



Systematic Observations: from global systems to local information

Systematic Observations are vital for adaptation, mitigation, climate science and other services:

GCOS defines their requirements

GCOS defines
Essential
Climate
Variables
(ECV). It
provides
product
requirements,
climate
monitoring
principles and
guidelines

Observations are made by a range of organisations: meteorological and hydrological agencies, ocean observing systems, satellite agencies, academia and others.

Data is processed into information useful information, global and regional datasets and forms the basis of projections

Data is checked, archived, and made available.

UNFCCC for Global Stocktake

Global Framework for Climate Services

National Adaptation

Climate Science, understanding and prediction

Other Users

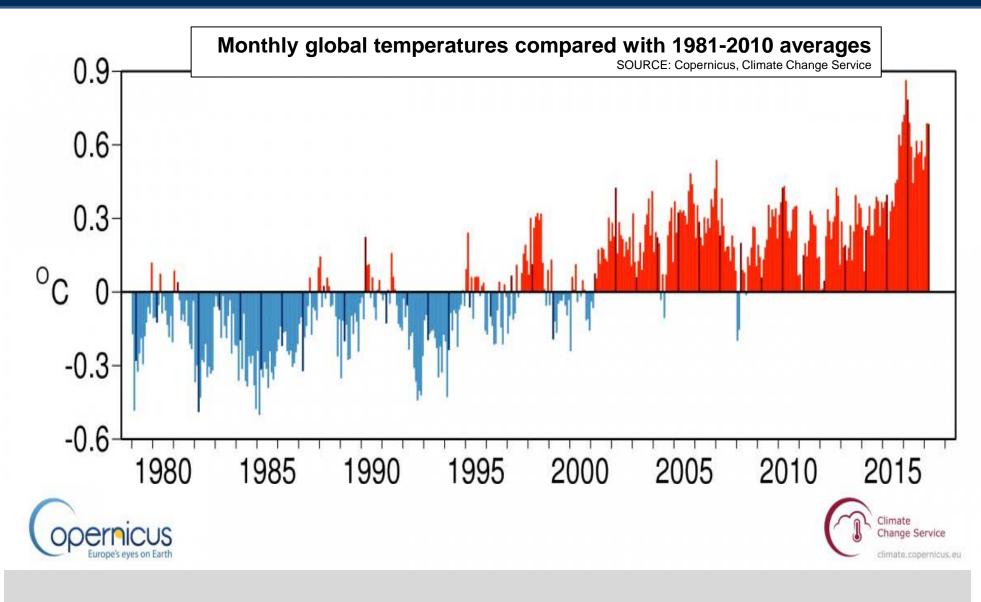




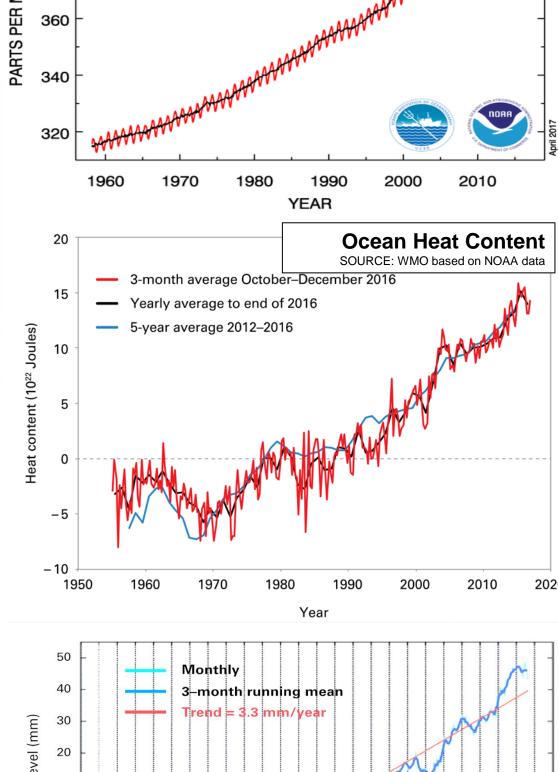








The climate system can only be understood and predicted based upon many sustained, systematic and comparable observations, both ground-based and satellites, that are operated by many different agencies. Climate indicators summarise this information.



Atmospheric CO₂ at Mauna Loa



Global Mean Sea level





GCOS Implementation Plan is global but GCOS also supports local adaptation

What does GCOS do?

Supports capacity building and network improvements

Ensures
performance of
observations
systems monitored

Advocates for sustained global observations of Essential Climate variables

Improves free and open data access, data archiving and discoverability

Reviews data requirements

Prepares plans for improvements

Advocates for sustained observations

Identifies climate indicators for communicating climate change

Facilitates data rescue

Develops regional plans addressing adaptation needs

GCOS Implementation Plan Proxy Observations made Reanalysis Downscaled measurements and by global networks products models data rescue **Climate services** such as adaptation, mitigation planning and monitoring Local high Additional Socio-economic, resolution parameters based health etc. data on local needs measurements GCOS Regional work programme

To support adaptation GCOS regional activities will include regional workshops to identify observational needs and gaps, to produce regional plans and to identify sources of information.