Extreme Events & SDGs

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The Sustainable Development Goals (SDGs)

- Global set of 17 goals agreed upon in 2015 by 193 countries to be achieved by 2030
- Built on a framework that includes 231 unique indicators to **quantify progress**

"As the world moves further off track in meeting the 2030 SDG deadline, timely and high-quality data are more essential than ever. Indeed, data are being widely recognized as strategic assets in building back better and accelerating the implementation of the SDGs"

– SDG Progress Report 2021

7 Indicators & the SDGs

Impacts

Temperature and Energy	Atmospheric Composition	Ocean and Water	Cryosphere
Surface Temperature	Atmospheric CO_2	Ocean Acidification	Glaciers
Ocean Heat		Sea Level	Arctic and Antarctic Sea Ice Extent

ipcc INTERGOVERNMENTAL PANEL ON climate change

WMO UNEP

nature

Science

Risks

State of the Climate 2011-2020

- 2nd Decadal State of the Climate Report
- Focus on **sustainable development**

Published at UNFCCC Global Stock-take 2023.

?

How have extreme events occurring over the past decade (2011-2020) hindered national progress toward achieving the SDGs?

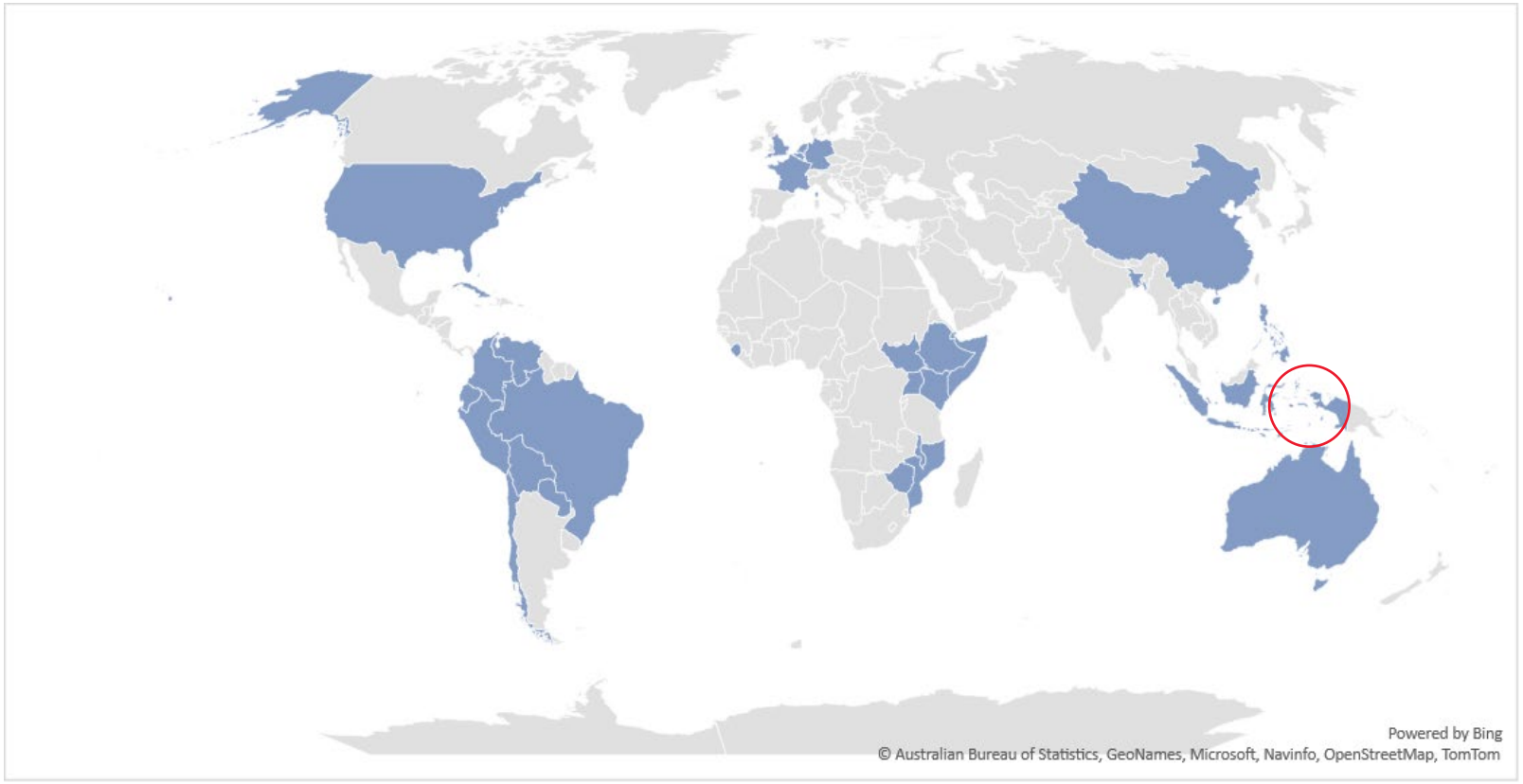
Extreme Events 2011-2020

15 Events

- 1 Cold wave
- 2 Droughts
- 2 Landslide/Mudslide
- 2 Floods
- 1 Heatwave
- 4 Tropical Cyclones
- 2 Wildfires
- 1 Locust Plague

Covering all 6 WMO regions

60% have published attribution studies



Indonesia Wildfires: 2015

"El Niño conditions strongly increased the probability of a drier-than-normal dry season, and that the background warming trend due to anthropogenic climate change increased the likelihood of high temperatures."

(King et al., 2016)

More than 100,000 premature deaths
Fires cost approximately 16 billion, 1.9% of GDP

Losses of USD ~800 million/year for following 3 years of estate crops (palm oil, rubber, and coconut)

More than 500k sought medical attention for respiratory illness

~4.7 million children stayed home from school.

2.6 million hectares of land burned; smoke affected biodiversity

$748 \pm 209\ MtCO_2$ estimated to have been released, peatlands accounted for 1/3 of area burnt

East Africa Drought: 2011-12

"No evidence was found for human influence on the 2010 short rains, with their failure being affected by La Niña. However, **human influence was found to increase the probability of long rains as dry as, or drier than, 2011.**"

(Lott, Christidias and Stott 2012)

9.5 million people in need of humanitarian assistance.

8.4 million food insecure , >260,000 famine deaths.
Malnutrition rates among children >50% in southern Somalia.

9,756 measles cases were reported in Ethiopia, 2,566 in Kenya, and 16,135 in Somalia.

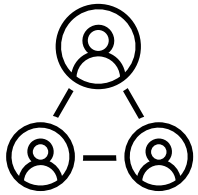
80% of dams/pans in Kinango District of Kenya dried up.

Drought slowed Kenya´s economy by an average of 2.8% per year.

In June 2011, 76 deaths were reported linked to resource-based conflicts (Kenya).

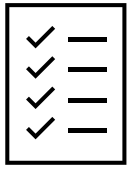
Data Collection

Preliminary impact statistics collected by **UN Custodian Agencies** (e.g., FAO, UNDRR)



Multi-agency data analysis to **quantify impact** of climate change impacts on SDGS

National data collection from **National Statistics Offices** through survey



Thank you.

If interested in following up, being a reviewer or with advice on methods, kindly contact cransom@wmo.int