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

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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

nature

Science

Risks

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State of the Climate 2011-2020

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

Published at UNFCCC Global Stock-take 2023.

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

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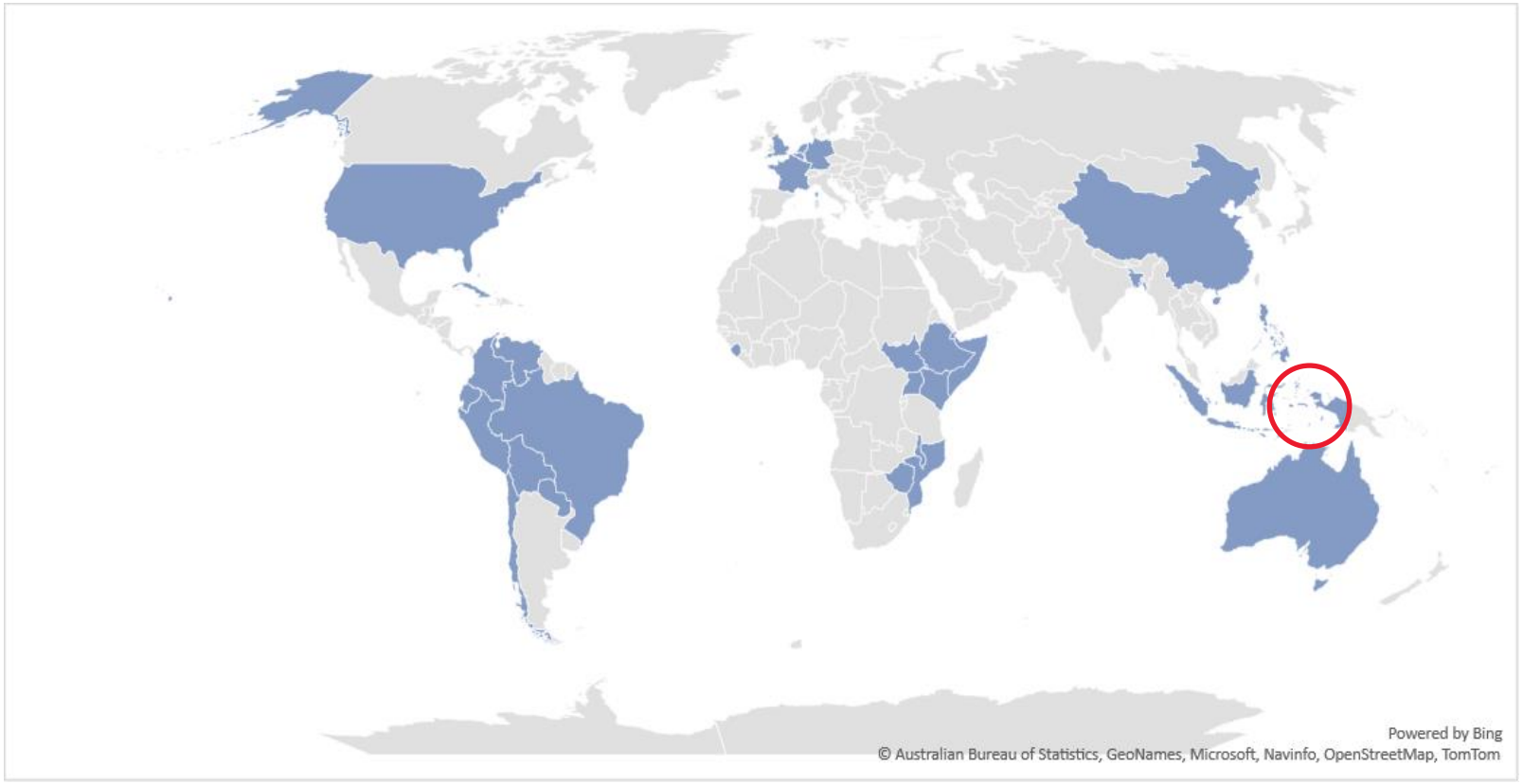
Extreme Events 2011-2020

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



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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

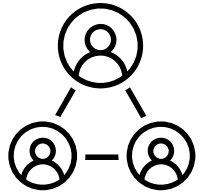
~4.7 million children stayed home from school.

2.6 million hectares of land burned; smoke affected biodiversity

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

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

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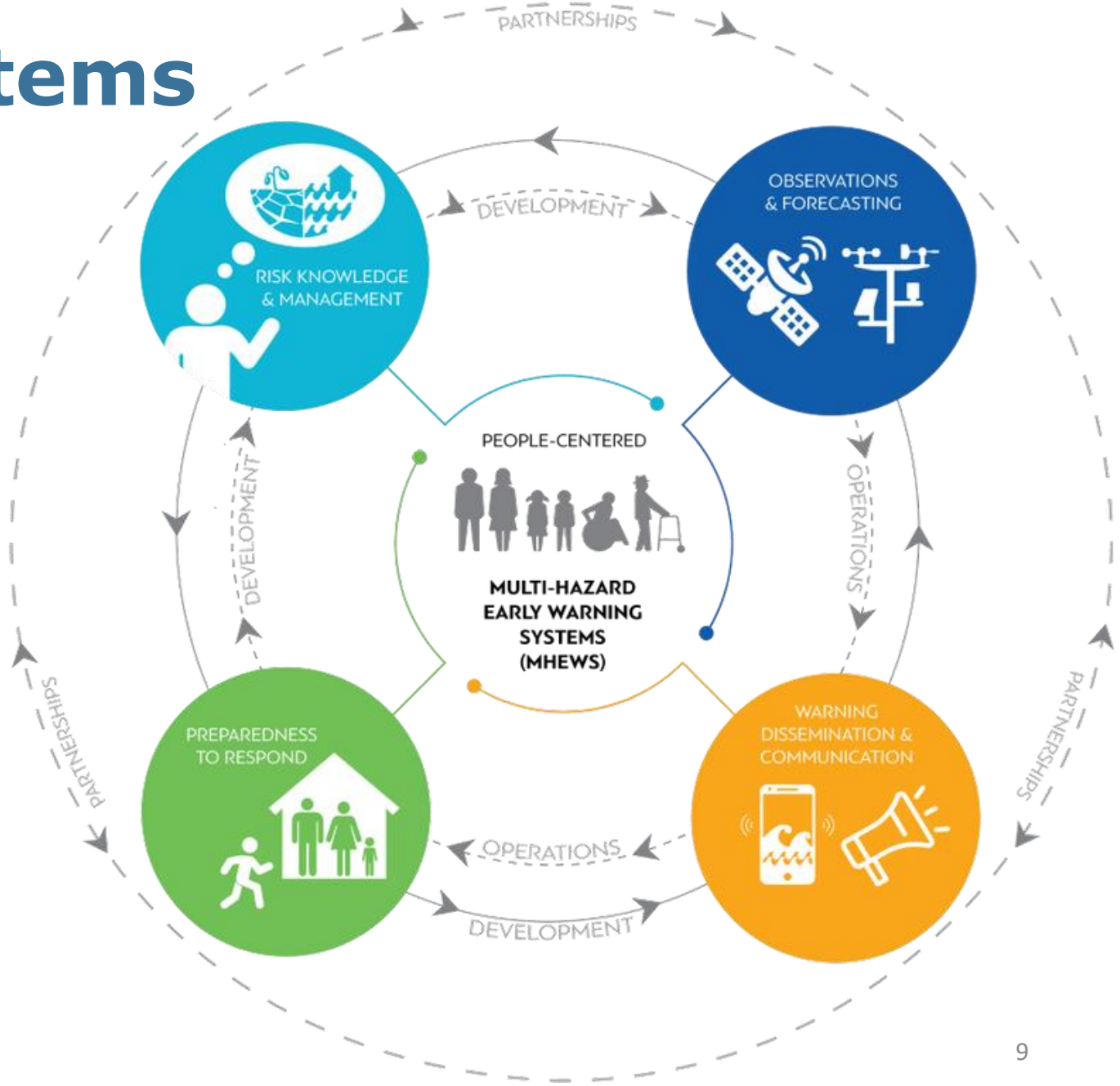
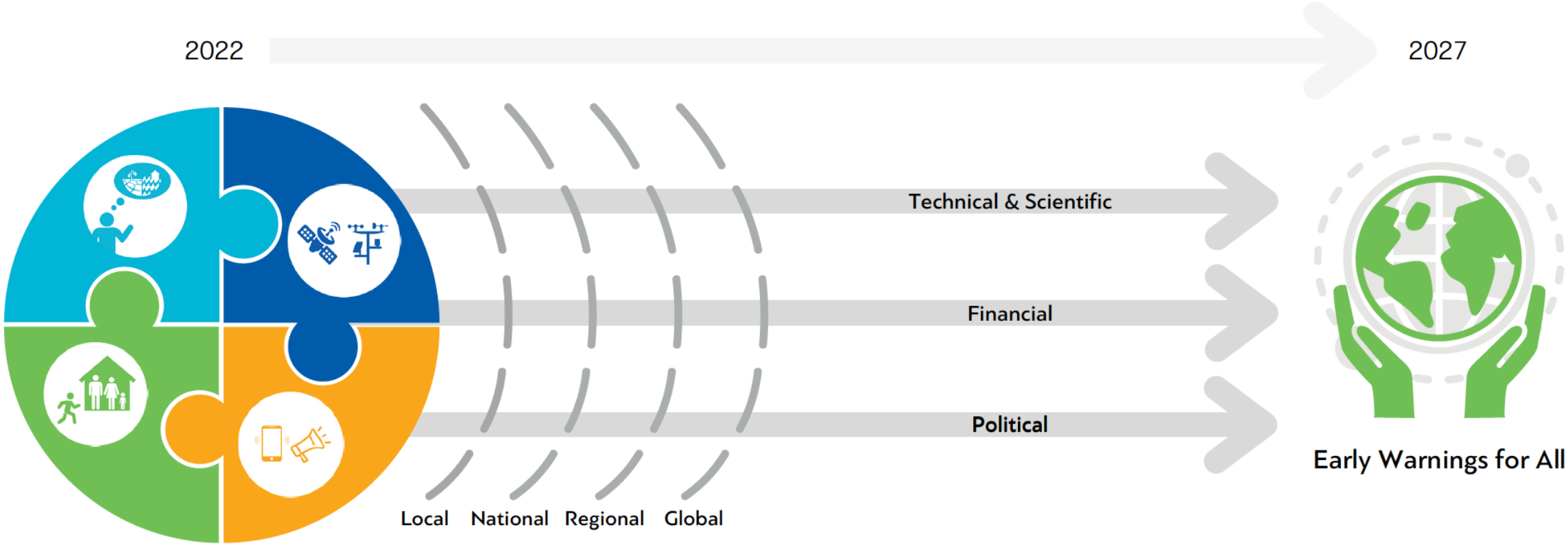
Early Warning Systems

- EWS integrate hazard information with risk analysis to provide meaningful early warnings that enable action to minimize impacts
- Less than half of all countries have EWS
  - **Coverage is particularly low in Africa, Least Developed Countries and Small Island Developing States**



Initiative Architecture to deliver on the five year goal

WMO is developing with key partners transformation plans for each of the four components of the early warning value chain (see Figure 1), demonstrating the steps required to deliver on the five year goal, across the global, regional, national, and local level. These transformation plans will be developed according to the architecture shown below. The development of the plan is based on globally agreed guidance on MHEWS and will address the technical/scientific, financial, and political tracks required, for the hydro-meteorological, disaster risk and early action communities to work together to ensure every person on Earth is protected by early warnings within five years.

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Thank you.

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

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