geographic region

D tables are for recording direct material impacts in "physical" terms, such as area or number of buildings. The supplemental category of "critical infrastructure" are included in the tables as an initial proposal for measuring the critical material impacts of disasters from the disaster risk reduction perspective.

**E Summary tables of direct material impacts in monetary terms**

- E1a Summary table of direct material impacts by hazards types
  - E1b Summary table of direct material impacts by hazards types and geographic regions
- E tables mostly replicate the D\_MAT tables and are for recording the impacts in monetary values, when it is relevant and possible, to calculate the direct economic losses, aligned with the Sendai Framework definition

**F Agriculture**

- F1 Summary of material impacts to Agriculture by hazards types

F1 was developed by FAO in alignment with requirements for Sendai Framework monitoring and for presentation in DRSF.

**G Summary tables of direct environmental impacts**

- G1 Summary table of direct environmental impacts by hazards types
- G2 Summary table of direct environmental impacts by hazards types and geographic regions

G tables extend the compilations on direct material impacts to include impacts to the environment.

**DRRE Disaster risk reduction expenditure account**

- DRRE\_Activ. Production expenditure account (current plus investment) by characteristic activities
- DRRE\_Trans. Transfers expenditure account and DRR National Expenditure

DRRE are satellite accounting tables developed to assess the feasibility for compiling DRR expenditure accounts based on existing data sources used in the national accounts or based on reporting from NDMA and other partner agencies.

**A Summary of disaster occurrences**

**A1 Summary table of disaster occurrences, by hazards types, scale, and geographic region**

**Measurement units: counts of occurrences**

	Geo Region 1			Geo Region 2			Geo Region 3			...			Adjustment for multiple counting of events by regions/states (-)			Adj. National total		
	Very large events	National scale medium to large events	Local scale events	Very large events	National scale medium to large events	Local scale events	Very large events	National scale medium to large events	Local scale events	Very large events	National scale medium to large events	Local scale events	Very large events	National scale medium to large events	Local scale events	Very large events	National scale medium to large events	Local scale events
Geo-physical																		
Hydrological																		
Meteorological & Climatological																		
Biological																		
Other																		
Total																		

**Data source:** NDMA, national register of disaster occurrences, according to official national designation

**International definition for a 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." (UNGA, 2015)

**Suggested variable for classifying scale of disasters:** geographic scope of emergency (e.g. local scale, province-level, or national emergency). Generally, large disasters are prone to extensive individual reporting while other events are reported on a statistical basis. The difference between calls for emergency at national and other scales will depend on the national context.

**Adjusted National Total columns** refers to the national total for number of disaster events, by scale and hazard type, adjusting for multiple counts across geographic regions.

## B Selected Background Statistics and Exposure to hazards

### B1a Population Background Statistics and Hazard Exposure by geographic regions

Measurement units: see column at right

		REGION					Measurement Unit
		Geo. Region 1	Geo. Region 2	Geo. Region 3	Geo Region ...	NATIONAL TOTAL	
1	Population	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	No. of people
1.1	Children under 5 years						No. of people
1.2	Persons over 60 years						No. of people
1.3	Persons with disabilities						No. of people
2	Households						No. of households
3	Median Households disposable income						currency
3.1	Local currency (NAME...)						currency
3.2	US\$ PPP						US\$ PPP
4	GDP	SDG 1.5.2	SDG 1.5.2	SDG 1.5.2	SDG 1.5.2	SDG 1.5.2	currency
4.1	Local currency (NAME...)						currency
4.2	US\$ PPP						US\$ PPP
5	Population in Hazard Area						No. of people
5.1	Geophysical						
5.1.1	High exposure						No. of people
5.1.2	Moderate exposure						No. of people
5.1.3	Low exposure						No. of people
5.2	Hydrological						
5.2.1	High exposure						No. of people
5.2.2	Moderate exposure						No. of people
5.2.3	Low exposure						No. of people
5.3	Meteorological & Climatological						
5.3.1	High exposure						No. of people
5.3.2	Moderate exposure						No. of people
5.3.3	Low exposure						No. of people
5.4	Biological						
5.4.1	High exposure						No. of people
5.4.2	Moderate exposure						No. of people
5.4.3	Low exposure						No. of people
5.5	Other [specify]						
5.5.1	High exposure						No. of people
5.5.2	Moderate exposure						No. of people
5.5.3	Low exposure						No. of people

**Data sources:** Joint work of NSO and NDMA, background statistics derived from NSO and from national accounts; exposure to hazards calculated by NDMA

**Links to global indicators:** Number of deaths attributed to disasters, per 100,000 population

**Exposure** is measured according to hazard area maps, produced using a variety of physical data inputs (see Chapter 2). Hazard maps are overlaid with social and economic statistics to estimate exposure. The ranking (high, moderate, low) refer to hazard probabilities - for example flood hazards are usually higher closer to the sources and depending on the slope and features of the terrain. The hazard may exist at lower probabilities, farther away.

**B1b Population Exposure by social groups**  
**Measurement units: Number of people**

	C3a1 - Age groups				C2a2 - Sex		C2a3 - Urban/Rural population		C2a4 - Specific vulnerability groups		NO TOTAL
	0-5	0-15	16-64	65+	Male	Female	Urban	Rural	Disabled	Poor	
1	Population	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	SDG 1.5.1, Sendai A1,B1	
2	Population in Hazard Areas										
2.1	Geophysical										
2.1.1	High exposure										
2.1.2	Moderate exposure										
2.1.3	Low exposure										
2.2	Hydrological										
2.2.1	High exposure										
2.2.2	Moderate exposure										
2.2.3	Low exposure										
2.3	Biological										
2.3.1	High exposure										
2.3.2	Moderate exposure										
2.3.3	Low exposure										
2.4	Meteorological & Climatological										
2.4.1	High exposure										
2.4.2	Moderate exposure										
2.4.3	Low exposure										
2.5	Other [specify]										
2.5.1	High exposure										
2.5.2	Moderate exposure										
2.5.3	Low exposure										

**Data sources:** joint work of NSO and NDMA, background statistics derived from population and housing census; maps of hazards calculated by NDMA  
**Links to global indicators:** Number of deaths attributed to disasters, per 100,000 population  
**Exposure** is measured according to hazard area maps, produced using a variety of physical data inputs (see Chapter 2). Hazard maps are overlaid with social and economic statistics to estimate exposure.

**B2a Exposure of Land and Infrastructure by Hazard Type**

Measurement units: see below table

		Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	NATIONAL TOTAL	Measurement Units
<b>1</b>	<b>Critical infrastructures in Hazard Area</b>							
1.1	Hospitals, health facilities							buildings, by type
1.2	Education facilities							buildings, by type
1.3	Other critical public administration buildings							sq m.
1.4	Public Monuments							sq m.
1.4.1	<i>Religious buildings</i>							
1.5	Roads							km
1.6	Bridges							m
1.7	Airports							buildings, by type
1.8	Piers							facilities, by type
1.9	Railways							km
1.10	Transport equipments							facilities, by type
1.11	Electricity generation facilities							facilities, by type
1.12	Electricity grids							facilities, by type
1.13	ICT Equipments							facilities, by type
1.14	Dams							facilities, by type
1.15	Water supply infrastructure							facilities, by type
1.16	Water sewage & treatment systems							facilities, by type
1.17	Other critical infrastructures							facilities, by type
<b>2</b>	<b>Land</b>							
2.1	Land							sq km
2.2	Agricultural land							sq km
2.3	Forest Areas							sq km
2.4	Built-up areas							sq km

**Data source:** Joint work of NDMA and official data source of land cover, land use, and infrastructure maps

**Definitions for Critical Infrastructure:** See DRSF Classification of Material Impacts (Chapter 8)

**Land defined according to definition in SEEA Central Framework:** "the space in which economic activities and environmental processes take place and within which environmental assets and economic assets are located."

Definitions for Agricultural land, forest areas, and built-up areas, see: DRSF Chapter 8.

**Measurement units:** Chapter 5

**B Disaster Risk Reduction Expenditure Account****B3 Coping Capacity Background Statistics**

		Geo Region 1	Geo Region 2	Geo Region 3	...	National	Measurement Units
1	GDP	SDG 1.5.2	SDG 1.5.2	SDG 1.5.2	SDG 1.5.2	SDG 1.5.2	Currency
2	GDP per capita						Currency
3	Median Households disposable income						Currency
3.1	Local currency (NAME...)						Currency
3.2	US\$ PPP						US\$ PPP
4	Number of dwellings with slum designation						no. of units
5	Population living in areas with slum designation						no. of people
<b>6 Early Warning Systems</b>							No. of systems
6.1	Population covered	Sendai G-3	Sendai G-3	Sendai G-3	Sendai G-3	Sendai G-3	%
6.2	Share of population in exposure areas covered						%
6.3	Investment Expenditure (also DRRE_A, 3.2)						Currency
<b>7 Household Preparedness</b>							
7.1	Share of households with emergency plan						%
7.2	Share of households with backup storage of food and water						%
7.3	Share of households with improved access to water and sanitation						%
7.4	Other Preparedness (household level)						%
<b>8 Environmental Resilience</b>							
8.1	Forest area						sq km
8.2	Share of water bodies in good condition						%
8.3	Other ecosystem condition measures						
<b>9 Risk Reduction Activity</b>							Currency
9.1	Disaster risk reduction characteristic transfers received						Currency
9.2	Disaster Risk Prevention						Currency
9.3	Disaster Risk Mitigation						Currency
9.4	Disaster Management						Currency
9.5	Disaster Recovery						Currency
9.6	General Government, Research & Development, Education Expenditure						Currency
<b>10 DRRCA Transfers from Central to local government</b>							Currency

**Data Sources :** Household Preparedness from Population and Housing Census and/or household surveys

Forest Area: national land cover statistics

Water and ecosystem assetments from national water enviroment protection authorities

Risk Reduction Activity: Finance Ministry and National Accounts

**Definition of Slums:** UN-HABITAT (2016)

## C Summary of Human Impacts

### C1 Summary table of human impacts by hazards types

Measurement units: Number of people, except 1.5.3, which is number of days

		HAZARDS					NATIONAL TOTAL
		Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	
<b>1 - Summary of Human Impacts</b>							
	<b>Human, affected population</b>						
<b>1.1</b>	<b>Deaths or missing</b>	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-1
1.1.1	Deaths	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2
1.1.2	Missing	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3
<b>1.2</b>	<b>Injured or ill</b>	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2
1.2.1	Major injuries						
1.2.2	Minor injuries						
1.2.3	Illnesses						
<b>1.3</b>	<b>Displaced</b>						
1.3.1	Permanent relocations due to destroyed dwelling	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4
1.3.2	Other Displaced						
<b>1.4</b>	<b>Dwellings Damaged</b>						
1.4.1	Number of people whose houses were damaged due to hazardous events	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3
<b>1.5</b>	<b>Loss of Jobs/occupations</b>						
1.5.1	Direct losses of jobs/occupations in industry and services	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5
1.5.2	Direct losses of jobs/occupations in agriculture						
1.5.3	Losses of days of activity						
1.5.3.1	Direct losses of days of activity in agriculture						
1.5.3.2	Direct losses of days of activity in industry and services						
<b>1.6</b>	<b>Number of people evacuated or receiving aid</b>						
1.6.1	Number of people who received aid. Including food and non-food aid during a disaster						
1.6.2	Supported with evacuation						
1.6.3	Non-supported evacuations						
1.6.4	Number of people who received aid after a disaster						
<b>1.7</b>	<b>Otherwise affected</b>						
<b>1.8</b>	<b>Total Human Impacts (no of impacts)</b>	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-1
<b>1.9</b>	<b>Multiple counts, individuals (minus)</b>						
<b>1.10</b>	<b>Total Human Impacts (no of people)</b>						

Variables 1.4 and 1.3.3 based on measurement of damage and destruction to dwellings (material impacts tables)

Multiple counts is an adjustment for aggregation in terms of number of people (instead of number of impacts), see Chapter 6 for further explanation.



## C2 Summary of human impacts by hazard type and geographic regions

### Measurement units: Number of people, except 1.5.3, which is number of days

	Geo Region 1						Geo Region ...						Hazard types/ National Total											
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	Adjustment for multiple counting of occurrences by types	TOTAL Region 1	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	Adjustment for multiple counting of events by types	TOTAL Region ...	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	Adjustment for multiple counting of events by types	TOTAL adjustment for multiple counting of events by Regions/States (-)	NATIONAL TOTAL		
<b>1 - Summary of Human Impacts</b>																								
<b>1.1</b>	<b>Deaths or missing</b>						SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	SDG 1.5.1/Sendai A-1	
1.1.1	Deaths						Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	Sendai A-2	
1.1.2	Missing						Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	Sendai A-3	
<b>1.2</b>	<b>Injured or ill</b>						Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	Sendai B-2	
1.2.1	Major injuries																							
1.2.2	Minor injuries																							
1.2.3	Illnesses																							
<b>1.3</b>	<b>Displaced</b>																							
1.3.1	Permanent relocations due to destroyed dwelling						Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	Sendai B-4	
1.3.2	Other Displaced																							
<b>1.4</b>	<b>Dwellings Damaged</b>																							
1.4.1	Number of people whose houses were damaged due to hazardous events						Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	Sendai B-3	
<b>1.5</b>	<b>Loss of Jobs/occupations</b>																							
1.5.1	Direct losses of jobs/occupations in industry and services						Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	Sendai B-5	
1.5.2	Direct losses of jobs/occupations in agriculture																							
1.5.3	Losses of days of activity																							
1.5.3.1	Direct losses of days of activity in agriculture																							
1.5.3.2	Direct losses of days of activity in industry and services																							
<b>1.6</b>	<b>Number of people evacuated or receiving aid</b>																							
1.6.1	Number of people who received aid, including food and non-food aid during a disaster																							
1.6.2	Supported with evacuation																							
1.6.3	Non-supported evacuations																							
1.6.4	Number of people who received aid after a disaster																							
<b>1.7</b>	<b>Otherwise affected</b>																							
<b>1.8</b>	<b>Affected Population (no of impacts)</b>						SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	SDG 1.5.1/Sendai B-1	
<b>1.9</b>	<b>Multiple counts, individuals (minus)</b>																							
<b>1.10</b>	<b>Total Human Impacts (no of people)</b>																							

Variables 1.4 and 1.3.3 based on measurement of damage and destruction to dwellings (material impacts tables)  
 Multiple counts is an adjustment for aggregation in terms of number of people (instead of number of impacts), see Chapter 6 for further explanation.

C3 Summary table of affected population by demographic and social categories

Measurement units: Number of people, except 1.5.3, which is number of days

	C3a1 - Age groups				TOTAL	C3a2 - Sex		TOTAL	C3a3 - Urban/Rural population		TOTAL	C3a4 - Specific vulnerability groups		NO TOTAL
	0-5	0-15	15-64	65+		Male	Female		Urban	Rural		Disabled	Poor	
<b>1 - Summary of Human Impacts</b>														
<b>Human, affected population</b>														
<b>1.1</b>	<b>Deaths or missing</b>													
1.1.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.1.2	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
<b>1.2</b>	<b>Injured or ill</b>													
1.2.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.2.2	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.2.3	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
<b>1.3</b>	<b>Displaced</b>													
1.3.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.3.2	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
<b>1.4</b>	<b>Dwellings Damaged</b>													
1.4.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
<b>1.5</b>	<b>Loss of Jobs/occupations</b>													
1.5.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.5.2	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.5.3	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.5.3.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.5.3.2	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
<b>1.6</b>	<b>Number of people evacuated or receiving aid</b>													
1.6.1	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.6.2	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.6.3	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
1.6.4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2	SDG 1.5.1/ Sendai A-3	SDG 1.5.1/ Sendai A-4	SDG 1.5.1/ Sendai A-1	SDG 1.5.1/ Sendai A-2
<b>1.7</b>	<b>Otherwise affected</b>													
<b>1.8</b>	<b>Affected Population (no of impacts)</b>													
1.8	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-2	SDG 1.5.1/ Sendai B-3	SDG 1.5.1/ Sendai B-4	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-2	SDG 1.5.1/ Sendai B-3	SDG 1.5.1/ Sendai B-4	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-2	SDG 1.5.1/ Sendai B-3	SDG 1.5.1/ Sendai B-4	SDG 1.5.1/ Sendai B-1	SDG 1.5.1/ Sendai B-2
<b>1.9</b>	<b>Multiple counts, individuals (minus)</b>													
<b>1.10</b>	<b>Total Human Impacts (no of people)</b>													

Urban and rural designations according to national definitions  
 Designation for 'poor' according to national poverty line (or, if unavailable, World Bank global absolute poverty line)  
 Multiple counts is an adjustment for aggregation in terms of number of people (instead of number of impacts), see Chapter 6 for further explanation.

**D Summary tables of direct material impacts****D1a Summary table of direct material impacts by hazards types**

Measurement unit: see column at right

	Hazard types						Measurement unit
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL	
<b>Direct economic material impacts</b>							
<b>1-Direct impacts on fixed assets or consumer durables</b>							
1.1	Dwellings (number)						no. of units
1.1.1	Dwellings destroyed (number)						no. of units
1.1.2	Dwellings damaged (number)						no. of units
1.2	Buildings and structures						sq. km
1.2.1	Critical buildings & structures	Sendai D-4	Sendai D-4	Sendai D-4	Sendai D-4	Sendai D-4	sq. m
1.2.2	Other buildings and structures						sq. m
1.3	Machinery and equipment						
1.3.1	Critical machinery and equipment	Sendai D-4	Sendai D-4	Sendai D-4	Sendai D-4	Sendai D-4	no. of units
1.3.2	Other machinery and equipment						no. of units
1.4	Consumer Durables						no. of units
<b>2-Direct impacts on valuables (SNA asset definition)</b>							
2.1	Art objects, music instruments						no. of units
2.2	Other valuables						no. of units
<b>3-Natural resources</b>							
3.1	Land, incl. soil						sq. km
3.2	Agriculture land						sq. km
3.3	Primary forests						sq. km
3.4	Livestock						no. of units
3.5	Fish stocks						tonnes
3.6	Freshwater						sq. km
3.7	Other natural resources						sq. km
<b>4-Critical goods &amp; services</b>							
4.1	Inventories (SNA asset definition)						
4.1.1	Agriculture (incl. immature crops)						tonnes
4.1.2	Inventories/ other products						tonnes
<b>5-Critical infrastructures [1.2.1]</b>							
5.1	Hospitals, health facilities	Sendai D-2	Sendai D-2	Sendai D-2	Sendai D-2	Sendai D-2	no. of units
5.2	Education facilities	Sendai D-3	Sendai D-3	Sendai D-3	Sendai D-3	Sendai D-3	no. of units
5.3	Other critical public administration buildings	Sendai D-4	Sendai D-4	Sendai D-4	Sendai D-4	Sendai D-4	no. of units
5.4	Public monuments						no. of units
5.4.1	Religious buildings						no. of buildings
5.5	Roads						km
5.6	Bridges						no. of units
5.7	Railways						km
5.8	Airports						no. of units
5.9	Piers						no. of units
5.10	Transport equipments						no. of units
5.11	Electricity generation facilities						no. of units
5.12	Electricity grids						no. of units
5.13	ICT Equipments						no. of units
5.14	Dams						no. of units
5.15	Water supply infrastructure						no. of units
5.16	Water sewage & treatment systems						no. of units
5.17	Other critical infrastructures (specify)						no. of units
<b>6-Direct impact on cultural heritage</b>							
<b>6.1 Direct impact on cultural heritage zones</b>							
6.1.1	UNESCO cultural heritage sites						sq. km
6.1.2	National cultural heritage designations						sq. km
6.1.3	Urban heritage						sq. km
6.1.4	Other heritage designations						sq. km
<b>6.2 Direct impact on cultural heritage objects</b>							
6.2.1	Buildings and monuments						no. of units
6.2.2	Cultural heritage valuables [2]						no. of units
6.2.3	Other cultural heritage (please specify)						no. of units

For definitions see Material Impacts Classification in Chapter 8

Distinguishing between damaged or destroyed is feasible for all variables and may be reported depending on demand. For the case of dwellings, destroyed dwellings results in displacement whereas a damaged dwelling might be repaired without displacement.

## D1b Summary table of direct material impacts by hazards types and geographic regions

Measurement unit: see column at right

	Geo Region 1						Geo Region ...						National Total						Measurement unit	
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL Geo Region 1	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	...	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL adjustment for multiple counting of events by		NATIONAL TOTAL
<b>Direct economic material impacts</b>																				
<b>1-Direct impacts on fixed assets or consumer durables</b>																				
1.1	Dwellings (number)																			no. of units
1.1.1	Dwellings destroyed (number)																			no. of units
1.1.2	Dwellings damaged (number)																			no. of units
1.2	Buildings and structures																			sq. km
1.2.1	Critical buildings & structures																			sq. m
1.2.2	Other buildings and structures																			sq. m
1.3	Machinery and equipment																			
1.3.1	Critical machinery and equipment																			no. of units
1.3.2	Other machinery and equipment																			no. of units
1.4	Consumer Durables																			no. of units
<b>2-Direct impacts on valuables (SNA asset definition)</b>																				
2.1	Art objects, music instruments																			no. of units
2.2	Other valuables																			no. of units
<b>3-Natural resources</b>																				
3.1	Land, incl. soil																			sq. km
3.2	Agriculture land																			sq. km
3.3	Primary forests																			sq. km
3.4	Livestock																			no. of units
3.5	Fish stocks																			tonnes
3.6	Freshwater																			sq. km
3.7	Other natural resources																			sq. km
<b>4-Critical goods &amp; services</b>																				
4.1	Inventories (SNA asset definition)																			
4.1.1	Agriculture (incl. immature crops)																			tonnes
4.1.2	Inventories/ other products																			tonnes
<b>5 Critical infrastructures [1.2], [1.3]</b>																				
5.1	Hospitals, health facilities																			no. of units
5.2	Education facilities																			no. of units
5.3	Other critical public administration buildings																			no. of units
5.4	Public monuments																			no. of units
5.4.1	Religious buildings																			no. of buildings
5.5	Roads																			km
5.6	Bridges																			no. of units
5.7	Railways																			km
5.8	Airports																			no. of units
5.9	Piers																			no. of units
5.10	Transport equipments																			no. of units
5.11	Electricity generation facilities																			no. of units
5.12	Electricity grids																			no. of units
5.13	ICT Equipments																			no. of units
5.14	Dams																			no. of units
5.15	Water supply infrastructure																			no. of units
5.16	Water sewage & treatment systems																			no. of units
5.17	Other critical infrastructures																			no. of units
<b>6 Direct impact on cultural heritage</b>																				
<b>6.1 Direct impact on cultural heritage zones</b>																				
6.1.1	UNESCO cultural heritage sites																			sq. km
6.1.2	National cultural heritage designations																			sq. km
6.1.3	Urban heritage																			sq. km
6.1.4	Other heritage designations																			sq. km
<b>6.2 Direct impact on cultural heritage objects</b>																				
6.2.1	Buildings and monuments																			no. of units
6.2.2	Cultural heritage valuables [2]																			no. of units
6.2.3	Other components																			no. of units

For definitions see Material Impacts Classification in Chapter 8

Distinguishing between damaged or destroyed is feasible for all variables and may be reported depending on demand. For the case of dwellings, destroyed dwellings results in displacement whereas a damaged dwelling might be repaired without displacement.

**D2a Disruption of basic services from a Disaster by hazard type****Measurement unit: number of people and period of time**

		Hazard types					
		Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL
<b>Disruptions to Basic services from a Disaster</b>							
<b>1</b>	<b>Health services</b>	Sendai D-7	Sendai D-7	Sendai D-7	Sendai D-7	Sendai D-7	Sendai D-7
1.1	No. of people						
1.2	Length of time						
<b>2</b>	<b>Educational services</b>	Sendai D-6	Sendai D-6	Sendai D-6	Sendai D-6	Sendai D-6	Sendai D-6
2.1	No. of people						
2.2	Length of time						
<b>3</b>	<b>Public administration services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8
3.1	No. of people						
3.2	Length of time						
<b>4</b>	<b>Transport services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8
4.1	No. of people						
4.2	Length of time						
<b>5</b>	<b>Electricity and energy services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8
5.1	No. of people						
5.2	Length of time						
<b>6</b>	<b>Water services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8
6.1	No. of people						
6.2	Length of time						
<b>7</b>	<b>ICT services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8
7.1	No. of people						
7.2	Length of time						
<b>8</b>	<b>Other basic services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8
8.1	No. of people						
8.2	Length of time						
<b>9</b>	<b>Total disruptions</b>	Sendai D-5	Sendai D-5	Sendai D-5	Sendai D-5	Sendai D-5	Sendai D-5

Definitions of Services: see UNISDR Technical Guidelines for Sendai Framework Indicators or DRSF Chapter 4

**D2b Disruption of basic services from a Disaster, by geographic region****Measurement units: number of people and period of time**

		Region					Adjustment for multiple counting of events by regions	ADJ NATIONAL TOTAL
		Geo. Region 1	Geo. Region 2	Geo. Region 3	Geo. Region ...			
<b>Disruptions to Basic services from a Disaster (Sendai D-5)</b>								
<b>1</b>	<b>Health services</b>	Sendai D-7	Sendai D-7	Sendai D-7	Sendai D-7		Sendai D-7	
1.1	No. of people							
1.2	Length of time							
<b>2</b>	<b>Educational services</b>	Sendai D-6	Sendai D-6	Sendai D-6	Sendai D-6		Sendai D-6	
2.1	No. of people							
2.2	Length of time							
<b>3</b>	<b>Public administration services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8		Sendai D-8	
3.1	No. of people							
3.2	Length of time							
<b>4</b>	<b>Transport services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8		Sendai D-8	
4.1	No. of people							
4.2	Length of time							
<b>5</b>	<b>Electricity and energy services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8		Sendai D-8	
5.1	No. of people							
5.2	Length of time							
<b>6</b>	<b>Water services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8		Sendai D-8	
6.1	No. of people							
6.2	Length of time							
<b>7</b>	<b>ICT services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8		Sendai D-8	
7.1	No. of people							
7.2	Length of time							
<b>8</b>	<b>Other basic services</b>	Sendai D-8	Sendai D-8	Sendai D-8	Sendai D-8		Sendai D-8	
8.1	No. of people							
8.2	Length of time							
<b>9</b>	<b>Total disruptions</b>	Sendai D-5	Sendai D-5	Sendai D-5	Sendai D-5		Sendai D-5	

*Definitions of Services: see UNISDR Technical Guidelines for Sendai Framework Indicators or DRSF Chapter 4*

## E Summary tables of direct material impacts in monetary terms

### E1a Direct material impacts by hazards types

Measurement units: national currency (estimated costs for recovery of damages)

	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL
<b>1-Direct impacts on fixed assets or consumer durables</b>						
1.1 Dwellings (number)	Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4
1.1.1 Dwellings destroyed (number)						
1.1.2 Dwellings damaged (number)						
1.2 Buildings and structures						
1.2.1 Critical buildings & structures	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5
1.2.2 Other buildings and structures	Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3
1.3 Machinery and equipment						
1.3.1 Critical machinery and equipment	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5
1.3.2 Other machinery and equipment						
1.4 Consumer Durables						
<b>2-Direct impacts on valuables (SNA asset definition)</b>						
2.1 Art objects, music instruments						
2.2 Other valuables						
<b>3-Natural resources</b>						
3.1 Land, incl. soil						
3.2 Agriculture land (ref F1)	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2
3.3 Restoration Costs for Primary forests						
3.4 Livestock (ref. F1)						
3.5 Fish stocks (ref F1)						
3.6 Restoration Costs for Freshwater						
3.7 Other natural resources						
<b>4 Critical infrastructures [1.2], [1.3]</b>						
4.1 Hospitals, health facilities	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5
4.1.1 Medical services during the emergency for people injured or ill						
4.2 Education facilities						
4.3 Other critical public administration buildings						
4.4 Public monuments						
4.4.1 Religious buildings						
4.5 Roads						
4.6 Bridges						
4.7 Railways						
4.8 Airports						
4.9 Ports						
4.10 Transport equipments						
4.11 Electricity generation facilities						
4.12 Electricity grids						
4.13 ICT Equipments						
4.14 Dams						
4.15 Water supply infrastructure						
4.16 Water sewage & treatment systems						
4.17 Other critical infrastructures						
<b>5 Restoration costs for Direct impact on cultural heritage</b>	Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6
<b>6 Other direct costs associated with disaster recovery (e.g. emergency medical services)</b>						
<b>7 Total Direct Economic Loss [1.1-1.3 + 2 + 3 + 4]</b>	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1

Monetary valuation for costs of material impacts normally requires a combination of data sources, particularly: assessments for cost of reconstruction, insurance claims assessments or the recorded values of assets prior to a disaster (where available), records of actual transactions for recovery of damages, i.e. expenditure on post-disaster reconstruction.

For definitions, refer to DRSF, Chapter 8 and current international standards, such as the System of National Accounts (SNA, 2008)

## E1b Summary table of direct material impacts by hazards types and geographic regions

Measurement units: national currency (estimated cost of damages)

	Geo Region 1					Geo Region ...					Hazard types/ National Total								
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Adjustment for multiple counting of events by types	TOTAL Region/State 1	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Adjustment for multiple counting of events by types	TOTAL Region/State ...	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Adjustment for multiple counting of events by types	TOTAL adjustment for multiple counting of events by Regions/States (-)	NATIONAL TOTAL
<b>1-Direct impacts on fixed assets or consumer durables</b>																			
1.1	Dwellings (number)	Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4		Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4		Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4	Sendai C-4		Sendai C-4
1.1.1	Dwellings destroyed (number)																		
1.1.2	Dwellings damaged (number)																		
1.2	Buildings and structures																		
1.2.1	Critical buildings & structures	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5
1.2.2	Other buildings and structures	Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3		Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3		Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3	Sendai C-3		Sendai C-3
1.3	Machinery and equipment																		
1.3.1	Critical machinery and equipment	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5
1.3.2	Other machinery and equipment																		
1.4	Consumer Durables																		
<b>2-Direct impacts on valuables (SNA asset definition)</b>																			
2.1	Art objects, music instruments																		
2.2	Other valuables																		
<b>3-Natural resources</b>																			
3.1	Land, incl. soil																		
3.2	Agriculture land	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2		Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2		Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2		Sendai C-2
3.3	Primary forests																		
3.4	Livestock																		
3.5	Fish stocks																		
3.6	Freshwater																		
3.7	Other natural resources																		
<b>4-Critical infrastructures [1.2] &amp; [1.3]</b>																			
4.1	Hospitals, health facilities	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5
4.1.1	Medical services during the emergency for people injured or ill																		
4.2	Education facilities																		
4.3	Other critical public administration buildings																		
4.4	Public monuments																		
4.4.1	Religious buildings																		
4.5	Roads																		
4.6	Bridges																		
4.7	Railways																		
4.8	Airports																		
4.9	Ports																		
4.10	Transport equipments																		
4.11	Electricity generation facilities																		
4.12	Electricity grids																		
4.13	ICT Equipments																		
4.14	Dams																		
4.15	Water supply infrastructure																		
4.16	Water sewage & treatment systems																		
4.17	Other critical infrastructures	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5	Sendai C-5		Sendai C-5
<b>5 Restoration costs for Direct impact on cultural heritage</b>																			
		Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6		Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6		Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6	Sendai C-6		Sendai C-6
<b>6 Other direct costs associated with disaster recovery (e.g. emergency medical services)</b>																			
7	Total Direct Economic Loss [1.1-1.3 + 2 + 3 + 4]	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1		SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1		SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1	SDG 1.5.2, Sendai C-1		SDG 1.5.2, Sendai C-1

Measurement units : national currency (estimated cost of damages)

Monetary valuation for costs of material impacts normally requires a combination of data sources, particularly: insurance claims assessments or assessments for cost of reconstruction, the recorded values of assets prior to a disaster (where available), records of actual transactions for recovery of damages, i.e. expenditure on post-disaster reconstruction, and average costs of crops or other exposed assets for estimating costs of damages based on average per unit values.



## F Material impacts to Agriculture

### F1 Summary of material impacts to Agriculture by hazards types

	Hazard types					TOTAL	Measurement units
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other		
<b>1-Crops</b>							
1.1 Area affected by crop type	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	sq. km
1.2 Stored produce destroyed	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
1.3 Stored inputs destroyed	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
1.4 Equipment/machinery destroyed	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	units
1.5 Discounted yield value of perennial trees until replanting							currency
1.6 Post-disaster short-run maintenance costs							currency
<b>2-Livestock</b>							
2.1 Number of animals killed	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	animals
2.2 Stored products, feed and fodder destroyed	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
2.3 Equipment/machinery destroyed	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	units
2.4 Discounted value of livestock products from dead animals until full recovery							currency
2.5 Post-disaster short-run maintenance costs							currency
<b>3-Forestry</b>							
3.1 Area damaged or destroyed	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	sq. km
3.2 Stored wood volume destroyed	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
<b>4-Aquaculture</b>							
4.1 Production from land-based ponds	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	tonnes
4.2 Production from water based cages and ponds	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
4.3 Stored production lost	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
4.4 Facilities destroyed							units
4.5 Post-disaster short-run maintenance costs	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	currency
<b>5 - Fisheries</b>							
5.1 Small scale production loss	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	SDG 1.5.2, Sendai C-2	currency
5.2 Coastal production loss	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
5.3 Industrial (large-scale) production lost	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	tonnes
5.4 Facilities destroyed (fishing gear, engines, vessels, storage, etc.)	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	Sendai C-2	units

This table was prepared for use in DRSF by FAO Statistics Directorate, for more information or technical guidance, please contact FAO Statistics, Rome  
 Definitions according to national practices for agriculture statistics, and current international standards, such as the System of National Accounts (SNA, 2008) and current standards from FAO:  
<http://www.fao.org/statistics/standards/en/>

## G Summary tables of direct environmental impacts

### G1 Summary table of direct environmental impacts by hazards types at country level

Measurement units: see column at right

	Hazard types							Measurement unit
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	Adjustment for multiple counting of events by types	TOTAL	
<b>Direct environmental impact</b>								
<b>1</b>	<b>Direct impacts on ecosystems by land cover types</b>							
1.1	01 Urban and associated developed areas							sq. km
1.2	02 Homogeneous herbaceous cropland							sq. km
1.3	03 Agriculture plantations, permanent crops							sq. km
1.4	04 Agriculture associations and mosaics							sq. km
1.5	05 Pastures and natural grassland							sq. km
1.6	06 Forest tree cover							sq. km
1.7	07 Shrubland, bushland, heathland							sq. km
1.8	08 Sparsely vegetated areas							sq. km
1.9	09 Natural vegetation associations and mosaics							sq. km
1.10	10 Barren land							sq. km
1.11	11 Permanent snow and glaciers							sq. km
1.12	12 Open wetlands							sq. km
1.13	13 Inland water bodies							sq. km
1.14	14 Coastal water bodies and inter-tidal areas							sq. km
<b>2</b>	<b>Loss of critical ecosystems</b>							
2.1	Man And Biosphere and other biological reserves (UNESCO, UNEP)							sq. km
2.2	Other designated ecosystems/habitats							sq. km
2.3	Ecosystems hosting threatened species (IUCN Red List)							sq. km
2.4	Other critical ecosystems							sq. km
<b>3</b>	<b>Losses of natural water resource (quantitative/qualitative)</b>							
3.1	Losses due to pollution of natural surface water							no. of water bodies
3.2	Losses due to pollution of groundwater							no. of water bodies
3.3	Losses due to destruction of natural surface water reserves							no. of water bodies
3.4	Losses due to destruction of groundwater reserves							no. of water bodies
<b>4</b>	<b>Direct impacts to the atmosphere or climate change</b>							
4.1	Emissions of GHGs							tonnes
4.2	Loss of carbon sequestration capacity							tonnes
4.3	Other direct impact on global warming							
4.4	Emissions of SO <sub>2</sub>							tonnes
4.5	Emission of other (non-GHG) air pollutants (specify)							tonnes

**Data sources:** Collaboration between national monitoring authorities for land cover, water resources, and atmospheric conditions with initial impacts assessments of NDMAs after a disaster

**G2 Summary table of direct environmental impacts by hazards types and geographic regions**  
**Measurement units: see column at right**

	Geo Region 1					Geo Region ...					National Total					Measurement units				
	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL Geo Region 1	Geo-physical	Hydrological	Meteorological & Climatological	Biological	Other	TOTAL Geo Region...	Geo-physical	Hydrological	Meteorological & Climatological		Biological	Other	TOTAL adjustment for multiple counting of events by Regions/States (-)	ADJ NATIONAL TOTAL
<b>Direct environmental impact</b>																				
<b>1</b>	<b>Direct impacts on ecosystems by land cover types</b>																			
1.1	Urban and associated developed areas																			sq. km
1.2	Homogeneous herbaceous cropland																			sq. km
1.3	Agriculture plantations, permanent crops																			sq. km
1.4	Agriculture associations and mosaics																			sq. km
1.5	Pastures and natural grassland																			sq. km
1.6	Forest tree cover																			sq. km
1.7	Shrubland, bushland, heathland																			sq. km
1.8	Sparsely vegetated areas																			sq. km
1.9	Natural vegetation associations and mosaics																			sq. km
1.10	Barren land																			sq. km
1.11	Permanent snow and glaciers																			sq. km
1.12	Open wetlands																			sq. km
1.13	Inland water bodies																			sq. km
1.14	Coastal water bodies and inter-tidal areas																			sq. km
<b>2</b>	<b>Loss of critical ecosystems</b>																			
2.1	Man And Biosphere and other biological reserves (UNESCO, UNEP)																			sq. km
2.2	Other designated ecosystems/habitats																			sq. km
2.3	Ecosystems hosting threatened species (IUCN Red List)																			sq. km
2.4	Other critical ecosystems																			sq. km
<b>3</b>	<b>Losses of natural water resource (quantitative/qualitative)</b>																			
3.1	Losses due to pollution of natural surface water																			no. of water bodies
3.2	Losses due to pollution of groundwater																			no. of water bodies
3.3	Losses due to destruction of natural surface water reserves																			no. of water bodies
3.4	Losses due to destruction of groundwater reserves																			no. of water bodies
<b>4</b>	<b>Direct impacts to the atmosphere or climate change</b>																			
4.1	Emissions of GHGs																			tonnes
4.2	Loss of carbon sequestration capacity																			tonnes
4.3	Other direct impact on global warming																			
4.4	Emissions of SO2																			tonnes
4.5	Emission of other (non-GHG) air pollutants (specify)																			tonnes

Data sources: Collaboration between national monitoring authorities for land cover, water resources, and atmospheric conditions with initial impacts assessments of NDMA after a disaster

**DRRE Disaster Risk Reduction Expenditure Account****DRRE\_A Production expenditure account (current plus investment) by characteristic activities**

Measurement units: Local currency (US\$ PPP)

	Providers of disaster risk reduction services (SNA institutional sectors)										Rest of the World (RoW)	
	Non-financial corporations	Financial corporations	General government (incl. non-profit institutions controlled by governments and social security)				Households			Non-profit institutions serving households (NPISHs)		TOTAL Resident sectors (units with at least 1 year of activity)
			Central government	State government	Local government	Subtotal General government	Households owners of unincorporated enterprises	Employees and recipients of property and transfer incomes	Subtotal Households			
<b>Activity expenditure account (current plus investment)</b>												
<b>1 Disaster Risk Prevention</b>												
1.1 Risk prevention in advance of hazardous event												
1.2 Risk prevention in or after hazardous event												
<b>2 Disaster Risk Mitigation</b>												
2.1 Structural measures												SDG 11.c.1
2.2 Non-structural measures												
2.3 Land-use planning												
2.4 Early warning systems management												
<b>3 Disaster Management</b>												
3.1 Preparedness												
3.2 Emergency management												
3.3 Other disaster responses												
3.4 Emergency supply of commodities												
<b>4 Disaster Recovery</b>												
4.1 Relocation												
4.2 Rehabilitation												
4.3 Reconstruction												
<b>5 General Government, Research &amp; Development, Education Expenditure</b>												
5.1 General government expenditure for Disaster Risk Reduction												
5.2 Research & Development, risk assessment, and information												
5.3 Education to Disaster Risk Reduction												
<b>A Subtotal current production expenditure (SUM 1 to 5)</b>												
<b>1 Disaster Risk Prevention</b>												
1.1 Risk prevention in advance of hazardous event												
1.2 Risk prevention in or after hazardous event												
<b>2 Disaster Risk Mitigation</b>												
2.1 Structural measures												
2.2 Non-structural measures												
2.3 Land-use planning												
2.4 Early warning systems management												
<b>3 Disaster Management</b>												
3.1 Preparedness												
3.2 Emergency management												
3.3 Other disaster responses												
3.4 Emergency supply of commodities												
<b>4 Disaster Recovery</b>												
4.1 Relocation												
4.2 Rehabilitation												
4.3 Reconstruction												
<b>5 General Government, Research &amp; Development, Education Expenditure</b>												
5.1 General government expenditure for Disaster Risk Reduction												
5.2 Research & Development, risk assessment, and information												
5.3 Education to Disaster Risk Reduction												
<b>B Subtotal Gross formation of fixed capital (SUM 1 to 5)</b>												
<b>6 Acquisition less disposals of land and other non produced non-financial assets</b>												
6.1 Acquisition less disposals of land												
6.2 Acquisition less disposals of non produced non-financial assets												
<b>C Investment production expenditure</b>												
<b>Total DRR Production Expenditure (current plus investment)</b>												

**DRRE\_B Transfers expenditure account & DRR National Expenditure**

Measurement units: Local currency (US\$ PPP)

	Institutional sectors										TOTAL Resident sectors (units with >1 year of activity)	Rest of the World (RoW)	
	Non-financial corporations		Financial corporations		General government (incl. non-profit institutions controlled by governments and social security)				Households				Non-profit institutions serving households (NPISHs)
	Non-financial corporations	Financial corporations	Central government	State government	Local government	Subtotal General government	Households owners of unincorporated enterprises	Employees and recipients of property and transfer incomes, Subtotal Households					
<b>Transfers expenditure account</b>													
<b>Total Transfers Paid (6.1)</b>													
<b>6.1 Disaster risk reduction characteristic transfers paid</b>													
6.1.1	Internal transfers between public government services (current or in capital)												
6.1.2	Risk transfers, insurance premiums and indemnities												
6.1.3	Disaster related international transfers (current or in capital)												
6.1.4	Public transfers to private (subsidies, transfers in capital...)												
6.1.5	Private transfers (taxes, voluntary...)												
6.1.6	Other transfers												
<b>Total Transfers Received (6.2)</b>													
<b>6.2 Disaster risk reduction characteristic transfers received</b>													
6.2.1	Internal transfers between public government services (current or in capital)												
6.2.2	Risk transfers, insurance premiums and indemnities												
6.2.3	Disaster related international transfers (current or in capital)												
6.2.4	Public transfers to private (subsidies, transfers in capital...)												
6.2.5	Private transfers (taxes, voluntary...)												
6.2.6	Other transfers												
<b>DRRE Net transfers (6.1 minus 6.2)</b>													
<b>Total DRR Production Expenditure (current plus investment)</b>													
<b>DRR National Expenditure = Total Production Expenditure plus Net Transfers</b>													
<b>Benefits of the DRR National expenditure (by beneficiaries)</b>													
<b>Beneficiaries of the Total Production Expenditure</b>													
<b>Beneficiaries of Total Transfers Received</b>													