GEO Health Community of Practice:
Using Environmental Observations to Improve Health Decision-Making

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As a global network of governments, organizations, and observers, the GEO Health Community of Practice seeks to use environmental observations to improve health decision-making at the international, regional, country, and district levels.

INTRODUCTION

- Earth observation (EO) data can support disease preparedness and response actions in disease epidemic and humanitarian efforts.
- They are relevant for monitoring progress of health-related development goals like the UN 2030 Agenda for Sustainable Development and Sendai Framework for Disaster Risk Reduction 2015-2030.
- Using the One Health approach, interdisciplinary and multi-agency teams can analyze EO data to enhance our understanding of dynamic ecosystem processes that influence human and animal health.

OBJECTIVES

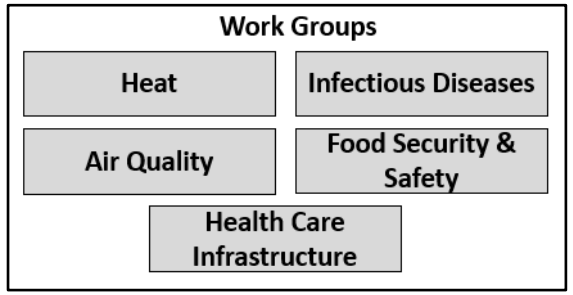
- To focus on developing integrated information systems that sustain engagement between scientists and decision makers to provide useful EO data that protect health and build resilience.
- To build partnerships across public and private sectors.
- To stimulate innovative and open approaches to gathering and providing useful risk assessment, monitoring, prediction, and forecasting information.

EARTH OBSERVATIONS FOR HEALTH INITIATIVE

Vector-borne Diseases	❑ Dengue Model forecasting Satellite-based System (D-MOSS) (Asia) ❑ Myanmar Malaria Early Warning System (Asia) ❑ An Early Warning System for Vector-borne Disease Risk in the Amazon (Americas) ❑ Satellite Informed System to Support Elimination of Malaria in the Americas (SISTEMA) (Americas) ❑ A Geospatial Surveillance and Response System Resource for Vector-borne Disease (Americas) ❑ Machine Learning, Climate Variability and Disease Dynamics (MEDINA) (Global)
Water-related Diseases	❑ Predictive Assessment of Transmission Conditions of Cholera (Global) ❑ Assimilation of Earth Observations to Improve and Enhance Global Predictive Ability of Forecasting Risk of Cholera Outbreaks (Global)
Air Quality Management	❑ Supporting Local Government Health and Air Quality Decision-Making with a Sub-City Scale Air Quality Forecasting System from Data Fusion (Africa, Americas) ❑ Enhancing Air Quality Decision-Making Activity in Indian Megacities through Assimilation of NASA Earth Observations and Development of a Decision Support System (Asia)
Emerging Environmental Health Risks	❑ Mapping Urban Heat Islands (Americas) ❑ Environmental Determinants of Enteric Infectious Disease and COVID-19 (Multiple Regions) ❑ Neighborhood-Scale Extreme Humid Heat Health Impact (Global)

WORK GROUPS

- To strengthen cross-collaborations and synergies, five working groups were established to engage health partners, identify gaps, and clarify and address health needs for capacity building.



- Members have supported the WMO COVID-19 Task Team and Global Heat Health Information Network (GHHIN).

FUTURE STEPS

- By supporting these multidisciplinary collaborations, CoP members continue to build partnerships and provide technical expertise on environmental health decisions and actions that affect global ecosystems.