CLIMATE CHANGE EXPENDITURE TAGGING (CCET)

Ministry of Environment, Natural Resources & Energy

Presentation Main Points

- ✓ Background
- ✓ Problem
- ✓ Data
- ✓ Impacts
- ✓ Solution
- ✓ More Points..
- ✓ One More..

Brief Background

- on June 22, 2020, the Ministry of Finance, Budget and Management held the first coordination meeting among the identified endorsing authorities on public works, environment and information technology.

- The Ministry of Environment, Natural Resources and Energy was given the tasked to review and assess Programs, activities and Projects P/ A/ Ps of the different Ministries which relates to environment, natural resources and energy prior to the submission of the respective Ministry's budget proposal.

- As an endorsing authority, the Ministry shall set criteria/standards for the different Ministries to be guided.

- These standards shall provide the necessary tool for the Ministry to endorse specific Ministries proposals to the MFBM for consideration and possible funding under the 2021 Budget.

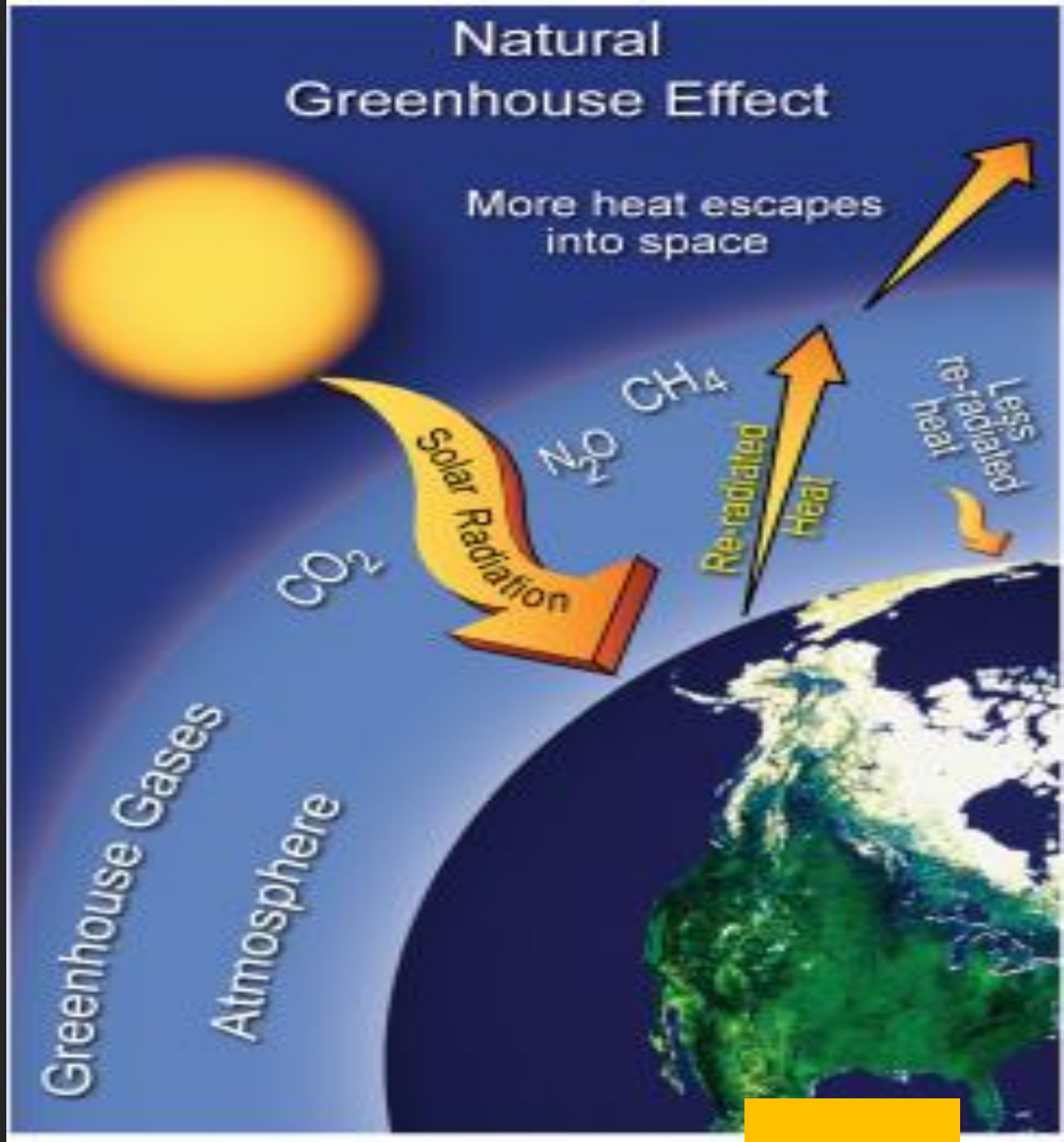


Climate Change: What you need to know

Greenhouse Effect 101

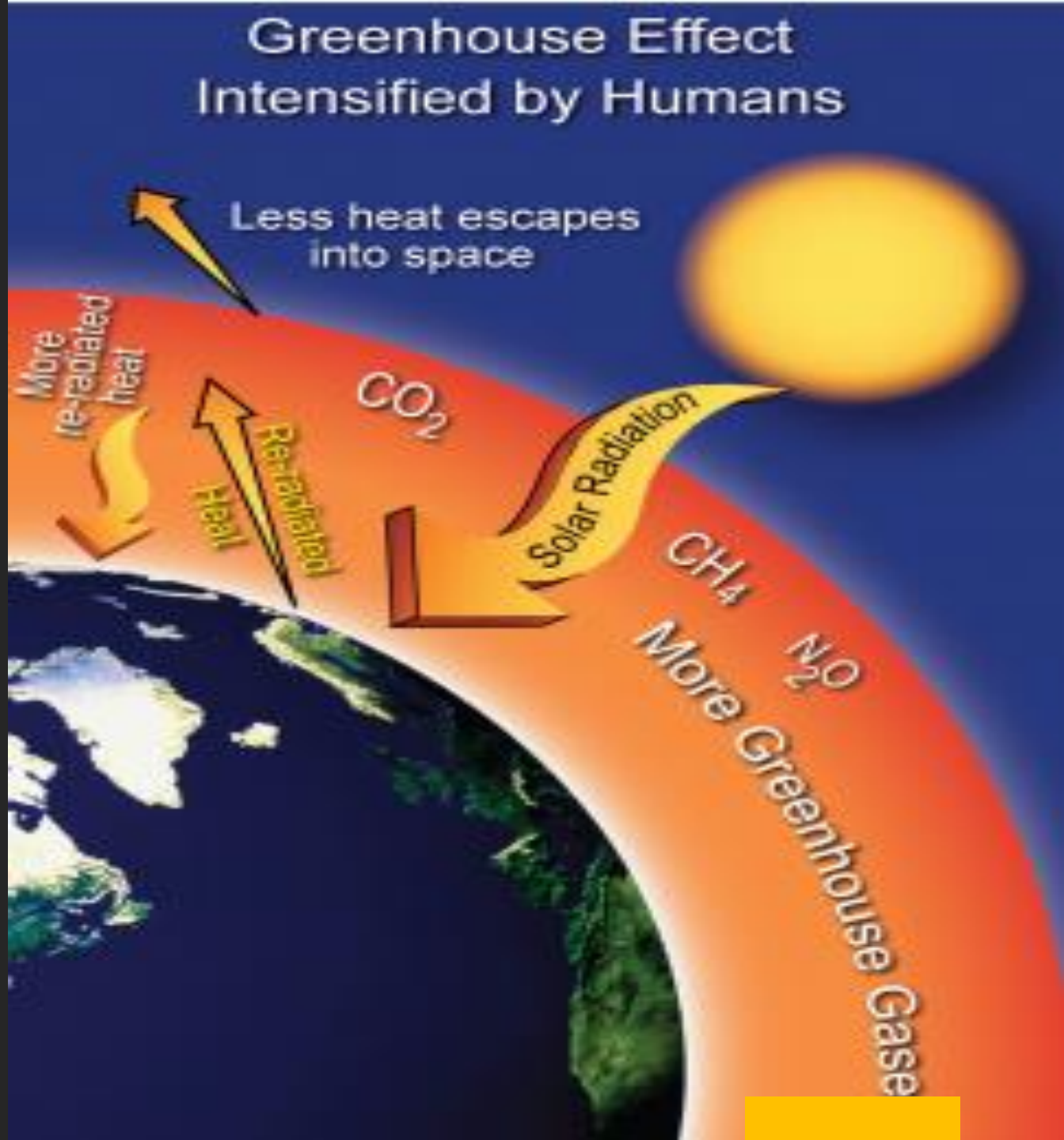
- Identified by scientists as far back as 1896, the greenhouse effect is the natural warming of the earth that results when gases in the atmosphere trap heat from the sun that would otherwise escape into space.

- The greenhouse effect is a good thing. It warms the planet to its comfortable average of 15 degrees Celsius and keeps life on earth, well, livable. Without it the world would be a frozen, uninhabitable place, more like Mars.



Greenhouse Effect 101

- The problem is, mankind's voracious burning of fossil fuels for energy is artificially amping up the natural greenhouse effect. The result? An increase in global warming that is altering the planet's climate systems in countless ways.



What causes greenhouse effect?

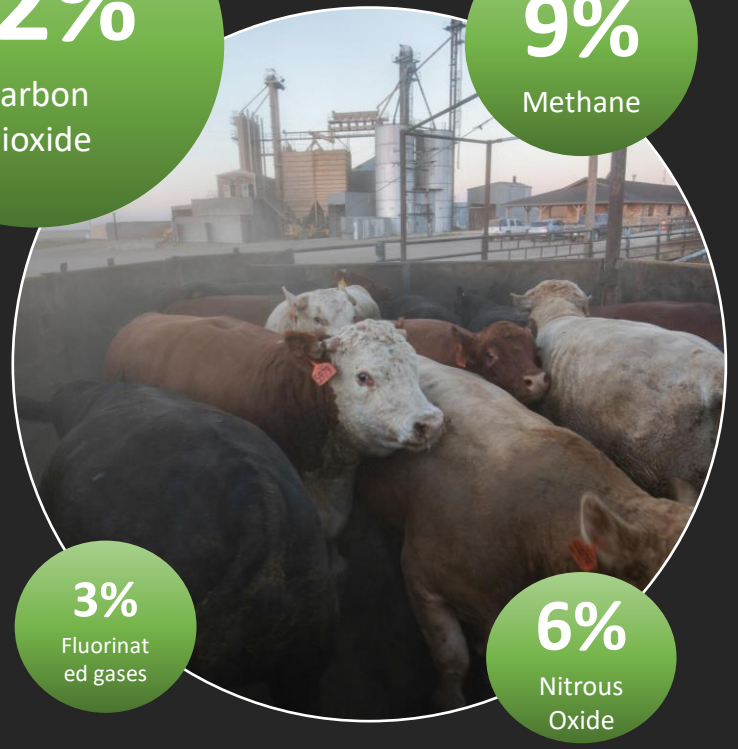
Sunlight makes the earth habitable.

While 30 percent of the solar energy that reaches our world is reflected back to space, approximately 70 percent passes through the atmosphere to the earth's surface, where it is absorbed by the land, oceans, and atmosphere, and heats the planet. This heat is then radiated back up in the form of invisible infrared light. While some of this infrared light continues on into space, the vast majority—indeed, some 90 percent—gets absorbed by atmospheric gases, known as greenhouse gases, and redirected back toward the earth, causing further warming.

Concentrations of GHGs in the atmosphere:

- For the past 800,000 years the concentration of greenhouse gases in our atmosphere was between about 200 and 280 ppm (parts per million).
- But in the past century, that concentration has jumped to more than 400 parts per million, driven up by human activities such as burning fossil fuels and deforestation.
- The higher concentrations of greenhouse gases—and carbon dioxide in particular—is causing extra heat to be trapped and global temperatures to rise.

What are greenhouse gases?



32%	Power Generation
28%	Transportation
20%	Industry
9%	Livestock and Agriculture
5%	Commercial
5%	Household

An atlas of pollution: the world in carbon dioxide emissions

Latest data published by the US Energy Information Administration provides a unique picture of economic growth – and decline. China has sped ahead of the US, as shown by this map, which resizes each country according to CO2 emissions. And, for the first time, world emissions have gone down

Europe
4,310m tonnes of CO2 in 2009
Down 6.9% on 2008

10 UK 520 7.8%
UK had been ranked 8th for emissions in 2008
6 Germany 766 7.0%
18 France 397 7.4%
19 Spain 330 8.4%
17 Italy 408 9.3%
25 Netherlands 249 9.2%
34 Belgium 107 10.7%
21 Poland 286 4.5%
24 Turkey 253 2.2%
39 Greece 100 3.3%
68 Norway 39.6
60 Sweden 50.6
59 Finland 52.2
62 Denmark 48.6
67 Ireland 43.3
41 Czech Rep 95.3
50 Austria 69.2
44 Romania 80.5
58 Serbia 32.5
66 Bulgaria 64.5
55 Portugal 58.3
73 Slovakia 31.8
64 Hungary 66

Eurasia
2,358m tonnes of CO2 in 2009
Down 9.2% on 2008

4 Russia 1,572 7.4%
22 Ukraine 255 26.2% Biggest % drop in total emissions
28 Kazakhstan 185 3.6%
36 Uzbekistan 115 9.4%
54 Turkmenistan 56.8
53 Belarus 60.6
52 Azerbaijan 58.2
8 South Korea 528 1.2%
5 Japan 1,098 9.7%
45 North Korea 79.5

North America
6,411m tonnes of CO2 in 2009
Down 6.9% on 2008

13 Mexico 444 1.9%

Central & South America
1,273m tonnes of CO2 in 2009
Up 3.6% on 2008

14 Brazil 420 0.3%
30 Venezuela 162 1.4%
49 Colombia 70.1
25 Chile 70.6 Biggest % rise in emissions
29 Argentina 167 6.3%
64 Trinidad & Tobago 43.8
76 Cuba 30.4
76 Puerto Rico 31.4
72 Ecuador 28.7
70 Peru 38.2

Africa
1,122m tonnes of CO2 in 2009
Down 3.1% on 2008

12 South Africa 450 6.7%
27 Egypt 192 3.5%
46 Nigeria 77.7
37 Algeria 134 4.2%
57 Libya 54.6
71 Morocco 36.5

Middle East
1,714m tonnes of CO2 in 2009
Up 3.3% on 2008

11 Saudi Arabia 470 3.2%
9 Iran 527 3.2%
26 United Arab Emirates 193 1.4%
43 Kuwait 84.9
38 Iraq 104 1.2%
48 Israel 70.5
53 Syria 56.9
72 Bahrain 31.1
67 Oman 45.0
79 Yemen 22.9

World
30,452m tonnes of CO2 in 2009
Down 0.1% on 2008

Asia & Oceania
13,264m tonnes of CO2 in 2009
Up 7.5% on 2008

1 China 7,711 million tonnes 13.3%
Only three years earlier, in 2006, China was in second place, and until recently had been very close to US emissions. But from 2008 to 2009, rapid growth has matched the country's 9-10% growth in GDP.
Since 2000 the country's CO2 emissions have risen by 170.6%

3 India 1,602 8.7%
India overtook Russia in 2009

15 Australia 418 1.8%
16 Indonesia 413 2.4%
23 Thailand 253 0.7%
20 Taiwan 291 3.7%
47 Philippines 72.4
40 Vietnam 98.8 4.9%
32 Malaysia 148 0.2%
31 Singapore 161 4.3%
42 Hong Kong 86.0
22 Pakistan 140 6.4%
56 Bangladesh 55.1

2 US 5,425 million tonnes 7.0%

US emissions are down for the second year in succession – after almost uninterrupted year on year increases since these records began in 1980. The decline has matched the country's economic woes which have seen it only just emerge from recession.
Since 2000 the country's CO2 emissions have fallen by 7.5%

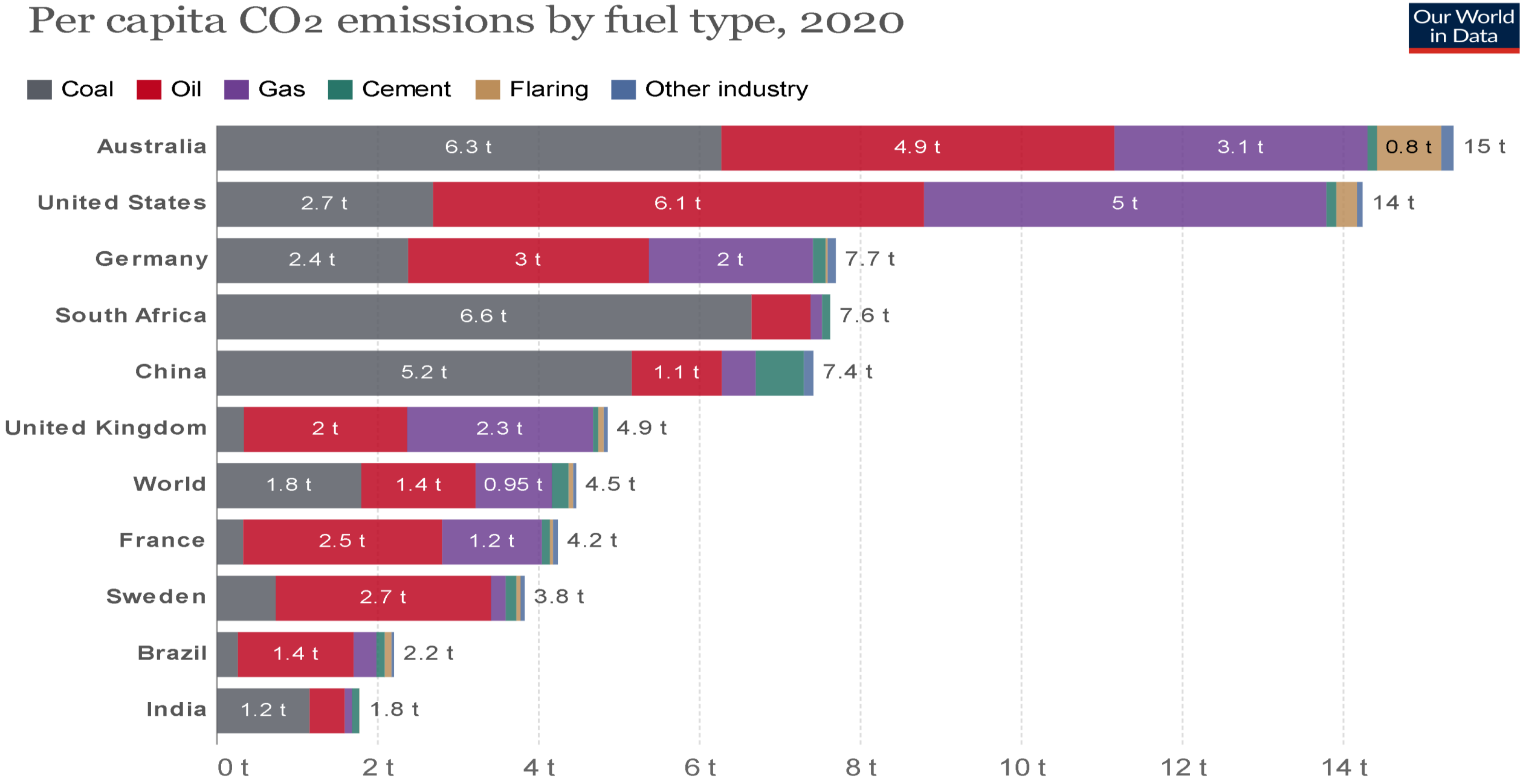
7 Canada 541 9.6%

Detailed data
Full list of each country's CO2 emissions and movement in the world emissions league table

Rank	Country	Million tonnes 2009	Percent change 08–09
1	China	7711	13.3
2	US	5425	-7.0
3	India	1602	8.7
4	Russia	1572	-7.4
5	Japan	1098	-9.7
6	Germany	766	-7.0
7	Canada	541	-9.6
8	South Korea	528	1.2
9	Iran	527	3.2
10	UK	520	-7.8
11	Saudi Arabia	470	3.2
12	South Africa	450	-6.7
13	Mexico	444	-1.9
14	Brazil	420	0.3
15	Australia	418	1.8
16	Indonesia	413	2.4
17	Italy	408	-9.3
18	France	397	-7.4
19	Spain	330	-8.4
20	Taiwan	291	3.7
21	Poland	286	-4.5
22	Ukraine	255	-26.2
23	Thailand	253	-0.7
24	Turkey	253	2.2
25	Netherlands	249	-9.2
26	United Arab Emirates	193	1.4
27	Egypt	192	3.5
28	Kazakhstan	185	-3.6
29	Argentina	167	6.3
30	Venezuela	162	1.4
31	Singapore	161	4.3
32	Malaysia	148	0.2
33	Pakistan	140	6.4
34	Belgium	107	-10.7
35	Uzbekistan	115	-9.4
36	Algeria	134	6.2
37	Iraq	104	1.2
38	Iran	106	-17
39	Greece	100	-3.3
40	Vietnam	98.8	-4.9
41	Czech Republic	95.3	-3.8
42	Hong Kong	86.0	11.3
43	Kuwait	84.9	-4.5
44	Romania	80.5	-10.6
45	North Korea	79.5	14.3
46	Nigeria	77.7	-2.4
47	Philippines	72.4	-2.9
48	Israel	70.5	-6.8
49	Colombia	70.1	-7.0
50	Austria	69.2	-3.5
51	Qatar	66.5	-6.8
52	Belarus	60.6	-9.5
53	Syria	56.9	6.3
54	Turkmenistan	56.8	-1.2
55	Portugal	56.5	1.5
56	Bangladesh	55.1	9.6
57	Libya	54.6	-4.7
58	Serbia	52.3	-4.3
59	Finland	52.2	-4.9
60	Sweden	50.6	-2.7
61	Hungary	50.0	-10.7
62	Denmark	48.6	-8.6
63	Oman	48.0	9.9
64	Trinidad and Tobago	43.8	-4.1
65	Switzerland	43.8	1.0
66	Bulgaria	44.5	-11.9
67	Ireland	43.3	-11.2
68	Norway	39.6	-6.3
69	New Zealand	39.1	-1.3
70	Peru	38.2	-6.0
71	Morocco	36.5	-2.3
72	Azerbaijan	36.2	-8.0
73	Slovakia	35.8	-4.5
74	Puerto Rico	33.3	-3.2
75	Bahrain	31.1	1.6
76	Cuba	30.4	4.7
77	Ecuador	28.7	1.7
78	Angola	24.0	1.8
79	Yemen	22.9	11.5
80	Tunisia	22.9	5.7
81	Croatia	21.5	-4.7
82	Jordan	20.0	2.4
83	Dominican Republic	19.9	2.1
84	Bosnia and Herzegovina	18.3	-15.9
85	Estonia	17.5	-31.8
86	Slovenia	17.4	0.3
87	Lithuania	15.8	-12.8
88	Panama	15.5	1.7
89	Lebanon	14.8	3.6
90	Bolivia	13.9	-2.7
91	Sudan	13.0	3.0
92	Sri Lanka	12.8	1.7
93	Ghana	12.5	-4.3
94	US Virgin Islands	12.2	-13.5
95	Jamaica	12.1	-3.6
96	Netherlands Antilles	11.6	-4.1
97	Kenya	11.5	2.4
98	Guatemala	11.3	-1.7
99	Armenia	11.2	1.5
100	Zimbabwe	10.6	18.6
101	Luxembourg	10.6	-11.2
102	Cyprus	9.4	-3.5
103	Latvia	8.5	8.3
104	Ghana	8.1	5.6
105	Honduras	7.9	-2.4
106	Brunei	7.6	-20.1
107	Cameroon	7.5	-1.9
108	Mongolia	7.4	-1.8
109	Macedonia	7.1	-20.1
110	Uruguay	7.1	-10.2
111	Moldova	7.1	-4.1
112	Ethiopia	6.9	7.1
113	Costa Rica	6.8	-4.4
114	Tanzania	6.7	7.1
115	IvoryCoast	6.6	2.2
116	Congo	6.3	3.8
117	Senegal	6.2	1.8
118	Tajikistan	6.1	-10.4
119	El Salvador	5.9	0.0
120	Kyrgyzstan	5.7	-0.4
121	Georgia	5.5	-4.9
122	Bahamas	5.2	3.1
123	Papua New Guinea	4.8	6.7
124	Albania	4.6	1.8
125	Equatorial Guinea	4.6	-3.1
126	Gabon	4.6	-1.2
127	Mauritius	4.6	-6.0
128	Botswana	4.5	7.7
129	Nicaragua	4.5	-3.3
130	Gibraltar	4.4	-3.8
131	Namibia	4.1	3.7
132	Paraguay	4.0	3.7
133	Cambodia	3.9	-6.1
134	Benin	3.7	3.9
135	Nepal	3.4	3.8
136	Iceland	3.4	-2.4
137	Palestine	3.2	-4.3
138	Madagascar	3.1	0.4
139	Malta	3.1	-2.5
140	New Caledonia	3.0	0.0
141	Togo	2.8	5.6
142	Reunion	2.8	0.0
143	Mauritania	2.7	3.3
144	Zambia	2.7	18.8
145	Papua, Oeon Rep	2.7	-2.6
146	Martinique	2.6	6.3
147	Macau	2.4	1.3
148	Mozambique	2.3	-4.1
149	Guadeloupe	2.3	-4.1
150	Haiti	2.1	2.9
151	Suriname	2.0	4.0
152	Uganda	1.9	-3.0
153	Fiji	1.9	6.2
154	Montenegro	1.9	4.3
155	Djibouti	1.8	3.4
156	Guam	1.7	0.0
157	Guyana	1.7	0.0
158	Burkina Faso	1.6	2.1
159	Seychelles	1.4	6.1
160	Barbados	1.4	-4.2
161	Swaziland	1.4	17.0
162	Niger	1.3	3.5
163	Guinea	1.3	-4.3
164	Sierra Leone	1.3	5.6
165	Malawi	1.3	6.6
166	Laos	1.2	1.1
167	Wake Island	1.2	-4.1
168	French Guiana	1.1	6.1
169	Aruba	1.1	-4.3
170	French Polynesia	1.1	2.7
171	Eritrea	0.94	3.4
172	Maldives	0.92	3.4
173	Somalia	0.90	3.4
174	Afghanistan	0.83	-2.9
175	Faroe Islands	0.80	6.4
176	Eritrea	0.77	6.4
177	Mali	0.76	6.4
178	Rwanda	0.74	0.0
179	Bermuda	0.70	4.2
180	Liberia	0.69	2.2
181	Antigua and Barbuda	0.69	6.4
182	American Samoa	0.67	2.3
183	East Timor	0.63	8.7
184	Greenland	0.61	-4.8
185	Guinea-Bissau	0.46	0.0
186	Gambia	0.44	15.4
187	Cayman Islands	0.43	-11.8
188	Saint Lucia	0.42	0.0
189	Bermuda	0.37	-4.0
190	Cape Verde	0.36	4.5
191	Bhutan	0.33	-11.1
192	Western Sahara	0.32	0.0
193	Antarctica	0.31	1.6
194	Saint Kitts and Nevis	0.30	11.1
195	Grenada	0.30	4.8
196	Central African Republic	0.29	-15.0
197	Solomon Islands	0.29	25.0
198	US Pacific Islands	0.29	0.0
199	Chad	0.29	11.1
200	Lesotho	0.27	5.9
201	Saint Vincent/Grenadines	0.22	11.6
202	Nauru	0.20	9.1
203	Tonga	0.15	-23.1
204	Cook Islands	0.15	66.7
205	Comoros	0.15	25.0
206	Sao Tome and Principe	0.15	11.1
207	Vanuatu	0.15	25.0
208	British Virgin Islands	0.15	25.0
209	Samoa	0.15	15.7
210	Montserrat	0.15	58.7
211	Dominica	0.14	16.1
212	Saint Pierre and Miquelon	0.11	16.7
213	Turks and Caicos Islands	0.08	0.0
214	Falkland Islands	0.05	0.0
215	Kiribati	0.04	0.0
216	Saint Helena	0.01	11.2
217	Niue	0.01	2.9

Tables shown total carbon dioxide emissions from the consumption of energy

Per capita CO_2 emissions by fuel type, 2020



Source: Our World in Data based on the Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

Increase in Temperature

- Heatwave
- Forest Loss
- Melting of Ice caps

Changes in Rainfall Pattern

- Drought
- Water Scarcity

Sea Level Rise

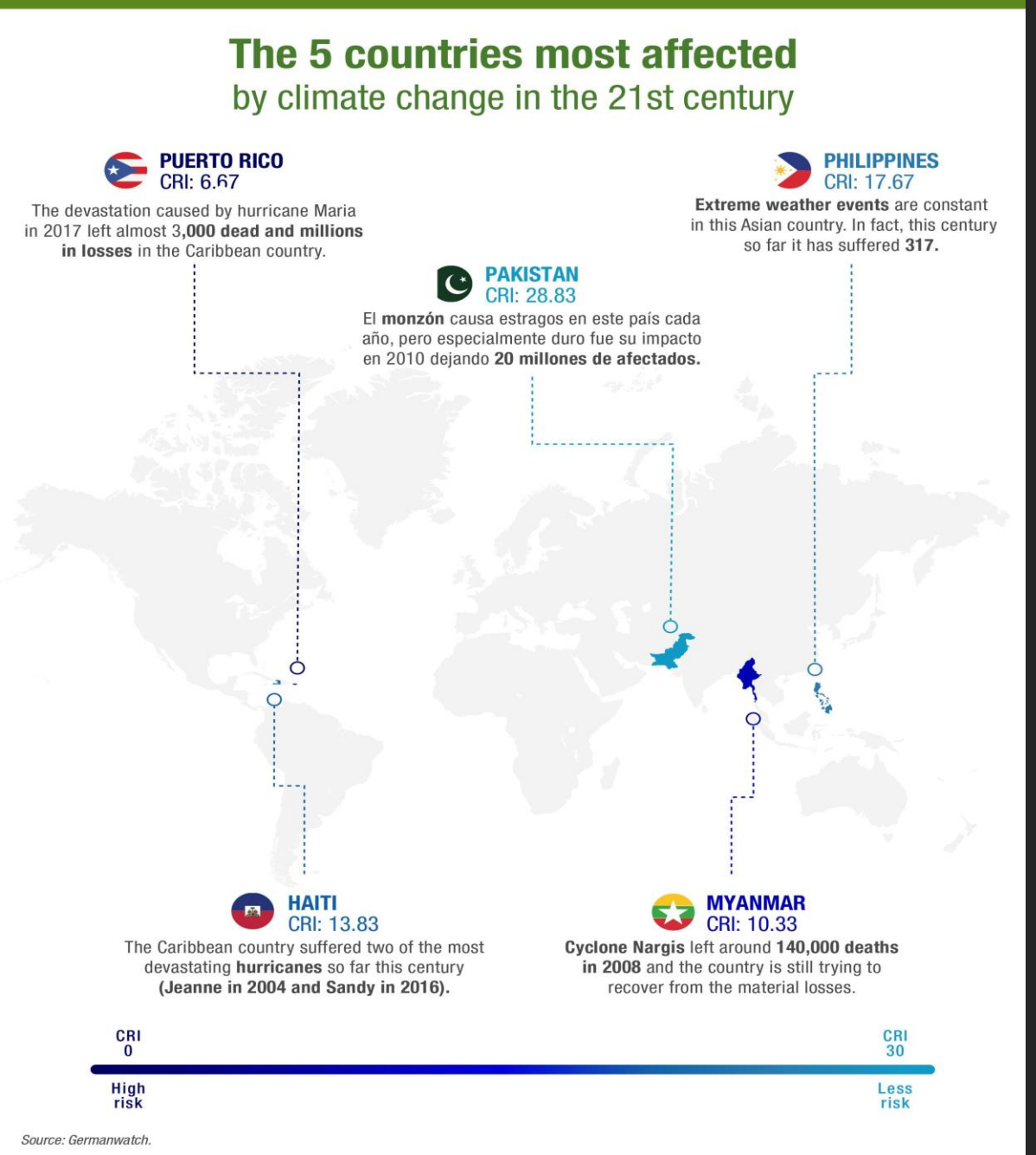
- Flooding
- Displacement

Ocean Acidification

- Coral Bleaching
- Biodiversity Loss

Extreme Climate Events

- Disasters
- Agriculture damage

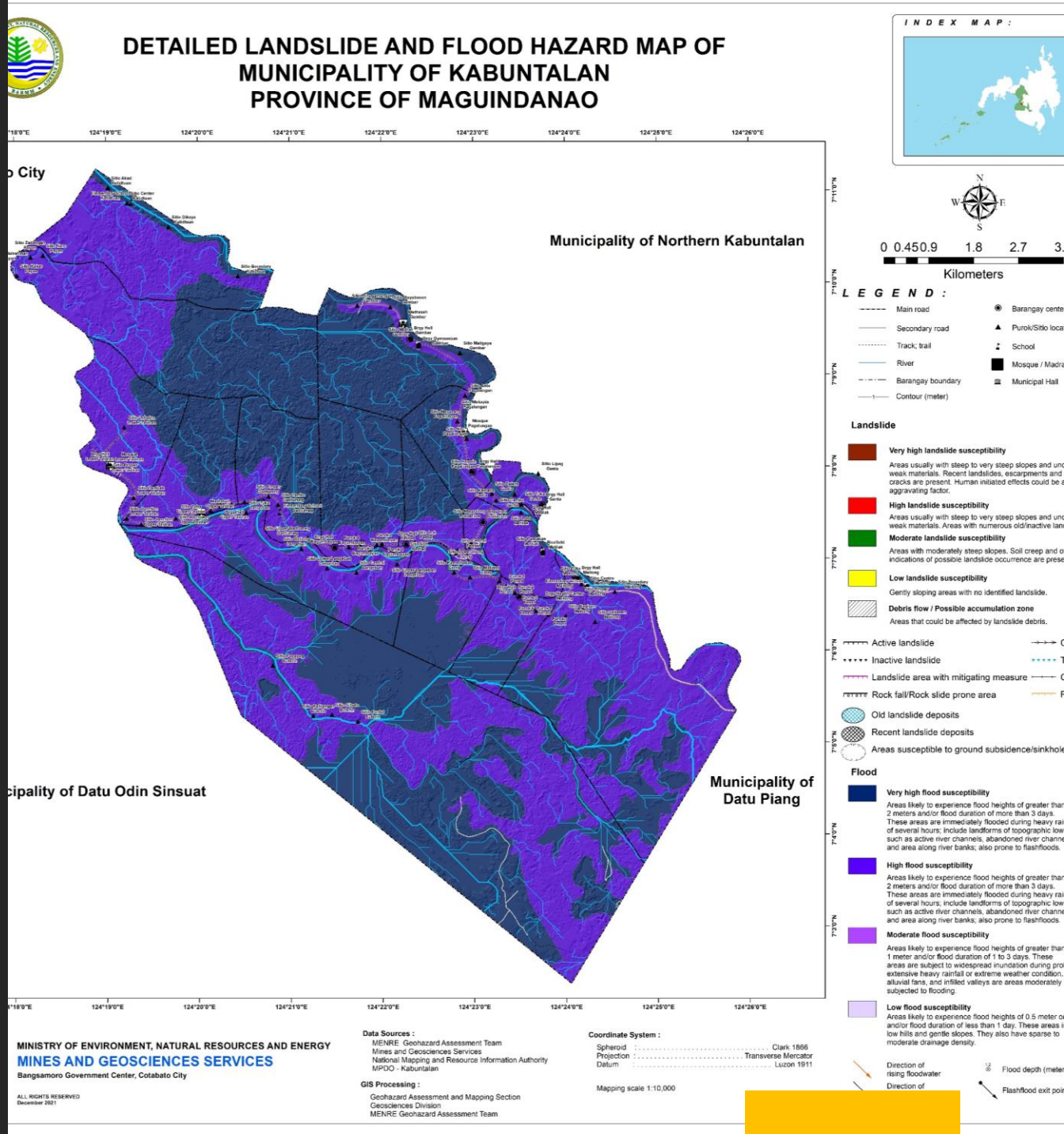


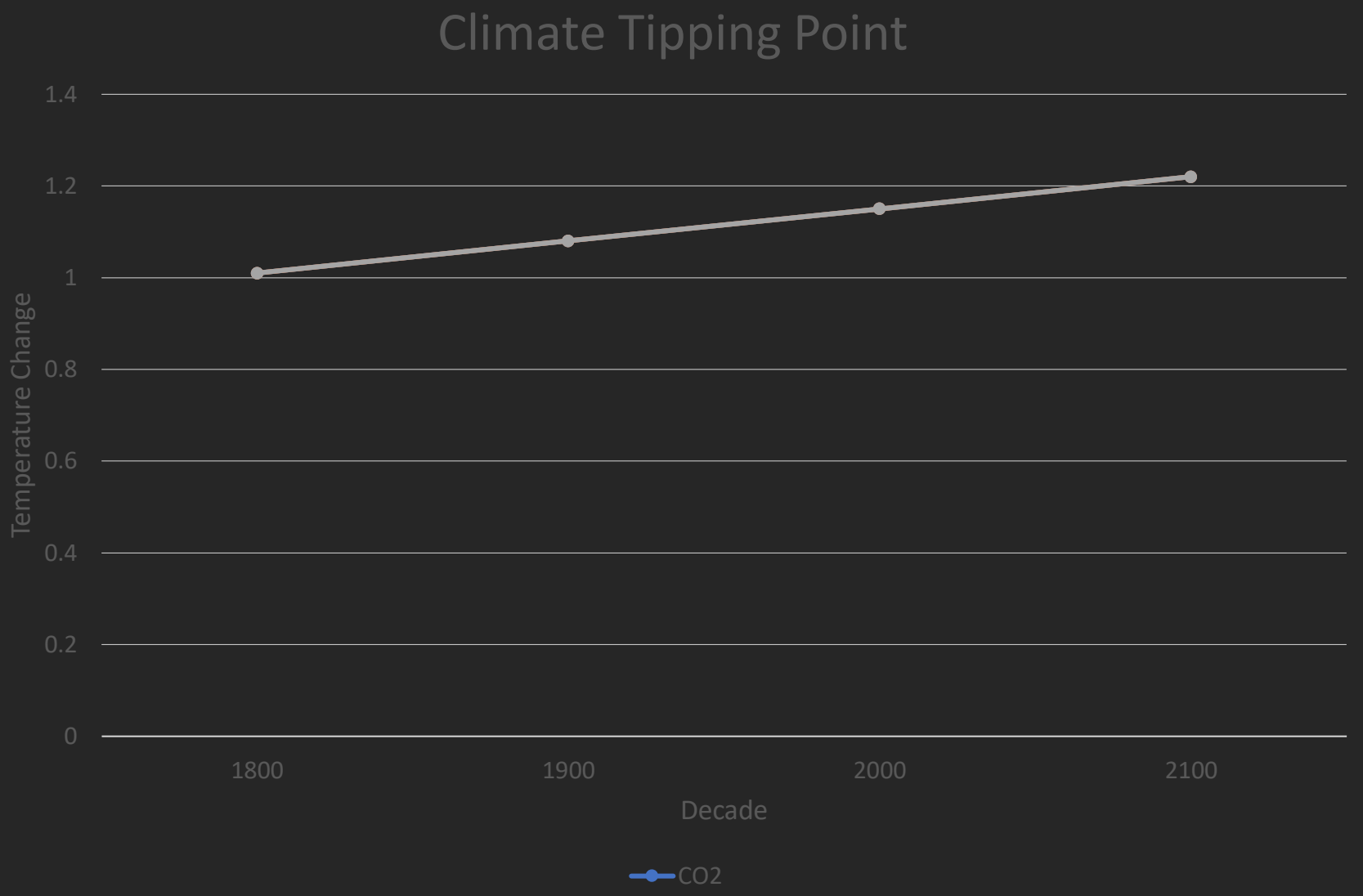
Philippines Ranks no. 2 with Climate Risk Index of 11.17

Typhoon Mangkhut's passage through the Philippines in 2018 affected more than 250,000 people across the country and left at least 59 dead due to torrential rainfall. According to Germanwatch, extreme weather events caused a total of 455 deaths in the country that year — 0.43 per 100,000 inhabitants — as well as more than 4,540 million US dollars in economic losses and a drop in GDP of 0.48% per capita.

Why it concerns us?

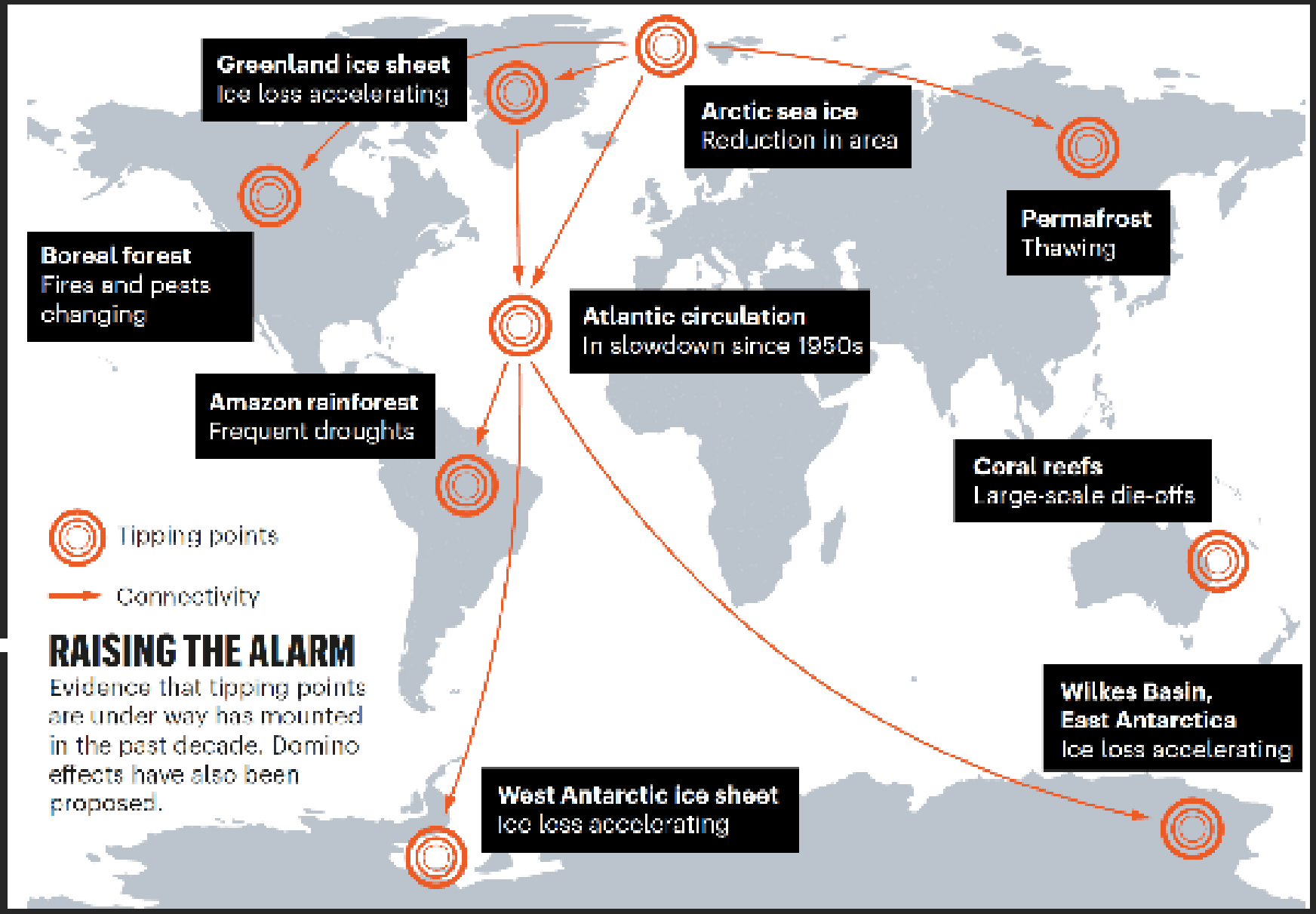
- A global problem with local impacts
- Certain impacts magnify pre-existing problems
- We have a lower capacity to deal with Climate Change
- Some impacts are most felt in the tropics





- 1.15°C increase since 1800
- 0.07 increase per decade
- Tipping point is assumed to be at 2°C

Climate Tipping Point



Amazon Rainforest

Temperature increase,
change in precipitation patterns ,
17% permanent loss in biodiversity

Eurasian Permafrost

Thawing leads to exposure of organic rich-soil
40% of area will be thawed by 2100

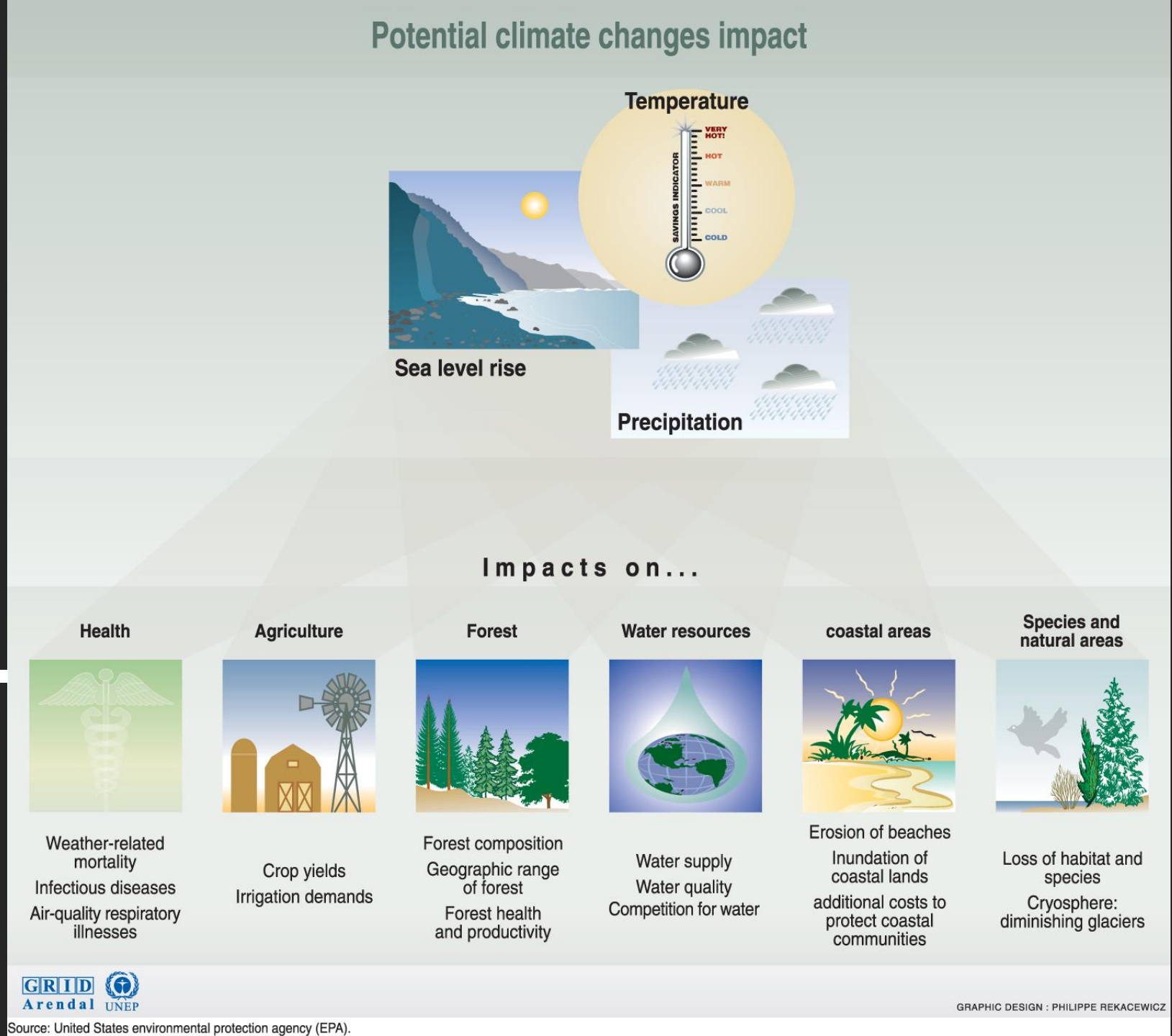


Climate Change: what we are currently facing

Increase in Temperature

1. Currently at 1.15 ˚C

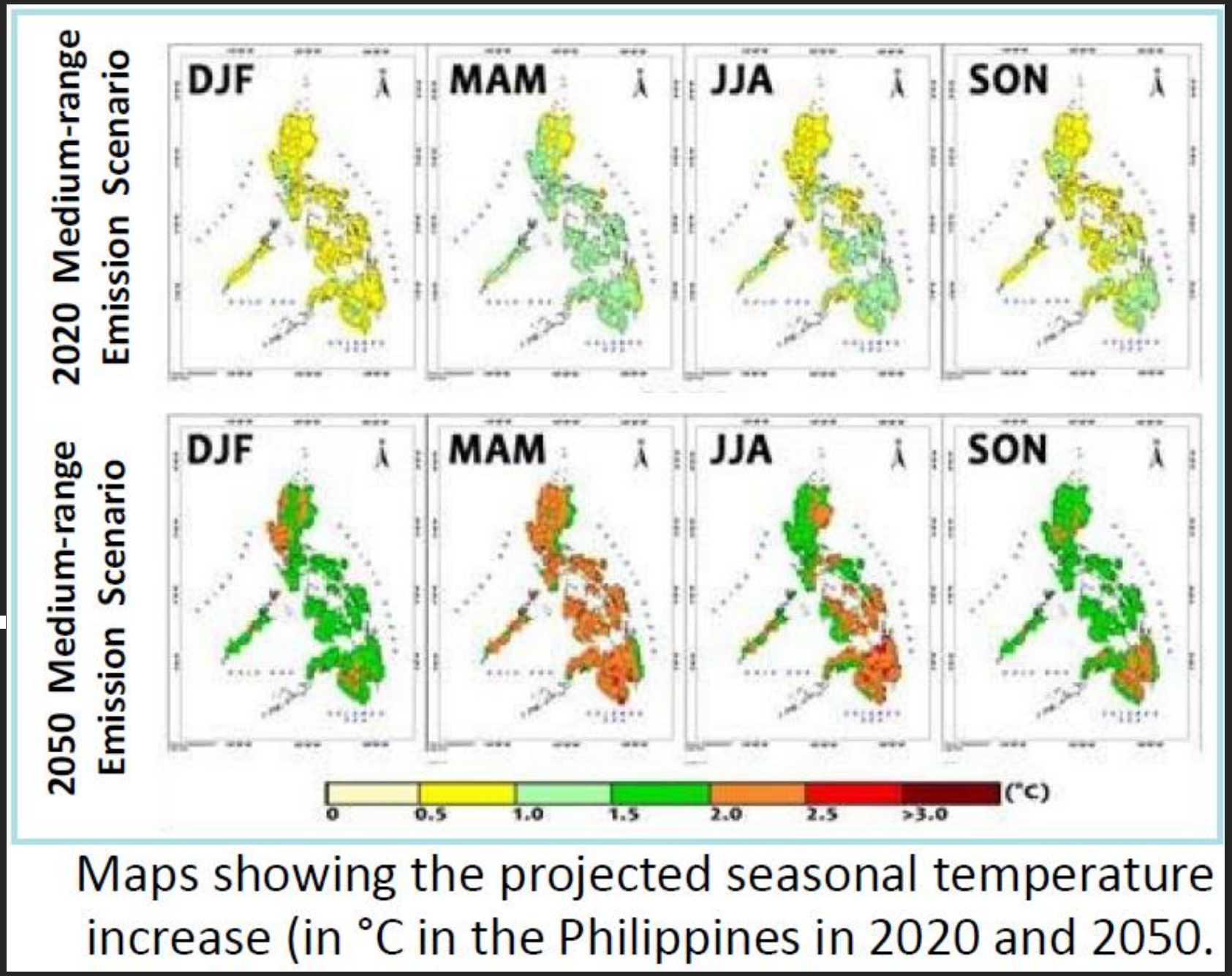
2. 0.07+ increase per decade



Precipitation Changes

1. Increase in Temperature

2. Extreme Climate Events



Maps showing the projected seasonal temperature increase (in °C in the Philippines in 2020 and 2050.

Sea Level Rise

- Affects coastal communities
- Total 20 cm so far
- About 2mm increase per year
- Increase flooding
- Affects mangrove growth

Ocean Acidification

- Increase in Carbonic Acid in the oceans
- Coral reefs are hyper-sensitive to changes
- Major effect on the shallow marine ecosystem

Extreme Weather Events

- Increase in intensity of typhoons
- Change in typhoon tracks
- More intense El niño events (drought)



NCCAP: Seven (7) Thematic Priorities

National Climate Change Action Plan (2011 – 2028)

Goal:
To build the adaptive capacities of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change, and optimize mitigation opportunities towards a gender-responsive and rights-based sustainable development

Intermediate Outcomes

Enhanced adaptive capacity of communities, resilience of natural ecosystems, and sustainability of built environment to climate change.

Successful transition towards climate-smart development

"climate-smart" to emphasize the need for "adaptive mitigation"

Ultimate Outcomes

Inputs

AMBISYON NATIN 2040

SUSTAINABLE DEVELOPMENT GOALS

1st Bangsamoro Development Plan 2020-2022

United Nations Framework Convention on Climate Change

National Adaptation Plan

Sectoral Plans & Programs

National Climate Risk Management Framework

Nationally Determined Contributions

Financing Gap Analysis

Capacity Needs Analysis

Technology Needs Analysis

R&D Agenda

Processes

Whole of Government Steering

Stakeholder Consultation and Collaboration

Partnership and Linkages

Coordination with the NPTE

Nexus analysis for adaptation-mitigation & themes/sectors

Use of Climate Information

Harmonization of Sectoral Timelines

Institutional Capacity Building

Nationally Determined Contributions

NDC IMPLEMENTATION IS FOR THE PURPOSE OF SUPPORTING:

SUSTAINABLE INDUSTRIAL DEVELOPMENT

POVERTY ERADICATION AND PROVISION OF BASIC NEEDS

SECURING SOCIAL AND CLIMATE JUSTICE

ENERGY SECURITY

MITIGATION WILL BE PURSUED AS A FUNCTION OF ADAPTATION

Commitment:

A projected GHG emissions reduction and avoidance of **75%**, of which 2.71% is unconditional and 72.29% is conditional.

APPROACHES:

Climate Change MITIGATION:

- Avoidance and sequestration of greenhouse gas emission (climate-smart industries, sustainable energy, etc.)
- Identification of sources of the problem (AWITFE – Agriculture, Wastes, Industry, Transportation, Forestry and Energy)
- Taking action at the root of the problem
- FIGHT

Climate Change ADAPTATION:

- Refers to the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities
- Intervention to reduce the impact of Climate Change (food security, water security, environmental stability, human security, etc.)
- PREPARING for the worst



Bangsamoro CCET: Typology

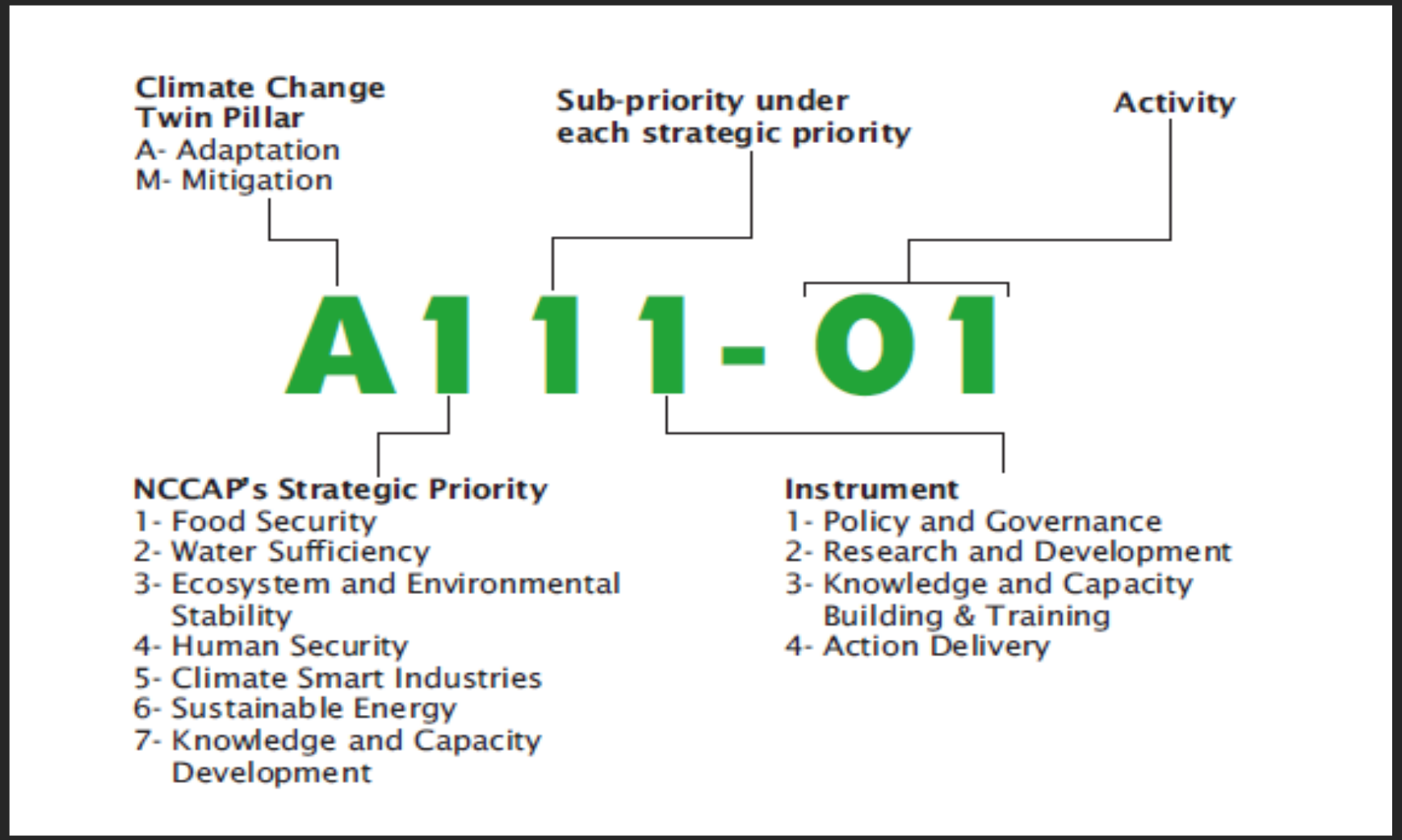
Seven (7) Thematic Priorities

Thematic Priority		Sub priority	
1	Food Security	1	Agriculture and Livestock
		2	Fisheries
2	Water Sufficiency	1	Water Supply
		2	Flood Protection
		3	Water and Sanitation
3	Ecological and Environmental Stability	1	Forest and Biodiversity
		2	Solid Waste
4	Human Security	1	Health
		2	Settlements and Local Land Use
5	Climate Smart Industries and Services	1	Tourism, Trade and Industries
6	Sustainable Energy	1	Energy Efficiency
		2	Power Generation
		3	Transportation and Communication
7	Knowledge and Capacity Development	1	Educational and Climate Science

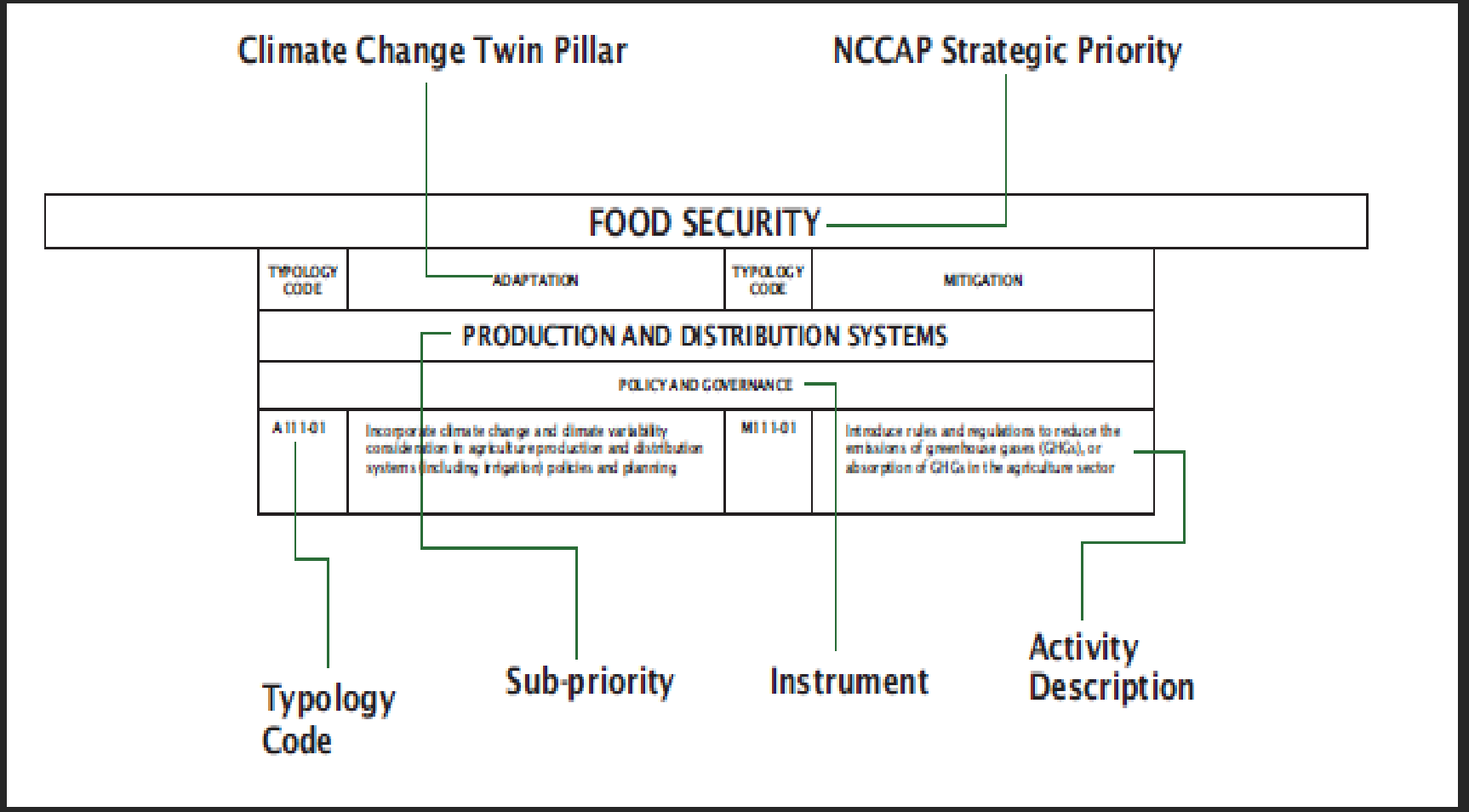
Instruments to Evaluate Effect of Mitigation and Adaptation of P/A/Ps

Instrument		Definition
1	**Policy, Development and Governance**	empower stakeholders to take action through the development, adoption, monitoring and review of policies, plans, regulations, administrative orders and/or executive orders.
2	**Research, Development and Extension**	generation, management and sharing of information.
3	**Knowledge Sharing and Capacity Building**	institutional capacity to implement climate action, including dissemination, awareness-raising and training activities focused on knowledge update.
4	**Service/Action Delivery**	activities that directly mitigate greenhouse gas/sequester carbon, or reduce risk, vulnerability or increase adaptive capacity

CCET Typology Coding



CCET Typology Coding





Bangsamoro CCET: Requirements

Proposal Requirements

Ministries when proposing climate change related programs, activities and projects shall;

- ✓**Identify**, **prioritize** and **tag** climate change programs, activities and projects for the year.
- ✓**Submit Bangsamoro Budget Proposal Form No. 500**, Climate Change Expenditure and indicate in partial or in full amount of climate change related P/A/P guided by the Climate Change Typologies in the Annex A of DBM Joint Memorandum Circular No. 2015-01;
- ✓**Accomplish** and **submit** the Bangsamoro Budget Proposal Form No. 710, Proposal for New National-funded project for each proposed P/A/Ps relating to climate change

Proposal Requirements

Ministries when proposing climate change related programs, activities and projects shall;

- ✓**Attached** duly accomplished Quality Assurance and Review Form (QRF). This form clarifies the objectives and coverage of the tagged P/A/P and identifies its interconnection with adaptation or mitigation.

Final Points

Ensure the sustainability of the program

Explore programs that capitalize on expertise of your institution

Consider the efficient use of funds by comparing the gains to the budget to be spent

Explore different approach to address the problem to fine tune the adaptation.

MENRE BARMM MFBM

Sukran Jazzakallahu Khayran