Advisory Panel to the Foreign Minister on Climate Change: Recommendations on Climate Change

Climate Change as the Main Mission of Japan's Diplomacy to Transform Japan into a Decarbonized Nation

April 2018

SLIDE DECK

Global Greenhouse Gas Emissions Under Different Scenarios and the Emissions Gap in 2030





0.

2010

2020

2030

2040

2050

source : UNEP (2017). The Emissions Gap Report 2017.

World Map of Natural Catastrophe 2017



730 loss events, thereof

- 20 most significant events in terms of overall or insured losses and/or fatalities
- Geophysical event: Earthquake, tsunami, volcanic activity
- Meteorological event: Tropical storm, extratropical storm, convective storm, local storm
- Hydrological event: Flooding, mass movement
- Climatological event: Extreme temperature, drought, wildfire

Natural Catastrophes 2017 - highest ever losses from weather catastrophes



Natural Catastrophes 2017 - highest ever losses from weather catastrophes



High Temperature Rise in Asia



Cities in Climate Change Risks

City ranking by estimated risk in average annual losses (US\$ million)

	City	AAL, with protection in USD million
1	Guangzhou	687
2	Miami	672
3	New York-Newark	628
4	New Orleans	507
5	Mumbai	284
6	Nagoya	260
7	Tampa-St. Petersburg	244
8	Boston	237
9	Shenzen	169
10	Osaka—Kobe	120
10 11	Osaka—Kobe Vancouver	120 107
10 11 12	Osaka—Kobe Vancouver Tianjin	120 107 104
10 11 12 13	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City	120 107 104 104
10 11 12 13 14	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City Kolkata	120 107 104 104 99
10 11 12 13 14 15	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City Kolkata Guayaquil	120 107 104 104 99 98
10 11 12 13 14 15 16	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City Kolkata Guayaquil Philadelphia	120 107 104 104 99 98 89
10 11 12 13 14 15 16 17	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City Kolkata Guayaquil Philadelphia Virginia Beach	120 107 104 104 99 98 89 89 89
10 11 12 13 14 15 16 17 18	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City Kolkata Guayaquil Philadelphia Virginia Beach Fukuoka—Kitakyushu	120 107 104 104 99 98 89 89 89 82
 10 11 12 13 14 15 16 17 18 19 	Osaka—Kobe Vancouver Tianjin Ho Chi Minh City Kolkata Guayaquil Philadelphia Virginia Beach Fukuoka—Kitakyushu Baltimore	120 107 104 104 99 98 89 89 89 82 82 76

City ranking with the largest increase in average annual losses (from 2005 to 2050)

	City	AAL, with protection in USD million	Increace
1	Alexandria	504	154%
2	Barranquilla	10	116%
3	Napoli	2	82%
4	Sapporo	4	76%
5	Santo Domingo	34	65%
6	Bayrut	2	63%
7	Houston	190	60%
8	Istanbul	21	57%
9	Jakarta	1,750	54%
10	Izmir	11	51%
11	Marseille- Aix-en-Provence	5	51%
12	Athens	1	50%
13	Shanghai	93	48%
14	Banghazi	22	46%
15	Tel Aviv-Yafo	0	45%
16	Fuzhou_Fujian	199	45%
17	Ningbo	256	45%
18	La Habana	0	42%
19	Port-au-Prince	1	41 %
20	Algiers	9	41 %

Carbon Pricing

Summary map of regional, national and subnational carbon pricing initiatives implemented, scheduled for implementation and under consideration (ETS and carbon tax)



Tally of carbon pricing initiatives implemented or scheduled for implementation



National level Subnational level

ETS implemented or scheduled for implementation Carbon tax implemented or scheduled for implementation ETS or carbon tax under consideration

ETS and carbon tax implemented or scheduled

Carbon tax implemented or scheduled, ETS under consideration

The circles represent subnational jurisdictions. The circles are not representative of the size of the carbon pricing instrument, but show the subnational regions (large circles) and cities (small circles).

Note: Carbon pricing initiatives are considered "scheduled for implementation" once they have been formally adopted through legislation and have an official, planned start date. Carbon pricing initiatives are considered "under consideration" if the government has announced its intention to work towards the implementation of a carbon pricing initiative and this has been formally confirmed by official government sources. The carbon pricing initiatives have been classified in ETSs and carbon taxes according to how they operate technically. ETS does not only refer to cap-and-trade systems, but also baseline-and-credit systems such as in British Columbia and baseline-and-offset systems such as in Australia. The authors recognize that other classifications are possible. Due to the dynamic approach to continuously improve data guality, changes to the map do not only reflect new developments, but also corrections following new information from official government sources, resulting in changes for Liechtenstein, Ukraine and Kyoto.

Offshore Wind Resource

High winds close to major demand centers

< 25

m

×

PHILIPPINES

LAOP. D. R.

THAILAND

source: Dana Younger (2018)

CAMBODIA

VIETNAM

ESG investment becoming global mainstream

- 1956 organizations have signed the Principles for Responsible Investment (PRI), of which 61 are Japanese organizations (as of Apr 2018)
- 7 of the 10 largest investment funds (as of 2014) have signed the PRI (as of Nov 2015)
- World's largest pension fund GPIF became a signatory of the PRI in 2015
- ESG investment has grown from 18 trillion US\$ in 2014 to 22 trillion US\$ in 2016
- Nearly all regions saw increases in their ESG investment, but especially Australia and Japan represented a large increase

Rank	Fund	Country	Total assets		
1	Government Pension Investment Fund (GPIF)	Japan	\$1,143,838		
2	Government Pension Fund	Norway	\$884,031		
3	National Pension Service	South Korea	\$429,794		
4	Federal Retirement Thrift	U.S.	\$422,200		
5	ABP (National civil pension fund)	Netherlands	\$418,745		
6	California Public Employees' Retirement System (CalPERS)	U.S.	\$296,744		
7	National Social Security Fund	China	\$247,361		
8	Canada Pension	Canada	\$228,431		
9	PFZW (Welfare pension fund)	Netherlands	\$215,006		
10	Central Provident Fund	Singapore	\$207,872		
PRI signatories (as of Nov 2015) (Unit: million US\$)					

Year 2014	Top 20 Investment Funds	Engaged in ESG investment	Not expressed
Number of funds	20	12	8
Total assets	6.06 trillion US\$	4.34 trillion US\$	1.72 trillion US\$