

## Disaster in SDGs

- How can we measure?

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1. Disaster in SDGs

2. Status of Disaster Statistics

3. How Can We Measure the Disaster?

# Disaster in SDGs

## THE GLOBAL GOALS For Sustainable Development

<b>1 NO POVERTY</b>  빈곤철폐	<b>2 ZERO HUNGER</b>  기아종식 식량안보와 농업 증진	<b>3 GOOD HEALTH AND WELL-BEING</b>  보건 및 웰빙 증진	<b>4 QUALITY EDUCATION</b>  교육보장 평생교육기회 증진	<b>5 GENDER EQUALITY</b>  성평등 달성 여성역량 강화	<b>6 CLEAN WATER AND SANITATION</b>  물과 위생시설 접근성 향상과 관리
<b>7 AFFORDABLE AND CLEAN ENERGY</b>  에너지접근 보장	<b>8 DECENT WORK AND ECONOMIC GROWTH</b>  경제성장 촉진 일자리 증진	<b>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</b>  인프라시설 구축 산업화와 혁신 증진	<b>10 REDUCED INEQUALITIES</b>  불평등 감소	<b>11 SUSTAINABLE CITIES AND COMMUNITIES</b>  지속가능한 도시와 거주지 조성	<b>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</b>  지속가능한 소비와 생산양식 확립
<b>13 CLIMATE ACTION</b>  기후변화 대응	<b>14 LIFE BELOW WATER</b>  해양자원보존과 지속가능한 이용	<b>15 LIFE ON LAND</b>  육상생태계 보호와 지속가능한 이용	<b>16 PEACE AND JUSTICE STRONG INSTITUTIONS</b>  평화로운 사회증진과 제도구축	<b>17 PARTNERSHIPS FOR THE GOALS</b>  이행수단과 글로벌파트너십 강화	 <b>THE GLOBAL GOALS</b> For Sustainable Development

# Disaster in SDGs



I.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters



II.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

II.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the [Sendai Framework for Disaster Risk Reduction 2015-2030](#), holistic disaster risk management at all levels



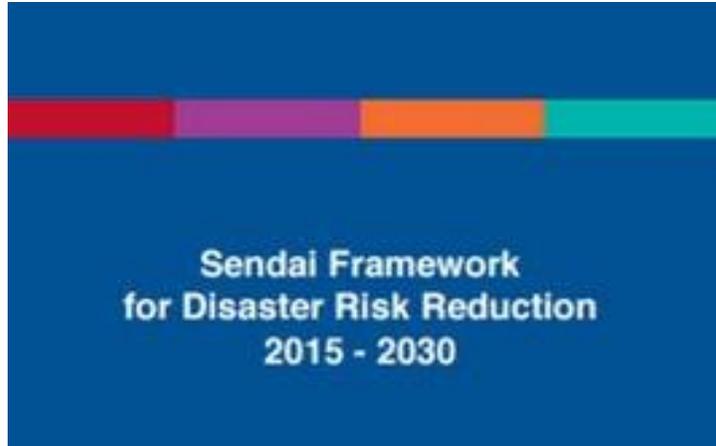
13.I Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

# Sendai Framework for Disaster Risk Reduction

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UN World Conference on  
Disaster Risk Reduction  
2015 Sendai Japan



## Reduce

- A. mortality
- B. number of affected people
- C. economic loss
- D. damage to critical infrastructure

## Increase

- E. disaster strategies
- F. early warning systems and risk information
- G. international cooperation.

# Indicators: SDGs and SFDRR

1.5.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people

A1(A2+A3) Number of deaths and missing persons attributed to disasters, per 100,000 population.

A2 Number of deaths attributed to disasters, per 100,000 population.

A3 Number of missing persons attributed to disasters, per 100,000 population.

B1(B2~B5) Number of directly affected people attributed to disasters, per 100,000 population.

B2 Number of injured or ill people attributed to disasters, per 100,000 population.

B3 Number of people whose damaged dwellings were attributed to disasters.

B4 Number of people whose destroyed dwellings were attributed to disasters.

B5 Number of people whose livelihoods were disrupted or destroyed, attributed to disasters.

1.5.2 Direct disaster economic loss in relation to global GDP

C1(C2~C6) Direct economic loss attributed to disasters in relation to global gross domestic product.

C2 Direct agricultural loss attributed to disasters.

C3 Direct economic loss to all other damaged or destroyed productive assets attributed to disasters.

C4 Direct economic loss in the housing sector attributed to disasters.

C5 Direct economic loss resulting from damaged or destroyed critical infrastructure attributed to disasters.

C6 Direct economic loss to cultural heritage damaged or destroyed attributed to disasters.

1.5.3 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030

D1(D2~D4) Damage to critical infrastructure attributed to disasters.

D2 Number of destroyed or damaged health facilities attributed to disasters.

D3 Number of destroyed or damaged educational facilities attributed to disasters.

D4 Number of other destroyed or damaged critical infrastructure units and facilities attributed to disasters.

D5 (D6~D8) Number of disruptions to basic services attributed to disasters.

D6 Number of disruptions to educational services attributed to disasters.

D7 Number of disruptions to health services attributed to disasters.

D8 Number of disruptions to other basic services attributed to disasters.

1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies

E1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030.

E2 Percentage of local governments that adopt and implement local disaster risk reduction strategies in line with national strategies.

1. Disaster in SDGs

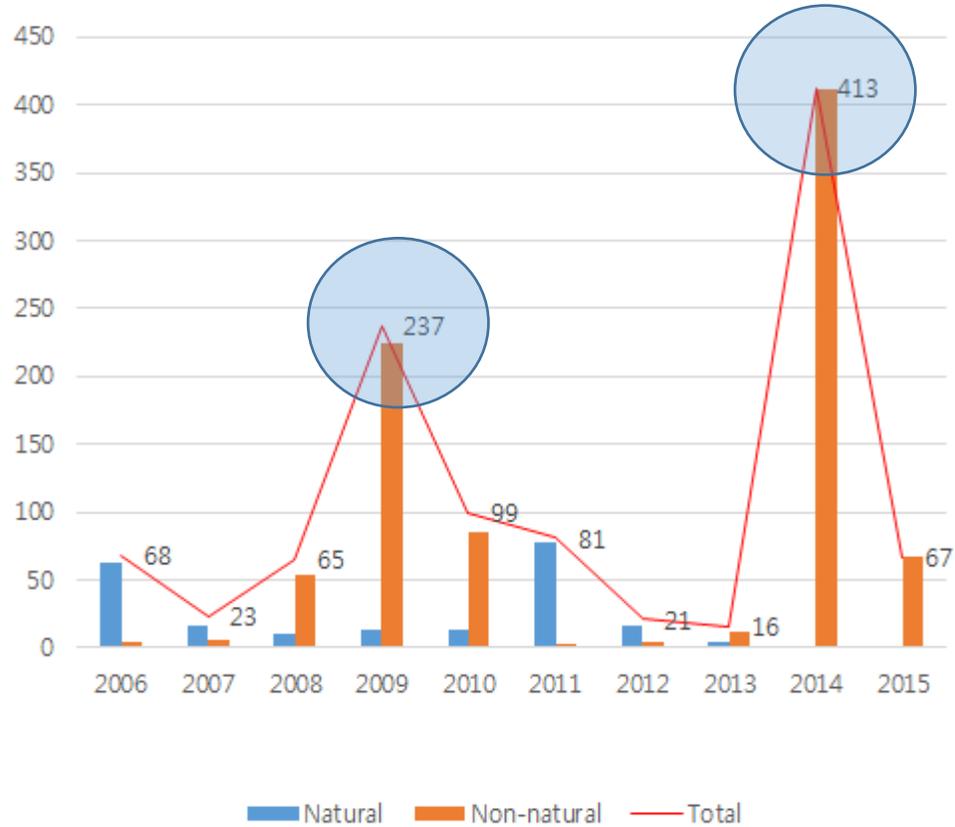
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# Damage from the Disaster

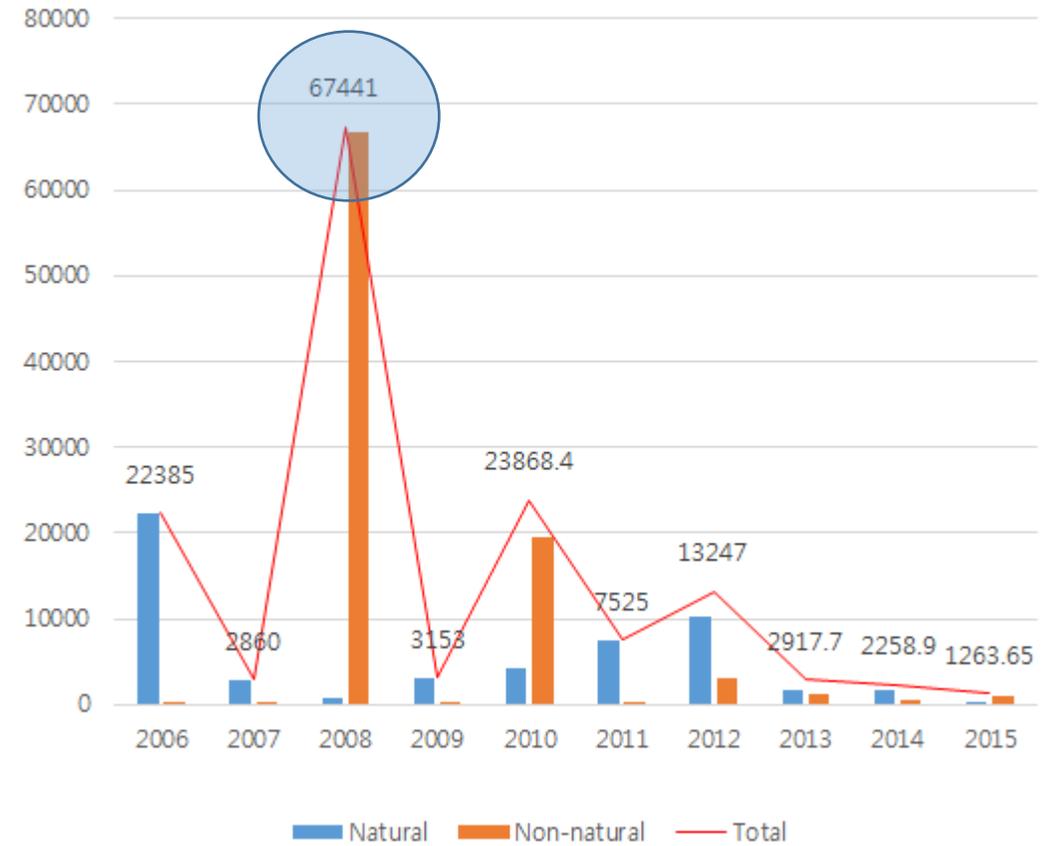
## death,missing persons during 10 years

Unit : persons



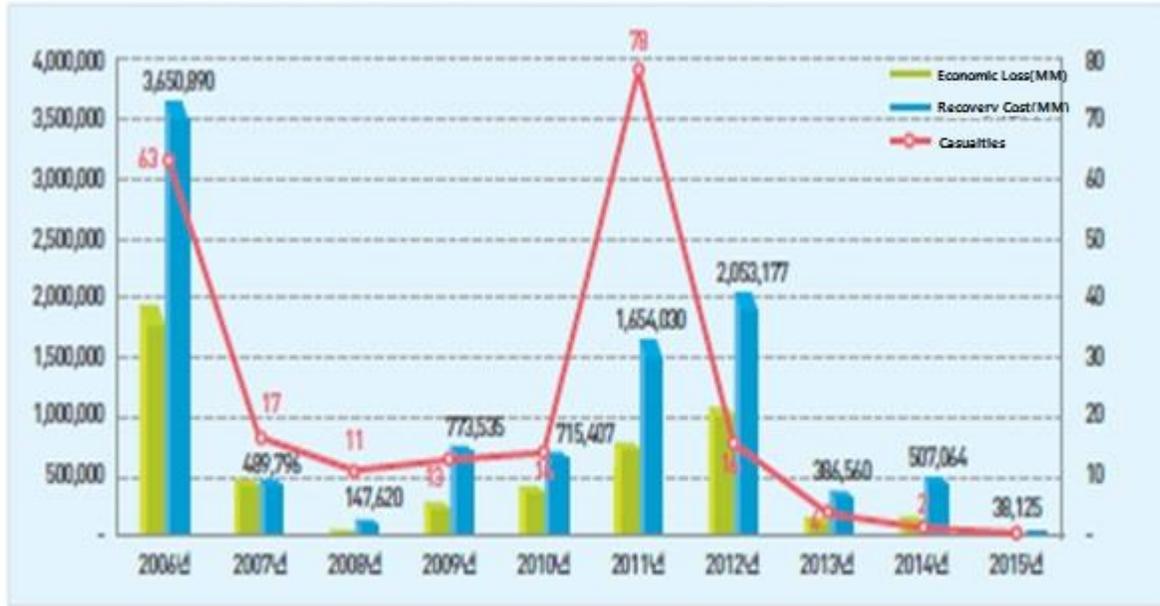
## Unit : 100 million economic loss during 10 years

Unit : 100 million



# Damage from the Natural Disaster

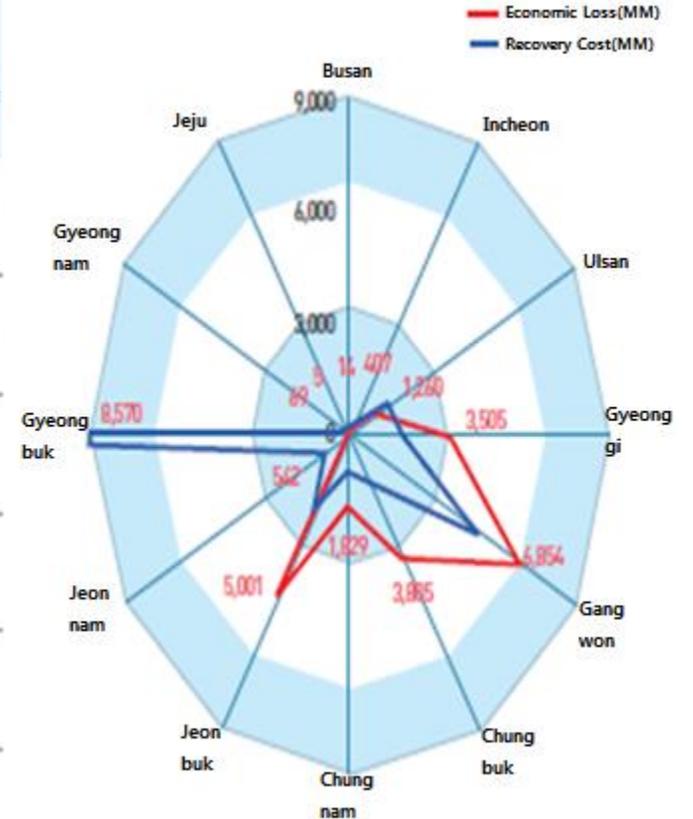
Annual Loss by Natural Disaster (2006 ~ 2015)



연도	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Economic Loss(MM)	1,942,983	251,811	63,703	298,808	426,781	794,200	1,089,210	172,137	180,018	31,861
Recovery Cost(MM)	3,650,890	489,796	147,620	773,535	715,407	1,654,030	2,053,177	386,560	507,064	38,125
Casualties	63	17	11	13	14	78	16	4	2	-

Regional Natural Disaster (2015)

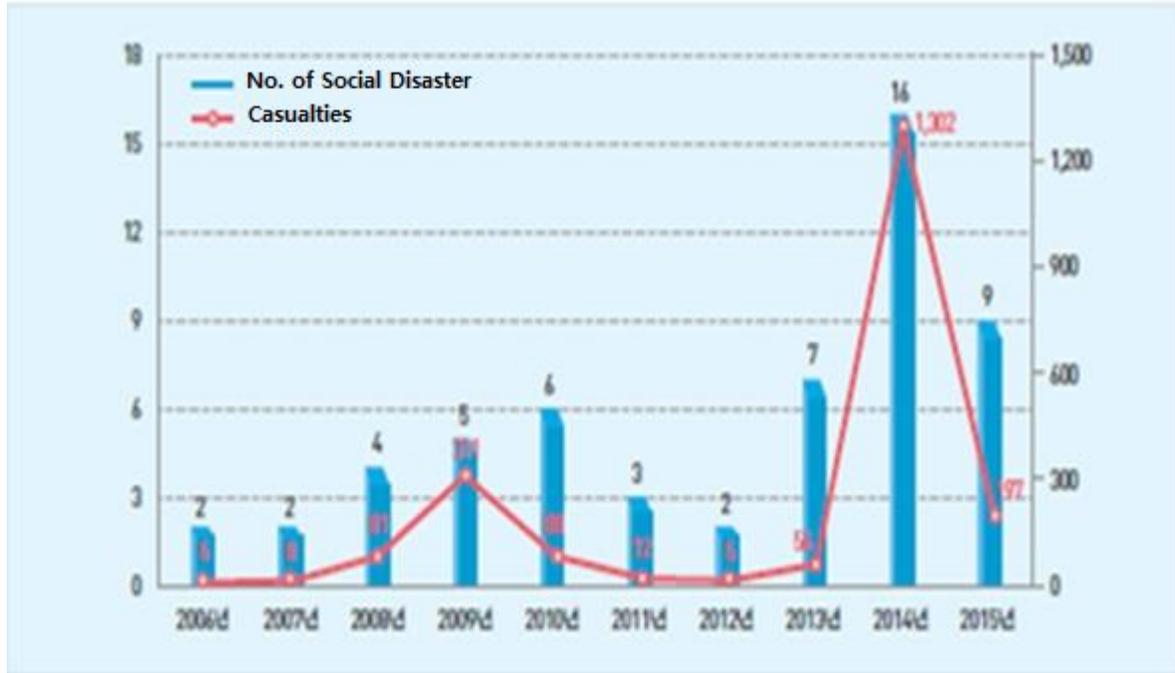
Region	Economic Loss (MM)	Recovery Cost(MM)	Region	Economic Loss (MM)	Recovery Cost(MM)
Busan	14	7	Chung nam	1,829	999
Incheon	407	156	Jeon buk	5,001	2,159
Ulsan	1,260	1,608	Jeon nam	542	928
Gyeong gi	3,506	1,942	Gyeong buk	8,570	23,482
Gang won	6,854	5,295	Gyeong nam	69	102
Chung buk	3,806	1,420	Jeju	5	27



Source : 2016 annual statistical report, National Security Office

# Damage from the Social(Non-natural) Disaster

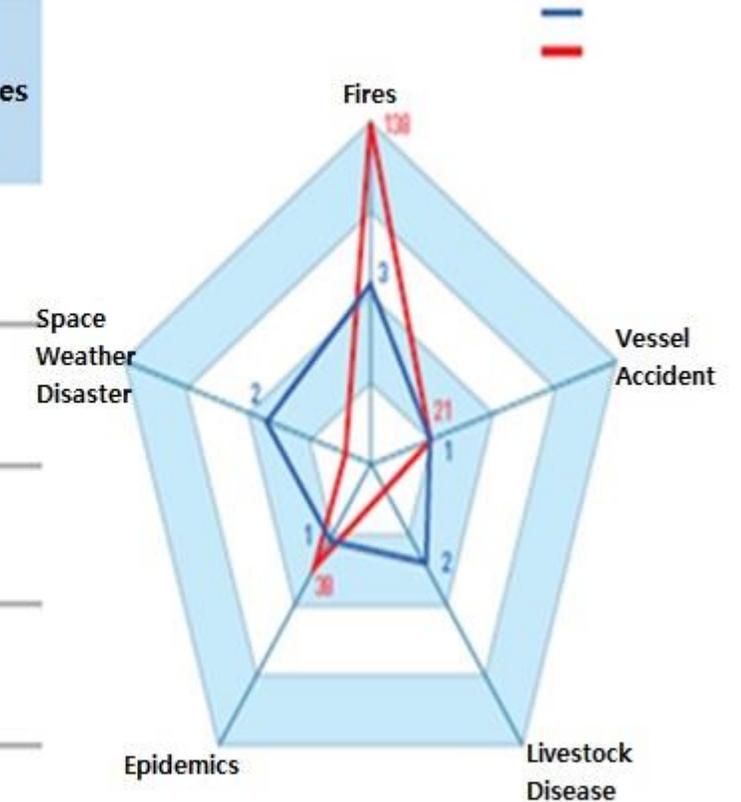
Annual Social Disaster Records (2006~2015)



연도	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
No. of Social Disaster	2	2	4	5	6	3	2	7	16	9
Casualties	5	8	81	311	88	12	5	56	1,302	197

Social Disaster Type (2015)

Type	No. of Social Disaster	Casualties
Fires	3	138
Vessel Accident	1	21
Livestock Disease	2	-
Epidemics	1	38
Space Weather Disaster	2	-



# Issue #I. Scope of Disaster

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## < SFDRR >

*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.*

## < Korea >

The term "disaster" means any of the following which actually causes or is likely to cause any harm to the lives, bodies, and property of citizens and the State:

(a) Natural disasters: Disasters caused by a typhoon, flood, downpour, strong wind, wind and waves, tidal wave, heavy snowfall, lightning, drought, earthquake, sandy dust, hypertrophied of algae, ebb and flow, volcanic activity, and other natural phenomena equivalent thereto;

(b) Social disasters: Damage, beyond the scale prescribed by Presidential Decree, caused by a fire, collapse, explosion, traffic accidents (including aviation accidents and marine accidents), chemical, biological, and radioactive accidents, environmental pollution incidents, etc.; damage caused by the paralyzation of the State's infrastructure, such as energy, communications, transportation, finance, medical treatment, and water supply; and damage caused by the spread, etc. of infectious diseases under the Infectious Disease Control and Prevention Act or contagious animal diseases under the Act on the Prevention of Contagious Animal Diseases;

## Issue #2. Data Disaggregation

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No one will be left behind

*SDG indicators should be disaggregated where relevant by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the Fundamental Principles of Official Statistics*  
- The 2030 Agenda for Sustainable Development -

*“While the Global Targets of the SFDRR do not explicitly call for data disaggregation, **Guiding Principle 19(g)** of the Sendai Framework for Disaster Risk Reduction does call for specific attention to factors such as income, sex, age and disability in disaster risk reduction.”*  
- Report of the OEIWG on indicators and terminology relating to disaster risk reduction

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