16   Mean temperature anomaly (compared to climate normal 1961 - 1990)

Indicator type   **Core indicator**   *Published*

Versioning

First publication   1/26/2017   Latest update   8/27/2021

Area and sub-area

Area and sub-area   Impacts   Physical conditions

Presentation

Tier	1
Indicator definition and description	Difference of the observed mean temperature year from climate normal (1961-1990), averaged across the country.
Unit of measure	Celsius degrees
Coverage	National territory
Spatial aggregation	National territory
Reference period	Calendar year
Update frequency	Annual
Base period	Climate Normal 1961-1990

Disaggregation (operational indicators)

Disaggregation (operational indicators)	Comments
Spatial	
Temporal (by month, by season)	Seasonal average temperatures Subnational annual and seasonal average temperatures and temperature changes Annual average global temperature

Other related -indicators (e.g.contextual, proxy, other core indicators)

ID	Subindicator	Type
62	Temperature change compared to pre-industrial levels	Proxy indicator
63	Temperature change (compared to base period 1951 - 1980)	Proxy indicator

Relevance

Policy context and rationale	The UN Paris Agreement on climate change aims to ensure increases in global temperature are less than 2°C above 'pre-industrial' levels, with an aspirational 1.5°C limit.
Related SDG indicator (SDG I.)	Not applicable

Relation w SDG-I.

Related Sendai Framework I.	Not applicable

Policy references

Document title	Link

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Sendai Framework for Disaster Risk Reduction 2015-2030 (United Nations Office for Disaster Risk Reduction (UNDRR), 2015)	https://www.undrr.org/implementing-sendai-framework/what-sendai-framework

Methodology

Methodology for indicator calculation	The indicator is calculated as the average of mean temperature anomalies accross the country. Mean temperature anomalies are calculated as differences of a annual mean temperatures from a correponding average temperature over the base period (climate normal, 1961-1990). The methodology uses in-situ data from monitoring stations and is explained in details the methodological document of WMO mentioned below.

Methodology references

Document title	Link
WMO Guidelines on the Calculation of Climate Normals (World Meteorological Organization, 2017)	https://library.wmo.int/index.php?lvl=notice_display&id=20130 - .XWOTUigzaUk
WMO Guidelines on Generating a Defined Set of National Climate Monitoring Products (World Meteorological Organization, 2017)	https://library.wmo.int/index.php?lvl=notice_display&id=20166 - .XWOTHSgzaUk

Classification syst.

Data sources

Main source	Other than official statistics
Explanation	Hydro-meteorological Institutes

SEEA Accounts that can serve as data sources

UN-FDES	1.1.1: Atmosphere, climate and weather

International databases containing this indicator

Comments

Comments	The indicator shows general trends, but cancels out seasonal and sub-national extremes. The base period 1961-1990 is recommended by WMO in http://www.wmo.int/pages/prog/wcp/wcdmp/documents/Report-Expert-meeting_final-WCDMP-84.pdf for long-term analysis of climate change. In most countries no data is available to calculate time series for national aggregates back to the pre-industrial period.