Climate Services
Resources to Protect Human Health

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World Health Organization
Presentation Overview

Vision & Rationale

What are we trying to achieve?

Decisions, Data, & Services

Partnerships & Participation

Capacities

Priority actions

World Health Organization

Climate services as a resource for health
Hippocrates (Circa 400 B.C)

“Whoever wishes to investigate medicine properly, should proceed thus: in the first place to consider the seasons of the year, and what effects each of them produces for they are not at all alike, but differ much from themselves in regard to their changes.

Then the winds, the hot and the cold, especially such as are common to all countries, and then such as are peculiar to each locality”
Vision & Rationale

Why should the health sector engage?

Meteorological conditions affect some of the largest disease burdens:

- Undernutrition kills 3.5 million/yr
- Diarrhoea kills 2.2 million/yr
- Malaria kills 900,000/yr
- Hydrometeorological extremes kill 10s of thousands, and cause multiple other health effects
We are still talking...

- Lessons, Best Practices, Recommendations exist to build on

- 1996: WHO Task Force Climate Health
- 1999: IRI Climate prediction & Disease Health in Africa
- 2004: WMO MALOF E. Africa
- 2006: Espoo – Living w/ climate variability & change
- 2007: WMO Madrid - Social, economic benefits of weather-, climate-info & services
- 2008: WMO CH Working Groups Africa
- 2009: WHA Resolution
- 2011: IRI Climate & Health Africa +10
- 2011: WCC-3
- 2011: Intl Conf on Climate Services
- 2012: ?
- 2011: GFCS Health & DRR

Vision & Rationale

Climate services as a resource for health
Recommendation 1.
**Full engagement of the public health community**, through the WHO, in the establishment of a GFCS in order to enable the inclusion of climate information in public health decision making.

Recommendation 2.
**Research and training opportunities, designed to build capacity and provide evidence** for policy and practice, should be developed through effective collaboration across relevant disciplines.

Recommendation 3
Invest in a **public service platform** within WMO member and partner institutions to encourage cross-sectoral interaction including cooperation on the establishment of observing and monitoring networks, the development of decision-support tools and systems and the development of ‘one stop’ advisory services for the health sector that will strengthen health surveillance and response systems.

Recommendation 4
The **sharing of data, information and capacity** (at local, regional and global scales) is necessary for improving health monitoring and surveillance systems to achieve “the most elementary public health adaptation” […] especially for least developed countries.

Recommendation 5.
Existing programs, initiatives and organizations working in climate and health should **jointly prioritize the development of the GFCS as it relates to health. Institutional mechanisms** that link outputs & responsible actors to the recommendations above are required and a clear framework for activities is essential.
Mission: WHO and the wider health sector has a mandate for preparedness, mitigation and response to protect and promote health.

Vision

1. A climate-informed and climate resilient health sector
2. Climate services are mainstreamed as a public-health service
3. Provision of good health is considered a goal of other sectors (ie climate, DRR, water, agriculture)
Designing Climate Services for Health

Vision & Rationale

Decisions, Data, and Services

How can climate info help make health decisions? What lessons do we have in doing this?

Partnerships & Participation

Capacities

Priority actions
Decisions, data, and services

A range of important health decisions can benefit...

- Risk and Vulnerability identification
- Resource allocation
- Infrastructure placement
- Emergency preparedness
- Public health information dissemination, ie Public Service Announcements and Alerts
- Disease control strategies
- Health policy, regulation and laws
- Flow and demand for pharmaceutical and public health supplies
- Health staffing decisions
- Targeted medicine for vulnerable populations
- Training of the health workforce for potential outbreaks or signs of illnesses in extreme weather
# Climate & Environmental Information can enhance health decisions

<table>
<thead>
<tr>
<th>Health Policy</th>
<th>Surveillance &amp; Monitoring</th>
<th>Health Interventions &amp; Implementation</th>
<th>Programme Evaluation</th>
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</thead>
<tbody>
<tr>
<td>Short and Long-term Planning</td>
<td>What diseases and determinants to monitor</td>
<td>Prioritization of vulnerable or at risk areas</td>
<td>What changes in disease incidence are due to interventions or due to seasonal favourability</td>
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<tr>
<td>Resources allocation</td>
<td>When to monitor</td>
<td>Early warning &amp; preparedness</td>
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<tr>
<td>Prioritization of geographic regions and health risks</td>
<td>What specific areas to monitor</td>
<td>Logistics, ensuring resources arrive before heavy rain or disasters</td>
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<tr>
<td></td>
<td></td>
<td>Climate-proofing interventions or the implementations</td>
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Decisions, Data, and Services

Can help manage health risks from short to long term

**Weather & Short-Term Climate**
Operational Decisions

**Mid-Term Climate**
Planning • Preparedness

**Long-Term Climate**
Planning & Investment

[Graphical representation of climate data and maps]
An online tool medium-term forecasting of heat-waves to support health services’ planning.

Guidance to policy-makers, health professionals and the public on how to prevent and cope with the health effects of heat-waves.

Policy Support: WHO/Europe recommends countries and regions in Europe to develop & implement heat–health action plans, to prevent, react to and contain heat-related risks to health.
Limitations in climate-informed health decisions

"……The published literature to date, however, includes no full descriptions of climate-based early warning systems being used to influence control decisions for infectious disease. WHO, 2005.”

Availability, reliability, resolution, and completeness of epidemiological surveillance data

Dynamic public health context can make climate information obsolete as prevention tool

Knowledge about sensitivity of diseases to climatic conditions

Capacity in environmental health and epidemiology

Local nature and determinants of disease often needs to be context specific
Recommendations for next steps

Develop tailored services in partnerships with weather/climate & health organizations. I.e health forecasts to predict future health outcomes.

Improve existing data
I.e digitize historical health & climatic data; enhance awareness and use of existing observational and processed data, appropriate satellite, climate model data sources.

Access and use data in a systematic manner to identify vulnerable groups & areas. I.e consider trend and seasonality issues; use data to evaluate the success of interventions & how communities cope.

Incorporate other data into health forecast services, i.e population, rural vs. urban residence, migration, environmental and poverty data.

Collaboration and new, multi-disciplinary initiatives that involve communities beyond health and climate/weather; build upon existing initiatives and progress; aim to meet emerging challenges; and communicate with end-users in appropriate ways.

Commitment at all levels that brings climate and health communities together.
## Designing Climate Services for Health

<table>
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<tr>
<th>Vision &amp; Rationale</th>
<th>Decisions, Data, &amp; Services</th>
<th>Partnerships, Participation, &amp; End-users</th>
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Who should be involved? What partnerships should we develop? What do we already know?

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<th>Capacities</th>
<th>Priority actions</th>
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Multiple health end-users can benefit

Health care and Public Health actors:
- Regional and Central Ministries of Health
- Disease control services
- National development planners including disaster risk reduction
- Civil society (including NGO and humanitarian actors)
- Medical personnel and community Health workers
- Public-Private Partnerships – e.g. supply chain logistics, water infrastructure
- Research Community
- Media
- * AND non-health sectors which protect health
Active collaboration in climate-health

Global policy

WHO and WMO
- Formal agreement 1952
- Espoo, Madrid, WCC-3,
- GFCS

Regional application of climate services

- MALOF
- MERIT
- ACMAD

National Operations

- National Climate & health working groups
- Multi-hazard EWS
Main constraints on today’s partnerships

• End-users want suppliers to give them what they want - but often don't know exactly what that is

• Health invests relatively little in surveillance, early warning and prevention

• Health data is often weaker than meteorological data

• Partnerships to bridge climate-health needs support: either externally, or by showing how a joined up decision-making system pays for itself
What is the future of participation and partnerships for CS?

Many recommendations & lessons for how to work together

Driven by expanding needs and uses for information

Driven by many technological changes

Many end-users and models

Many technical and institutional challenges…
Key Factors for Successful Climate & Health Partnerships

1. Champion individuals who can innovate and motivate are essential

2. Strong institutional frameworks to guide and define clear aims & roles

3. Intention to build trust and dialogue, plan to find and work out differences

4. Catalyzing enabling factors and incentives needed to make the partnership work

5. Strong focus on the public health problem and outcome maintained

Lessons from WCC-3 Side Meeting on Climate Risk Management of Infectious Diseases
Designing Climate Services for Health

Vision & Rationale

Decisions, Data, & Services

Partnerships, Participation

Capacities

What capacities are needed? to develop? to deliver? to use?

Priority actions
Institutional & Leadership Capacity

Technological Capacity

Professional Skills

→ Need a UIP to appropriate link National and Community capacities
Increased Capacity on all sides

Meteorological professionals need to learn more about the practical challenges of disease control & health protection.

Health professionals need to learn more about how climate and environmental information can help them control diseases & have skills to use that information.
Opportunities for improved climate-health skills

- Existing body of work to identify core skills for enhanced use of climate information for public health decisions
- Development and dissemination of training courses – linked directly to applied programmes

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<th>Domain</th>
<th>Competency Statement</th>
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<tr>
<td>1. Basic Concepts in Public Health and Climate</td>
<td>Understand the basic frameworks for public health analyses, the factors that drive the climate system and the range of methods used to capture public health and climate information</td>
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<tr>
<td>2. Methods and Tools for Analyzing Climate and Public Health Data</td>
<td>Analyze in space and time the relationship between climate and public health data using appropriate statistics, methods and tools</td>
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<tr>
<td>3. Use of Climate Information in Decision-Making for Climate-Sensitive Diseases</td>
<td>Apply climate information to enhance public health surveillance, early warning, prevention and control of climate-sensitive public health issues</td>
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<tr>
<td>4. Computer and Information Technology</td>
<td>Use computers and relevant software for applications in climate information for public health</td>
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<tr>
<td>5. Communication in Public Health and Climate</td>
<td>Develop effective communication means and tools for public health and climate information</td>
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<tr>
<td>6. Collaborating, Mentoring and Training on Climate Information for Public Health</td>
<td>Advise, train and collaborate with public health and climate and weather professionals using relevant platforms, mechanisms and partnerships</td>
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Next steps to improve capacity

- Training and capacity building of end-users including the health sector and communities to understand and use climate data appropriately
- Improved health surveillance data
- Capacity to better assess, manage and monitor health risks of climate variability and change
- Monitoring and evaluation of the appropriate and effective, and cost-effective use of climate information for health decisions
- Research and forecasting of health impacts associated with CV & CC.
- Development and deployment of Early Warning Systems
Climate Services for Health

Vision & Rationale

Decisions, Data, & Services

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What criteria should be used to guide action for health in the GFCS?
Defining Priority actions

Starting Point → GFCS Principles

GFCS PRINCIPLES

1. The primary goal of the Framework will be to ensure greater availability of, access to, and use of climate services for all countries.

2. All countries will benefit, but priority shall go to building the capacity of climate-vulnerable developing countries.

3. Framework activities will address three geographic domains; global, regional and national.

4. Operational climate services will be the core element of the Framework.

5. Climate information is primarily an international public good provided by governments, which will have a central role in its management through the Framework.

6. The Framework will promote the free and open exchange of climate-relevant observational data while respecting national and international data policies.

7. The role of the Framework will be to facilitate and strengthen, not to duplicate.

8. The Framework will be built through user–provider partnerships that include all stakeholders.
Defining Priority actions

Potential criteria to identify action

- Protect vulnerable populations
- Addresses major gap identified at regional and/or national levels
- Addresses climate sensitive health condition of public health priority
- Engages a range of health, DRR, and meteorological stakeholders in partnership with the aim of protecting health and wellbeing
- Includes effective Monitoring and evaluation, and accountability
- Has a risk communication function
- Has articulated capacity building targets
- Cost-effective
Conclusions

- The health community has shown interest and commitment to working toward better use of climate information
- There are lessons, expertise, and recommendations to build on
- There are concrete opportunities ahead of us…
Thank you for your attention

World Health Organization
http://www.who.int/