

The role of Climate Services Information System in NAPs

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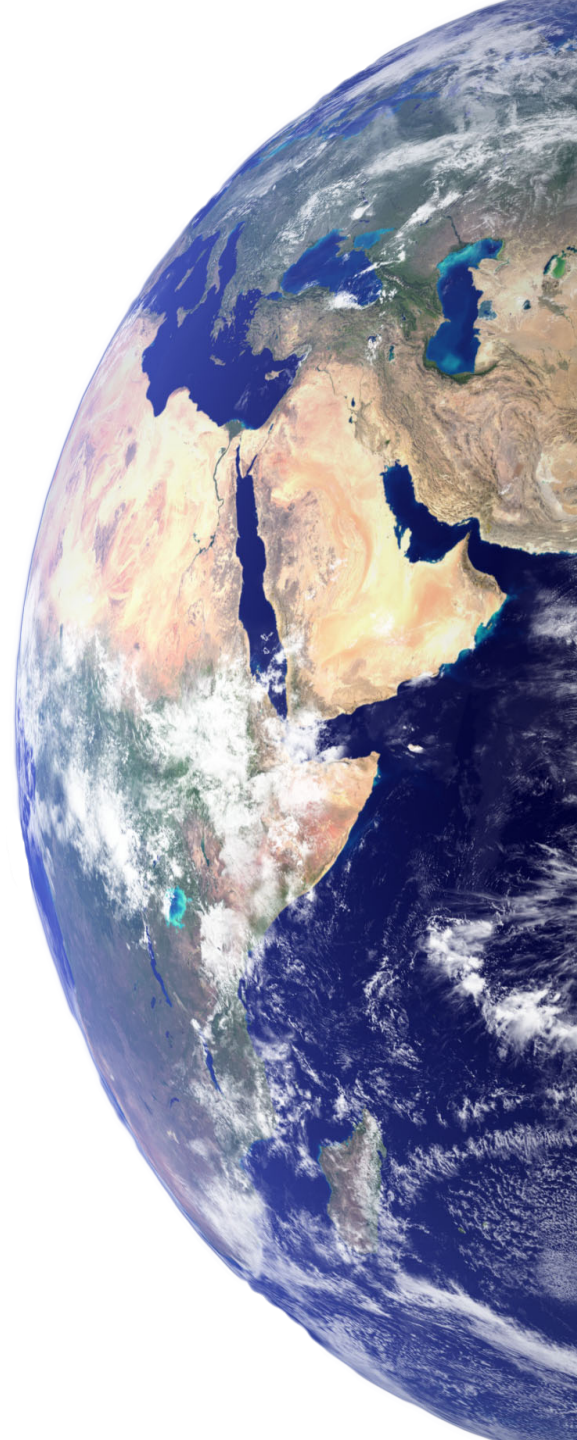
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World Meteorological Organization
Organisation météorologique mondiale

Adaptation planning...


...should be based on information and scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that supports decision-making

Paris Agreement, Article 7

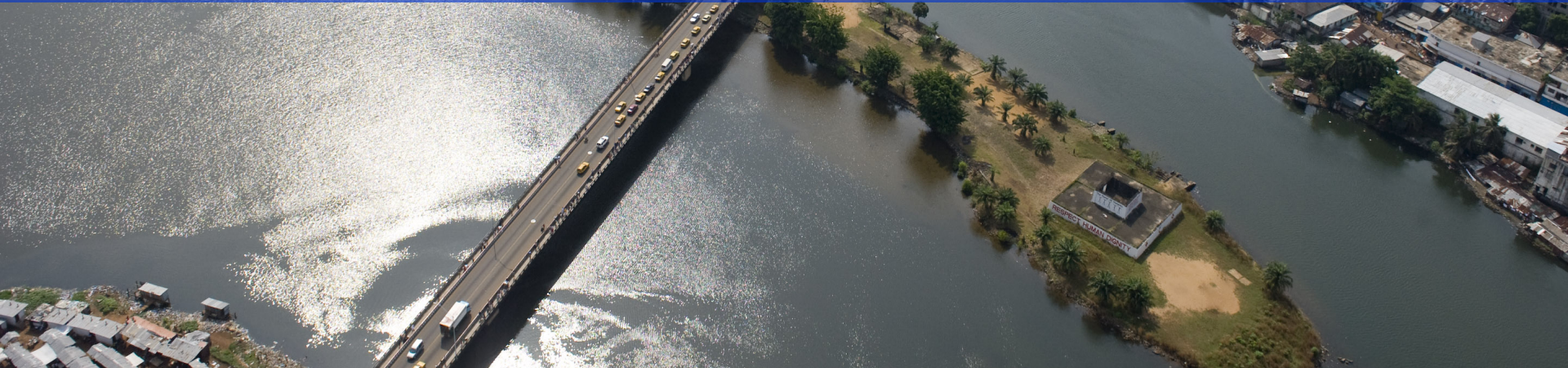


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A definition...

An aerial photograph showing a wide river flowing through a city. The city buildings are visible on the right bank, and a large green area is on the left. The sky is hazy.

Climate information is the collection and interpretation of weather and climate data that is credible, relevant and usable.



Climate Services Support to NAPs

NAP ELEMENTS AND STEPS

Weather and climate services

ELEMENT A. Lay the groundwork and address gaps

Stocktaking or identifying available information on climate change impacts and gaps and needs

- Archives records flagging events expected for dynamic risk assessment
- Real-time monitoring of hazards and development of historical databases

Assessing development needs and climate vulnerabilities

- Incorporate relevant climate observations, statistical analysis, forecasts and projections in risk assessment processes

ELEMENT B. Preparatory elements

Analysing current climate and future climate change scenarios

- Risk analysis (multi-hazard, multi-level and multi-sector)

Assessing climate vulnerabilities and identifying and appraising adaptation options

- Engage stakeholders for implementation from different sectors
- Establish coordination and information channels for relevant information inputs

ELEMENT C. Implementation strategies

Prioritizing climate change adaptation in national planning for national adaptation implementation strategy

- Identify priority regions based on analysis of vulnerability to weather and climate extremes

Enhancing capacity for planning and implementation of adaptation

- Strengthen operational climate services, including analysis, forecasts and projection and interoperability with health, socioeconomic and biological data

ELEMENT D. Monitoring and Evaluation

Monitor, review and report on NAP process

- Monitor the efficacy and relevance of climate service provision

The climate science basis

Outputs

Guidance document

Guide for Developing the Climate Science Basis for GCF Funded Activities

Tools & data sources

Climate Information Platform (CIP)

A web-based data access platform – providing access to CMIP and CORDEX projections and indicators worldwide.

Climpact

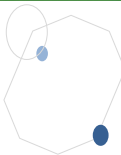
A software package to calculate over 70 climate indices from historical daily temperature and precipitation relevant for the health, agriculture, water and other climate-sensitive sectors.

Country examples

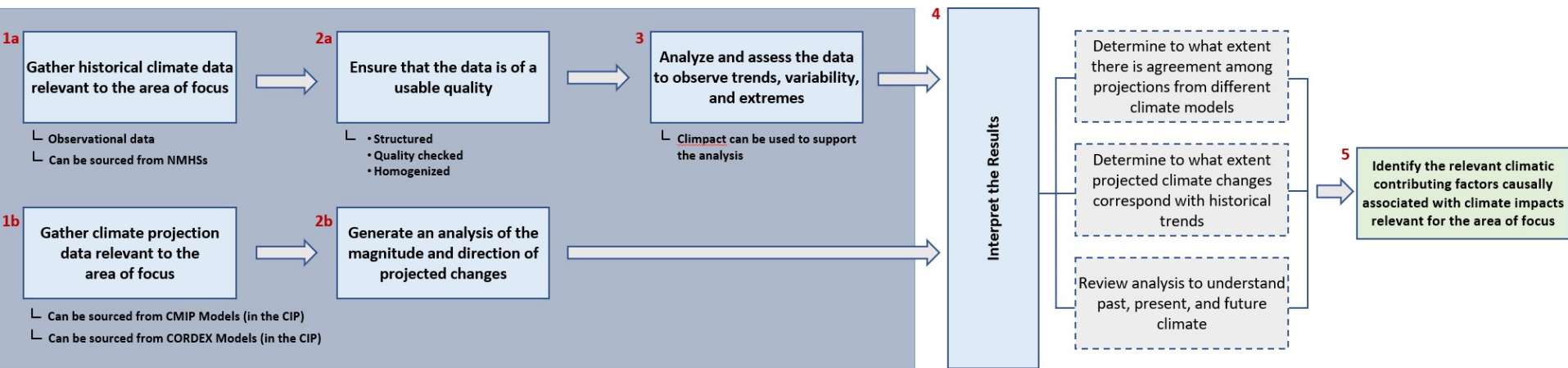
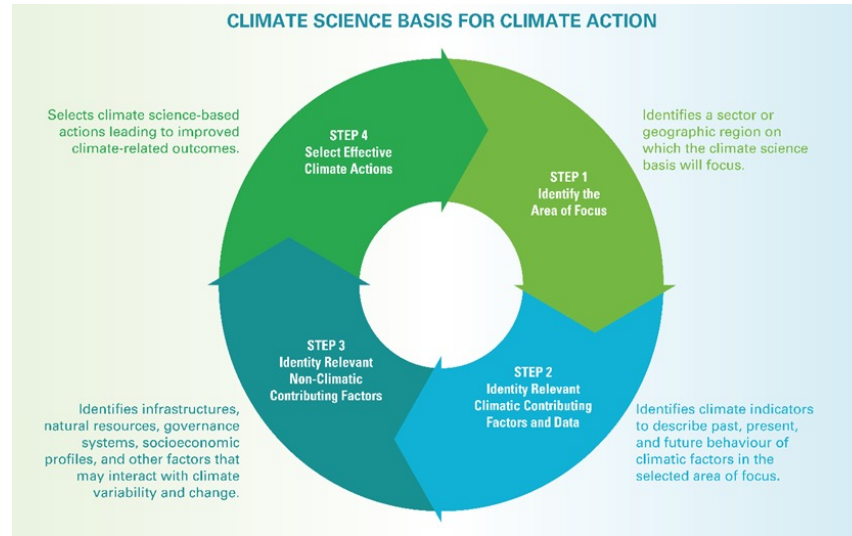
Evidence-based climate action solutions for agriculture, health, water, energy, fisheries, forestry, coastal zone management, DRR and other sectors from St. Lucia, Democratic Republic of the Congo, Cabo Verde and Cambodia.



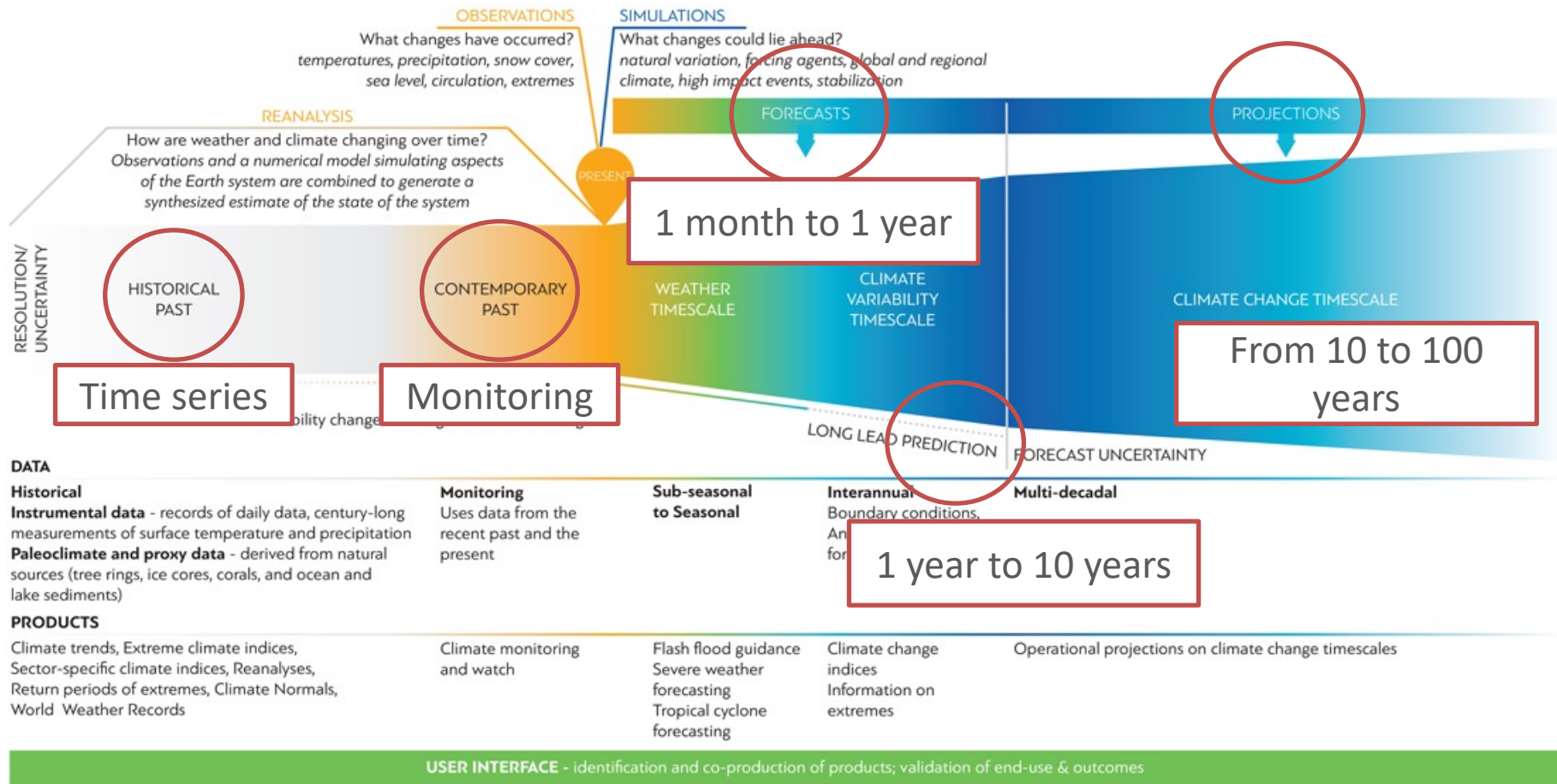
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The Climate Science Basis Guidance



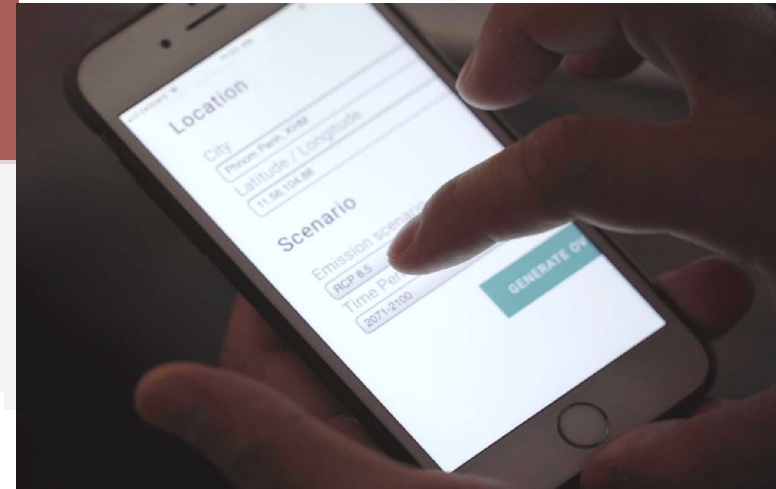
Climate Services Information System (CSIS)



Tools & data sources

Climate Information Platform (CIP)

A web-based data access platform which provides access to the most reliable hydro-climatic data and technical resources for climate science inputs relevant for GCF submissions.



Site-specific report

Get an instant climate change overview for any location world-wide.



Data Access Platform

Download pre-calculated climate indicators and explore interactive maps and graphs.

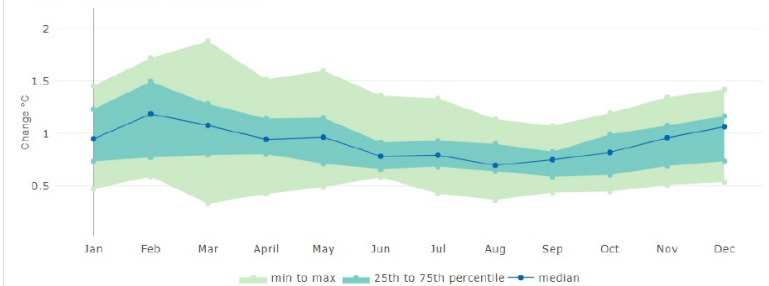


Climpact

Calculate climate indicators using your own weather and climate data.

Temperature (monthly mean)

Change compared to historical period.



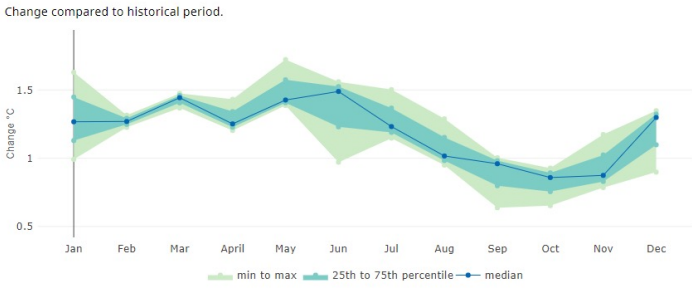
Indicator: Temperature (annual mean), Time period: 2011-2040, Historical period: 1981-2010, RCP 8.5, Model: CORDEX Africa Ensemble Mean, Model results for an area covering the location: Praia, Ilhas do Sotavento (14.92, -23.51)
Reference: <https://climat>



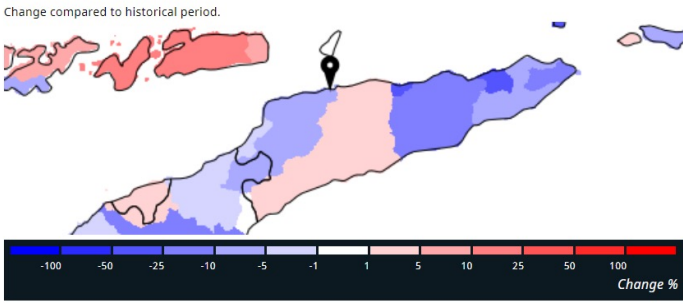
Downscaling and Expert advice

<p>+1°C Temperature (annual mean)</p> <p>View Temperature details</p>	<p>-1% Precipitation (annual mean)</p> <p>View Precipitation details</p>	<p>-5% Aridity actual (annual mean)</p> <p>View Aridity actual details</p>
<p>-5% Soils moisture (annual mean)</p> <p>View Soils moisture details</p>	<p>-15% Water discharge (annual mean)</p> <p>View Water discharge details</p>	<p>-15% Water runoff (annual mean)</p> <p>View Water runoff details</p>

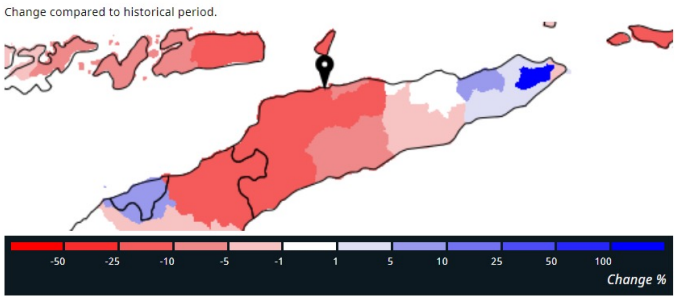
Temperature (monthly mean)



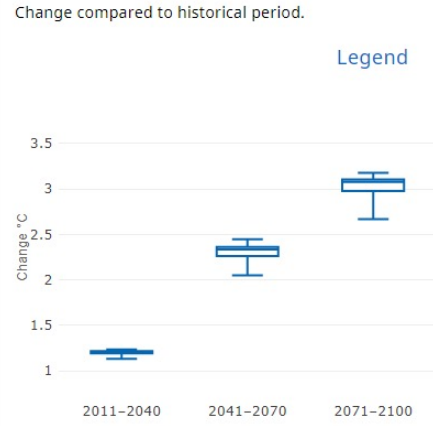
Aridity actual (annual mean) for Timor-Leste



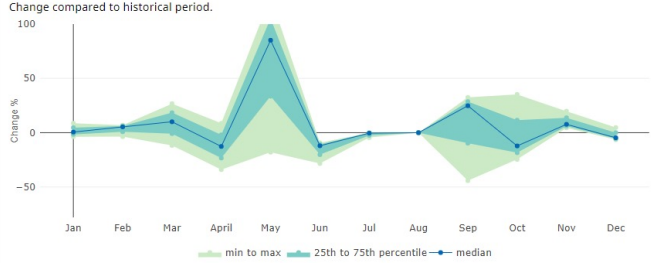
Water discharge (annual mean) for Timor-Leste



Temperature (annual mean)



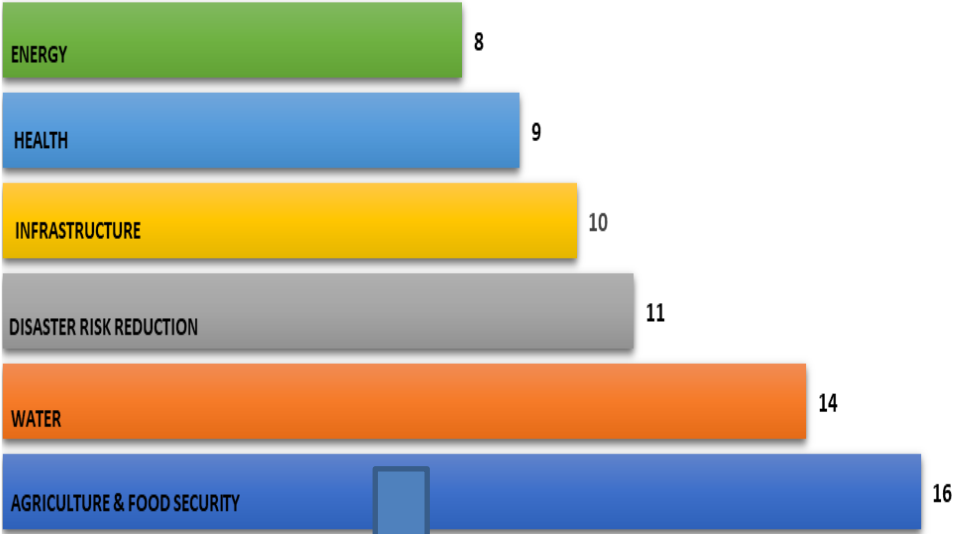
Aridity actual (monthly mean)



The climate services gaps assessment: West Africa

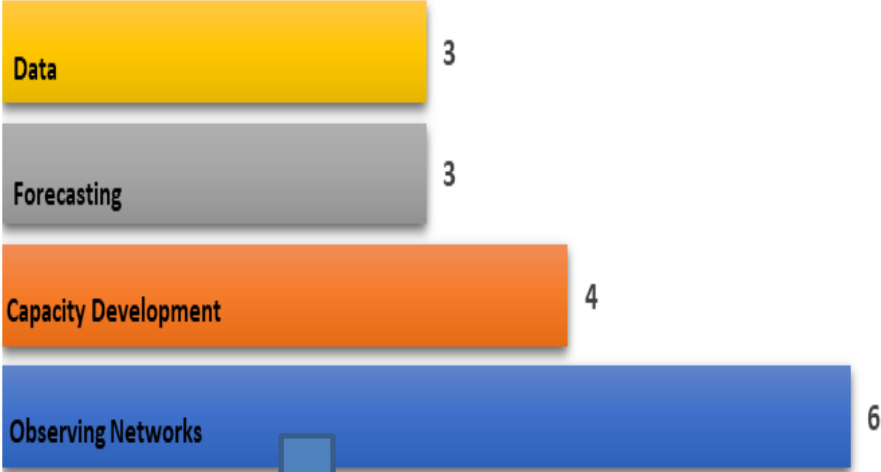
NDCs

Priority sectors for adaptation



**TOP PRIORITIES FOR ADAPTATION:
AGRICULTURE AND FOOD SECURITY,
WATER, DRR**

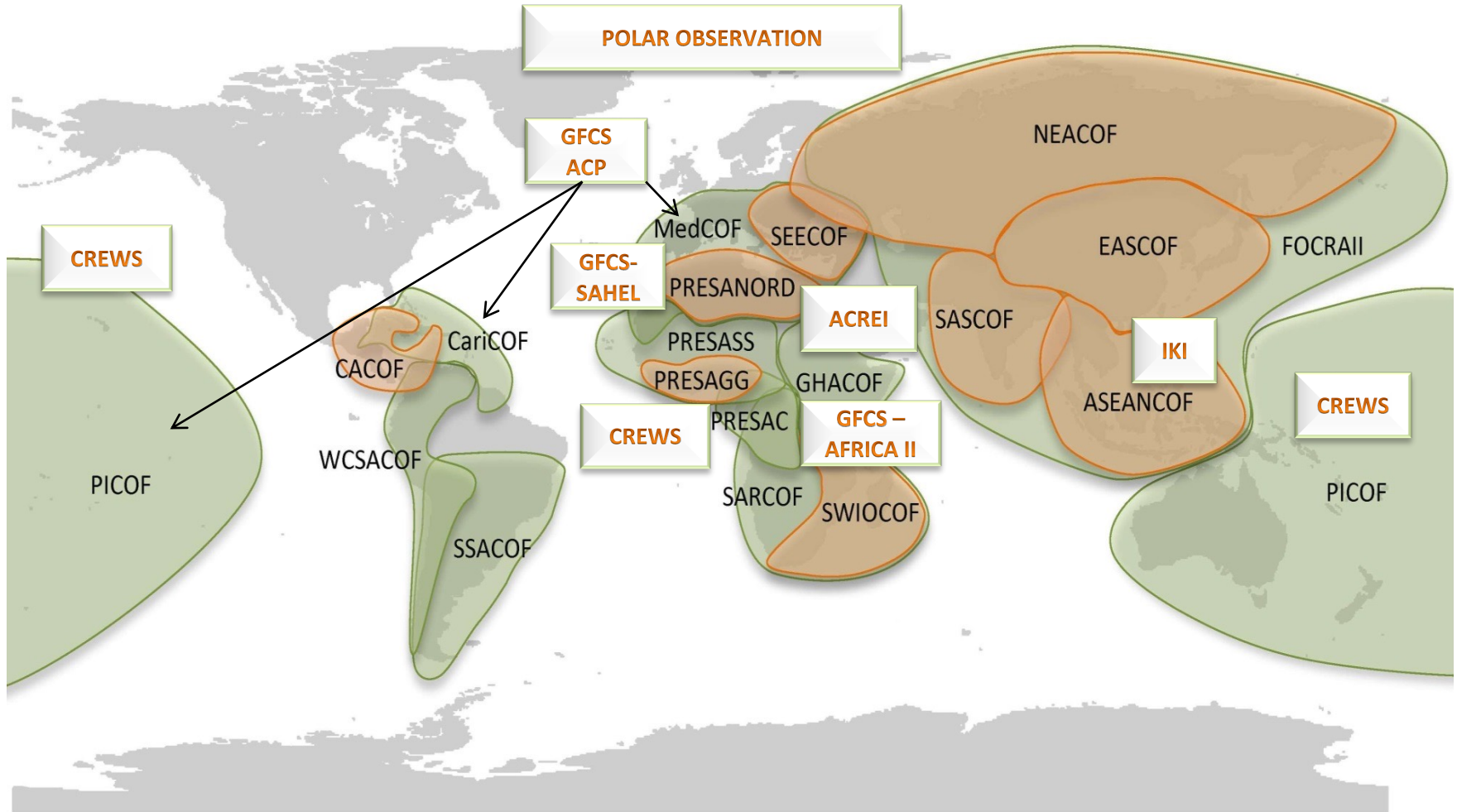
Need for climate services



**TOP CLIMATE SERVICES NEED:
OBSERVING NETWORKS**

Source: 2019 NDCs

Regional Climate Forums



State of the Global Climate 2020

Led by the WMO with inputs from over 70 WMO Members, 40+ scientific experts

In collaboration with UN agencies:
UNEP, FAO, WFP, UNHCR, IOM, IOC UNESCO, WHO, IMF

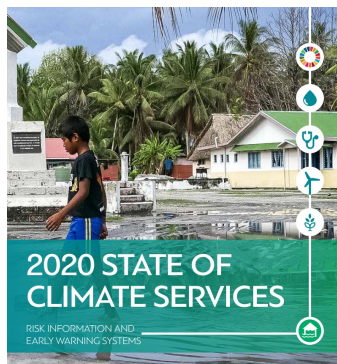
Key climate indicators in 2020:

Record high CO₂, CH₄ and N₂O despite COVID-19

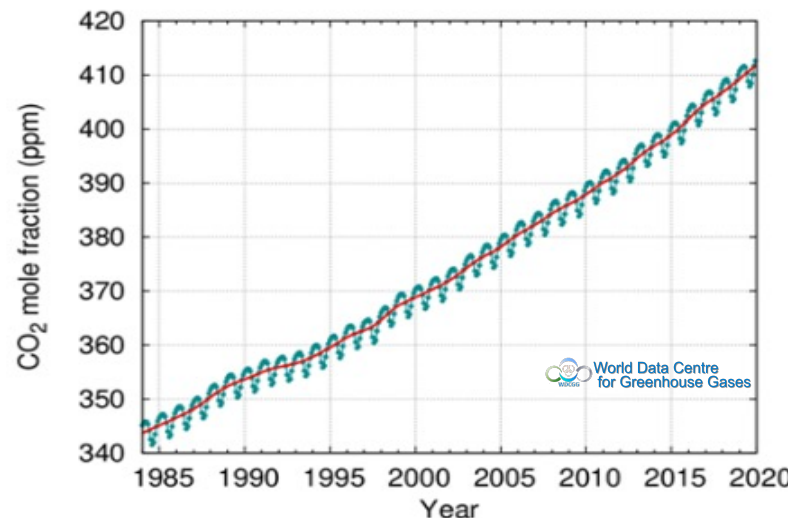
One of three warmest years on record

Numerous regional temperature records e.g. Finland

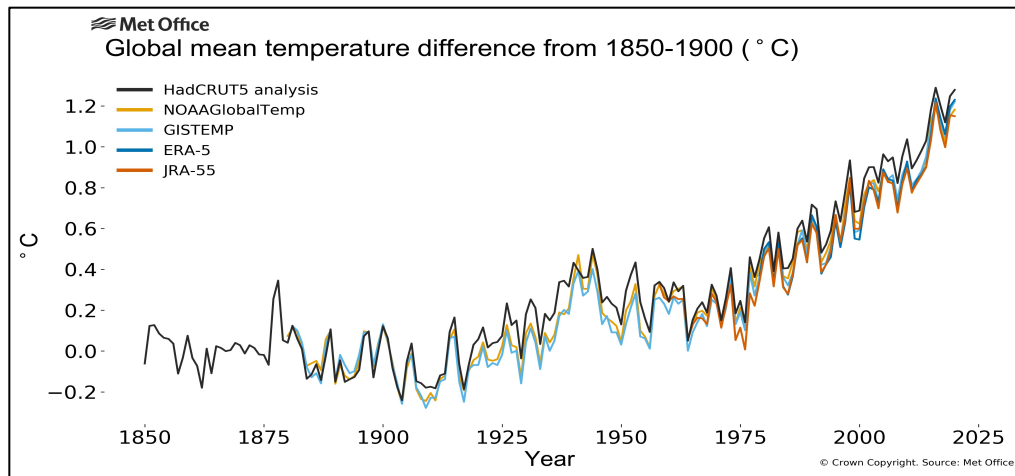
Annual global temperature ~1.2°C above 1850-1900



CO₂ concentration



Global Temperature



© Crown Copyright. Source: Met Office

State of the Global Climate 2020

Key climate indicators in 2020:

Record high ocean heat content
Record high sea level
Both are accelerating
Near record Arctic sea-ice minimum

High impact events in 2020 included:

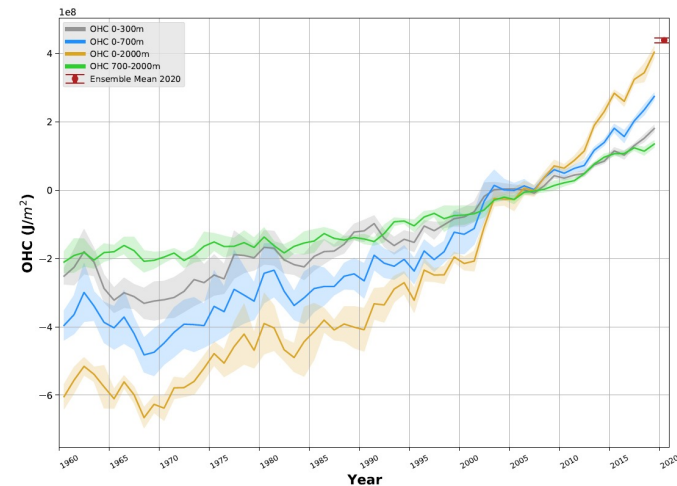
Siberian heatwave
Extreme snowfall in parts of N America and E Asia
Widespread extreme rainfall and summer flooding across Asia

In 2020, millions were doubly hit:
climate-related disasters + the COVID-19 pandemic

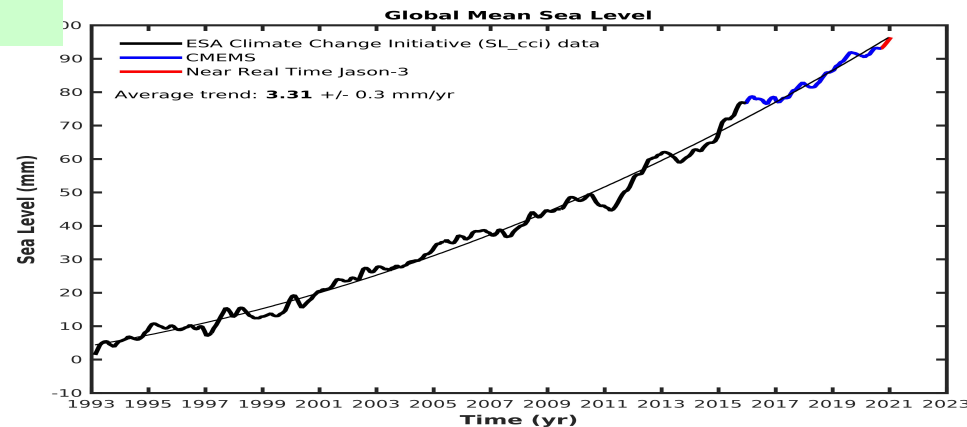
Climate related events => ~23 million displacements of people on average each year over last decade

Risks often arise from compound events e.g. flooding and worst locust infestation in E Africa for 25 years

Ocean Heat Content

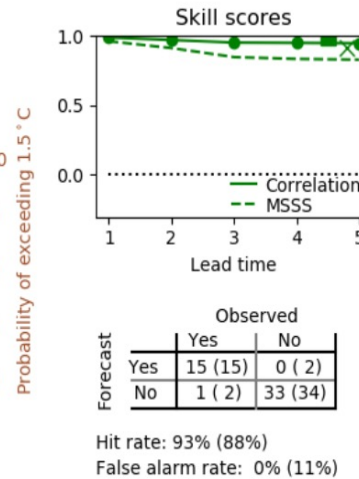
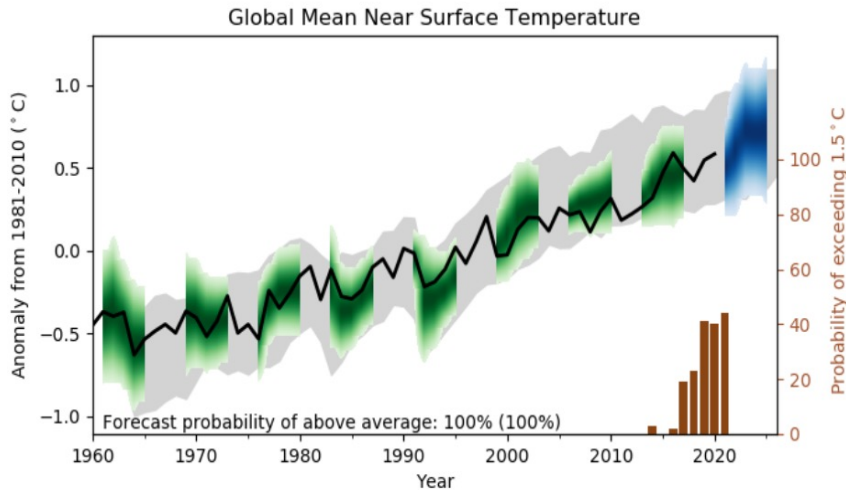


Global Mean Sea Level



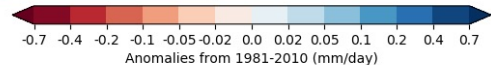
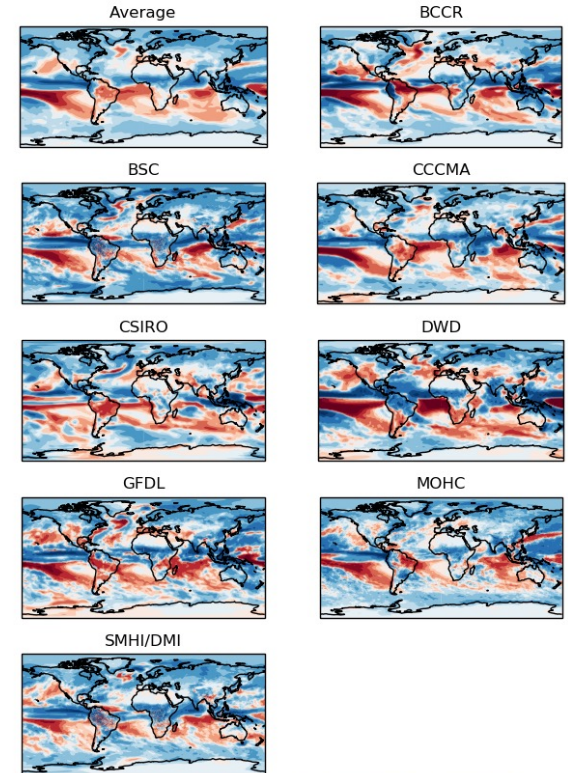
Global Annual to Decadal Climate Update

Probability of temporary exceedance of 1.5°C



5 year rainfall predictions

2020 predictions for 2021-2025 precipitation



Climate predictions updated each year

- ⇒ Increasing chance of *temporary* 1.5 deg
- ⇒ Increased chance of wetter Sahel
- ⇒ Increased chance of Atlantic storms



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Thank you
Merci

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