



**World Meteorological Organization**

**COMMISSION FOR WEATHER, CLIMATE, WATER  
AND RELATED ENVIRONMENTAL SERVICES AND  
APPLICATIONS**

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Submitted by:  
Chairs of the SG-HEA

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**INTERIM PROGRESS ON THE HEALTH, ENVIRONMENT, AND CLIMATE SCIENCE  
TO SERVICES MASTER PLAN 2019-2022**

# WHO – WMO JOINT PROGRAMME OF WORK / 2019– 2022 HIGHLIGHTS

By working together, WHO and WMO are strengthening their interagency cooperation to empower and support Member States and partners to better manage risks to human health related to climate change, extreme weather and climate, water, air quality and solar radiation. A Framework Collaboration Agreement (2018) and joint workplan (2019-2023) guide the implementation of a broad range of activities. Highlighted achievements of activities under the joint programme include:

## WMO 18<sup>TH</sup> CONGRESS RESOLUTION ON ADVANCING INTEGRATED HEALTH SERVICES

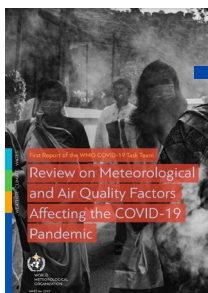
WMO Members passed a resolution to strengthen capacity for the application of climate and atmospheric science and service applications in the health sector. They endorsed the WHO-WMO Master Plan for Climate, Environment, and Health (2019-2023), and requested support from WMO members, and WHO.

## WHO/WMO JOINT CLIMATE AND HEALTH OFFICE

The WHO/WMO Joint Climate and Health Office provides interagency coordination for strategic and technical activities since 2014. In 2020, the Joint Office was moved from the Global Framework for Climate Services Office, into the Services Department under Applied Climate Services Division, providing a more direct connection to the WMO operational programmes, and strengthened with additional WMO regular budget and human resources.

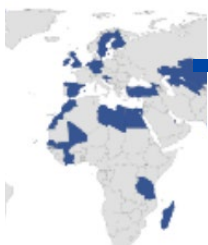
## WHO–WMO SERVICES COMMISSION STUDY GROUP ON INTEGRATED HEALTH SERVICES

Joint technical body comprised of [19 experts representing both health and meteorological expertise](#), regularly meet to provide strategic guidance and inputs to the creation of permanent mechanisms for accelerating integrated health science and services at WMO, and for working more effectively with health partners. A WHO-WMO expert meeting in (Jan 2020), three virtual regional consultations, and the [First Hybrid Meeting](#) of the Study Group in May 2022 informed the Implementation Plan for Advancing Climate, Environment and Health Science and Services for Health 2023-2033.



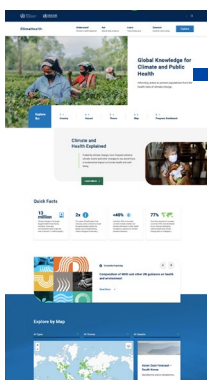
## WMO RESEARCH BOARD COVID-19 TASK TEAM

Early in the pandemic in response to the unknown nature of SARS-COV2 transmission and its relationship to environmental conditions, a [16 member task team](#) was created to review and synthesis the state of knowledge. [An international conference, two reports, a framework published in Nature Communications, and two webinars](#) were held, including a [published BAMS Meeting Summary](#).



## HEALTH FOCAL POINTS AT NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES, AND REGIONAL CLIMATE CENTERS

90 focal points in 66 countries at National Meteorological and Hydrological Services (NMHS) and Regional Climate Centres (RCCs) have been nominated to support health sector collaboration. Focal points have assisted in the creation of Climate Service Provider Profiles, which feature national climate products and services relevant for public health on the ClimaHealth.info portal. Nomination of additional Focal Points from all countries will be encouraged.



## CLIMAHEALTH.INFO, THE WHO-WMO HEALTH, CLIMATE, AND ENVIRONMENT SCIENCE PORTAL

A new WHO and WMO online platform serves as the public interface of this joint programme to provide reliable information, learning materials, and resources on climate, health, and environmental research, decision tools and operational services. As a permanent mechanism for communication, coordination, capacity building, and dissemination it supports the overall aims of the joint work plan and future WMO Integrated Health Science and Services. It features a dynamic dashboard of WHO/ UNFCCC Climate and Health Profiles, WHO Country Survey data, the Climate Services Readiness Tool, and extensive curated library of tools and resources.



## GUIDANCE AND TECHNICAL PUBLICATIONS FOR ENHANCED DECISION-MAKING

WHO-led expert teams have developed technical guidance and good practices in data sharing arrangements, data integration and information management, co-design of sector specific climate indices, and other tailored products for applying climate and weather information to health programming, with input from the WHO/WMO joint office. Including:

- [Quality criteria for the evaluation of climate-informed early warning systems for infectious diseases](#)
- [Climate Services for Health Readiness Toolkit](#)
- [Checklists to Assess Vulnerabilities in Health Care Facilities in the Context of Climate Change](#)
- [Quality Criteria for Health National Adaptation Plans](#)
- [Climate change and health: vulnerability and adaptation assessment](#)



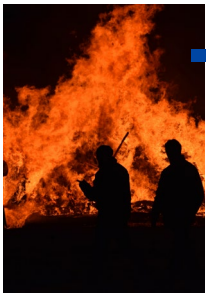
## AIR QUALITY AND HEALTH

WMO and WHO collaborate on the WHO-led Global Air Pollution and Health Technical Advisory Group on Air Pollution (former Global Platform on Air Quality and Health). There are five priority areas of work: exposure assessment; health outcomes and exposure-response functions; policy and interventions; climate change co-benefits and desert dust and health. Modelling tools and approaches related to air quality forecasting and reanalysis developed and implemented by the WMO community will be compared with and considered for integration by the GAPH-TAG. The Scientific Steering Committee (SSC) and several Scientific Advisory Groups of the Global Atmosphere Watch programme contributed to the meeting of the Global Air Pollution and Health Technical Advisory Group in 2019.



## FOCI PROJECT

The WHO and WMO are both participating in the EU Horizon Project "Non-CO2 Forcers and their Climate, Weather, Air Quality and Health Impacts." Launched in 2022, the project assesses the impact and sources of key radiative forcers to inform the enhancement of Earth System Models and into Regional Climate Models. The tools developed will serve to investigate mitigation and/or adaptation policies incorporated in selected scenarios for Europe and other world regions.



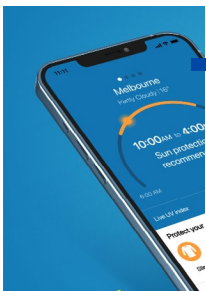
## WILDFIRE AND PUBLIC HEALTH

In collaboration with partners, WHO have prepared a technical scoping review Wildland fire and Public Health, including Wildland Fire for Public Health Officials (in press 2022).



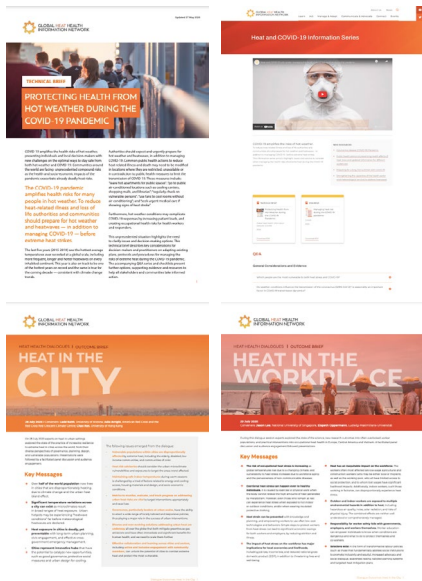
## WHO/WMO REPORT ON ATMOSPHERIC MINERAL DUST

A technical report on the human exposure, impacts, and prevention opportunities for health and sand and dust exposure has been prepared (in press 2022). In addition, WMO and WHO collaborate on dust issues through the Sand and Dust Storm-Warning and Advisory System (SDS-WAS) activities, and both organizations participate in the UNCCD-led international Coalition for Coordinated Action on Sand and Dust Storms.



## INTERSUN PROJECT

The InterSun Project was established in 1995 as a collaboration between WHO, WMO and UN Environment helps address technical issues on the monitoring and prediction of UV Radiation safety. The SunSmart global mobile application for providing the local UV index was developed and launched in 2021.



## GLOBAL HEAT HEALTH INFORMATION NETWORK

The Global Heat Health Information Network, a joint initiative of WHO, WMO, and US NOAA is a multi-disciplinary community of practice to scale up capacity to address the increasing risks of extreme heat to human health and society. Key activities include:

- “[COVID-19 and Extreme Heat](#)” Guidance Series published May 2020
- New website launch [www.ghhin.org](http://www.ghhin.org); [masterclass series](#); dialogues on “[Heat in the City](#)” and “[Heat in the Workplace](#)”.
- Technical workshops held in Senegal, Chile, Netherlands, and India.
- WHO-WMO Technical Report on climate change and occupational heat stress (in press 2022).
- WMO SERCOM recognized GHIN in February 2021 as a key mechanism for addressing heat related risks to society, requesting Partners, Members, and the HEA-SG to support scale up of activities.
- New project funding (2022-2027) will assist WHO and WMO to jointly Accelerate Action for Extreme Heat and Health. Activities are planned to expand the growth of the network, develop guidance, and undertake catalytic activities at regional levels.



## HEALTH RISKS OF INDOOR HEAT

A new project - [Informing decision-making about indoor heat risks to human health](#) - was launched in 2022 to provide decision-makers evidence and guidance to inform multi-sectoral strategies to reduce the health risks of indoor overheating.



## HEALTH, ENVIRONMENT, AND CLIMATE CHANGE COALITION

WMO, WHO, and UN Environment jointly launched the Coalition in 2018 to enhance UN wide coordination on health, environment, and climate. The coalition focuses on coordination and harmonizing actions in chemicals and waste, climate, and air quality, and is mobilizing resources to particularly support regional agendas. It also contributes to health across the SDGs, notably SDG 3 (Good Health) and SDG 13 (Climate), and will reconvene in 2022, responding to the increased demand from Member States, notably through the UNFCCC, German G7 Presidency priorities and Stockholm +50 fora.



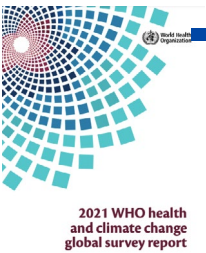
## MULTI-HAZARD EARLY WARNING SYSTEMS AND HEALTH RELATED EMERGENCY RESPONSE

The COVID-19 pandemic severely impacted progress in the area of emergencies during the reporting period. WHO and WMO did scope opportunities to strategically improve health sector involvement in MHEWS and to enhance the benefits of public weather services and MHEWS for public health, the work of the health sector, and WHO. WHO participated in the WMO-led Multi-hazard Early Warning Systems Network/ Global Multi-hazard Alert System (GMAS) Conference in 2019.



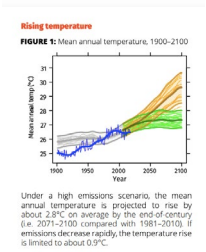
## CLIMATE SERVICES FOR HEALTH COUNTRY PROJECTS

WHO and WMO together implement the Global Framework for Climate Services Adaptation for Africa demonstration project in Malawi and Tanzania. Based on learning and tools developed in 2014-2017, WHO are scaling up climate service applications, notably the climate-service readiness assessment tool, integrated climate and health surveillance systems, and research within the climate and health projects now active in 16 countries, funded by a range of multilateral and bilateral donors.



## WHO MONITORING OF HEALTH SECTOR PROGRESS ON CLIMATE CHANGE

There are two key initiatives in this area of work. The [WHO health and climate change global survey](#) that collects national level data on 20 indicators related to governance, evidence, implementation, capacity and finance. This includes data on the collaboration between the health sector and national meteorological and hydrological services as well as data on climate-informed health surveillance and early warning systems for climate-sensitive diseases.



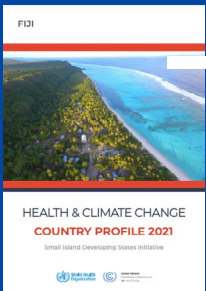
The [WHO/UNFCCC Climate and Health Country Profiles](#) has been an ongoing collaboration with WMO since 2015 and highlights the climate hazards, health risks and potential health co-benefits from climate action at national level. Over 70 profiles are available and include climate projections and weather exposure information facilitated through the WHO/WMO joint office. A technical report on the development of climate indices has been developed, and a pilot series of 6 city profiles further downscale this approach to an urban scale.



## MONITORING PROGRESS ON CLIMATE SERVICES FOR HEALTH

WHO and WMO report improvements in the access and use of climate information annually, in the Lancet Countdown for Climate and Health. In 2021, the NMHS of 85 countries report to WMO that some level of engagement or service provision to the health sector occurs. A complementary WHO country survey of 100 countries captures the use of climate information by Ministries of Health for Early Warning Systems, Integrated Surveillance, and impact assessments.

# SPECIAL FOCUS ON SIDS AND URBAN ISSUES



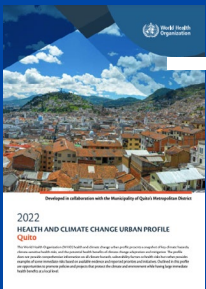
## WHO SPECIAL INITIATIVE ON CLIMATE CHANGE AND HEALTH IN SIDS

Provides health authorities from island states with the political, technical, scientific and financial support to improve understanding and address the health impacts of climate change. A series of SIDS Health and Climate Change Country Profiles and SIDS dynamic data dashboard illustrates progress made by island states to date in responding to the health threats of climate change.



## WMO SERVICES COMMISSION URBAN STUDY GROUP, AND CROSS-CUTTING URBAN SERVICE ACTIVITIES

WMO urban work relevant to health include activities of the Integrated Urban Study Group, e.g., the Urban Stakeholder Mapping; the WMO Urban Research Meteorology and Environment (GURME) Project; Guidance on Integrated Urban Hydrometeorological, Climate and Environmental Services (2019), Good Practices on High-Resolution Modeling for Integrated Urban Services (2022); and Guidance to Measuring, Modelling and Monitoring the Canopy Layer Urban Heat Island (2022). A WMO Integrated Urban Workshop in June 2022 took stock of existing urban activities within WMO and identified coordination opportunities to improve and facilitate Integrated Urban Services.



## WHO URBAN CLIMATE AND HEALTH PROFILES

As part of the WHO monitoring programme on health and climate change, WHO launched the [Health and Climate Change Urban Profiles](#) involving six pilot cities, Washington DC, Quito, Accra, Glasgow, Kisumu, and Indianapolis.

## COLLABORATIVE OBJECTIVES

### WMO-WHO HEALTH, ENVIRONMENT, AND CLIMATE COOPERATION FRAMEWORK

SIGNED MAY 2018

