2017 Operationalization Plan

*Under revision by Steering Committee*

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# **EXECUTIVE SUMMARY**

The GHHIN is envisioned to be an independent, voluntary, member driven forum of scientists, professionals, and policymakers focused on enhancing and multiplying the global and local learning and resilience-building for heat health that is already occurring. This is a unique user interface platform for the global extreme heat health community.

GHHIN seeks to serve as a catalyst, knowledge broker, disseminator of good practices, and a forum for facilitating exchange and identifying needs. The GHHIN will create a global common space to promote evidence-driven interventions, shared-learning, co-production of information, synthesis of priorities and capacity building that can empower multi-disciplinary actors (e.g. health system practitioners, government authorities, community service organizations, urban planners, and the meteorological community) to take more effective and informed life-saving preparedness and planning measures. In order to synchronize learning across global to local heat-health related activities. GHHIN will propose a common framework that can be used as appropriate by members in their own work, to help connect local efforts and learning into the global dialogue. It is a voluntary member-based initiative with a light-touch governance process initially supported by the WHO/WMO and US NOAA, and driven forward through inputs from other key partners.

Operationalization of GHHIN calls for 5 key elements in 2017/2018:

|  |  |
| --- | --- |
| **TASK** | **STATUS** |
| 1. Establish and Staff GHHIN Coordination Unit | Need resources for full time support |
| 1. Formalize the Ad-Hoc Advisory Committee | In our control |
| 1. Establish Process to Produce Bi-annual Global Synthesis Report | Need resource mobilization |
| 1. Comparative Heat-Health System Stocktaking Report | Summer 2017. Interns committed to work on this project |
| 1. Develop and launch GHHIN Outreach Strategy | Summer 2017. Interns committed to work on this project |
| 1. Organize the 1st Global Forum | Need resource mobilization |

Budget and Resource Plan

# GHHIN Coordination

## Coordination Functions

A full-time GHHIN coordination function, hosted by the WHO/WMO Joint Office is proposed to get the network off the ground. Alternative arrangements can also be considered. It will serve to identify members, organize meetings, support core communication platforms, and manage key activities on behalf of the network. Specific responsibilities include:

* Fundraising for core activities and staff
* Member engagement and support for the formation of regional nodes
* Convening an annual forum and preparing an annual report
* Providing coordination support to nodes and working groups
* Providing networking and communication platforms for members
* Providing technical and capacity building resources

**Location, Composition, and Engagement**

The WMO/WHO joint office for Climate and Health in Geneva will host the GHHIN Initiative and help provide initial coordination support. Voluntary leads from members will be welcomed to host regional nodes, lead working groups, and develop activities identified as GHHIN priorities. The unit will aim to recruit a full time coordinator. The coordination unit will actively interact and support other bodies such as:

* steering committee;
* leaders of regional nodes;
* virtual working groups;
* new members, experts, partners;
* individual contractors;
* donors

## Expected Outputs in 2017/2018

* Regular monthly Coordination meetings
* Website and Online Platform start to develop
* Annual forum
* Annual report
* Learning Mentoring Program
* Technical working groups
* Heat Health Action Profiles Database
* Heat Alert and Support Desk
* Formation of regional nodes

# Formalize the GHHIN Advisory Committee

**Coordination Team (2016-2017)**

* Joy Guillemot WMO/WHO Joint Office
* Juli Trtanj NOAA, Climate Program Office
* Hunter Jones NOAA, Climate Program Office
* Xxx NOAA, Sea Grant Fellow

**A Steering Committee** of the following members have shaped the development of GHHIN in 2016.

* Kumar Kolli WMO, Climate Prediction and Applications
* Kris Ebi Professor, Global Health, University of Washington, Seattle
* Shubhayu Saha US Centers for Disease Control
* Angie Bone Centre for Radiation, Chemicals and Environmental Hazards Public Health England
* Kim Knowlton National Resources Defense Council
* Hannah Nissan Columbia University -IRI,
* Glen McGregor Professor, Durham University
* Yolanda Clewlow UKMet
* Andreas Matzarakis Head Human-Biometeorology, Research Centre Human Biometeorology Deutscher Wetterdienst

**(Additional Global Members need to be identified)**

* Chao REN, Associate Professor, School of Architecture, The Chinese University of Hong Kong
* Emily Chan, Director CC - Medical/ Disaster & Humanitarian Response Chinese University of Hong Kong
* China CDC or Shanghai HH
* Somenath Dutta, India Meteorological Department
* University of East Anglia
* MeteoFrance
* Health research community
* Dave Henderson Senior Advisor, Health and Air Quality Services, Meteorological Service of Canada
* Philippe Gachon (Ph.D) Centre pour l'Étude et la Simulation du Climat à l'Échelle Régionale (ESCER), Université du Québec à Montréal

# Global Heat and Human Health Synthesis Report

1. **Scope and Purpose of the Report**

The GHHIN Global Heat Health Synthesis report will be published on a bi-annual basis, every 2 years to synthesis the state of science and practice to monitor, forecast, and address extreme heat risks to human health. The report will help to establish baseline conditions (exposure/information/response etc.) confronting the heat-health community; to track progress being made over time; to highlight knowledge and research gaps; to provide an authoritative voice upon which members can advocate more effectively; and be presented in an accessible format to a broad readership. The report will complement and synthesize information on the GHHIN Global Heat Health web portal, which is routinely updated with new research, initiatives, events, outcomes, indicators, and other items.

In the future the member driven portal and annual forums will serve as a content/data collection opportunities to inform the synthesis report. The first synthesis report will draw upon a stocktaking exercise completed by the steering committee.

1. To track the magnitude and global differentiation of exposure, impacts, vulnerability and global response capacity.
   * Draw on and align with IPCC, US Assessment/ WMO State of Climate, other impacts data
   * Link to Lancet Tracking Change WG1 – Annual publication pre-COP Nov. every year.

* exposure to annual mean temperature change (positioning extremes in the trend)
* exposure to heatwaves
* heat index relevant for labor productivity
* mortality and morbidity statistics (can we build on emdat.be?)
* key global thresholds and related indicators for extreme heat

1. To draw out and articulate evidence based key messages, emerging and pressing issues needing advocacy, investment, and attention.
2. To provide a high profile venue to showcase and draw upon member info in the GHHIN profiles of country action – bringing in success stories, national progress to feed report
3. To document ongoing observational and surveillance, process study, biomedical, climate and multidisciplinary research, and information needs for the global heat-health community
4. **Proposed Structure**

|  |  |  |
| --- | --- | --- |
| **Sections** | **Content Description** | **Key indicators** |
| **Part 1 – Key Messages and Emerging Issues** |  | Regional dimensions  Country dimensions |
| **Part 2 – Hazard Synthesis** | Observed status and projections of global heat hazards |  |
| **Part 3 – Synthesis of Global Heat Exposure trends** | Primarily, reports on exposure trends and indicators over the past 2 year reporting period.  Secondarily, brings together all of the global literature published in the intervening years of the report that examine changing exposures to extreme heat.  Global Overview (including major climate drivers such as ENSO)  Regional dimensions  Country dimensions  Basically, what was the exposure over the past 2 years, and what have we learned about exposure over the past 2 years?  Maps of populations at risk, urban heat islands  Case Study Boxes: Country/local snapshot characterizing exposure | Alignment with Lancet Indicators |
| **Part 4– Synthesis of Vulnerability** | Who is vulnerable, where?  How is vulnerability changing, what indicators of vulnerability are available at national, sub-national levels?  How are drivers of vulnerability changing: Urbanization. Aging. Migration. Energy Access.  Case Study Boxes: Country/local snapshot characterizing vulnerability | Key Indicators Regional dimensions  Country dimensions |
| **Part 5– Synthesis of Impacts** | Summarizes global literature as baseline, and published in intervening years. Key figures to be cited in part 1.  Country/local snapshot characterizing impacts |  |
| **Part 6 – Synthesis of Preparedness and Protective Actions** | Review of heat actions (heat action plans implemented in intervening two years. What is working, what is not New approaches to observing/surveillance, new interventions, new collaborations, etc.  Storytelling Case Study Boxes - snapshot characterizing local action | Contributes to SDG Indicators |
| **Part 7- Synthesis of needs gaps and outline of next two year directions**, | Synthesis of   * critical data and observations used and needed, * research and communication * needs for action * advocacy; |  |

1. **Bi-annual Production Process**

While acknowledging that the production of any report requires significant dedicated effort, with enough ongoing investment in monitoring and reporting to the web portal, hopefully most of the data can be available before authors of this report even begin discussing the synthesis.

**Target Publication Date**: September 2018 and every other year thereafter.

**Dec-Feb**: collection and synthesis of data for the preceding period (calendar years 2016 & 2017) This long lead time is because we may draw on many sources that do their own compilation and need a few months after the close of the previous year to publish their data.

**Feb-March**: preparation of the report

**April-May**: review and revision

**June**: publication

Publication Target to Align with other Policy and Reporting Processes: Notably, Lancet Tracking Climate and Health (annual Oct/Nov), WMO State of the Climate (Impacts section)(annual Oct/Nov release pre-COP), IPCC AR6

Outreach to research funding agencies and institutions, to the earth observation community, and to key international organizations (IPCC, WMO, WHO)

# Comparative Heat-Health System Stocktaking Report

To be updated -

Two complementary technical papers will be prepared on similarities and differences in global extreme heat prediction and preparedness systems across timescales. These papers will inform the framework for the GHHIN to track HHEWS approaches, and establish indicators of risk and adaptation that can be part of a GIS-based dashboard and the country profiles. This will also help identify the alignment of the NOAA National Integrated Heat Health Information System guiding questions.

A project outcome will be core templates for comparative core information categories, along with a considerable amount of new content about existing systems.

This report will build on some efforts to compare different systems, and notably update p 28, table 4 of the WHO/WMO Heatwave and Health Guidance on Warning System Development Guidance Document, comparing local and national systems in US, Canada, Germany, Spain, France, UK, China, Hong Kong, Japan, Australia.

Paper 1: Stocktaking paper on global heat hazards and human exposure across timescales (weather, S2S, and decadal) that will provide the framework for the GHHIN to track HHEWS approaches, and establish indicators of risk and adaptation that can be part of a GIS-based dashboard and the country profiles. Propose data collection approach and organize existing data, synthesis and drafting of technical paper.

Paper 2: Stocktaking paper on human vulnerability to heat and risk reduction actions across timescales (weather, S2S, and decadal), including known effectiveness at improving health outcomes, that will provide the framework for the GHHIN to track HHEWS approaches being used, define principle categories of strategies and measures, and establish indicators of risk and adaptation for extreme heat that can be part of a GIS-based dashboard and GHHIN country profiles.

This report will notably update Chapter 6 of the WHO/WMO Heatwave and Health Guidance on Warning System Development Guidance Document.

*Subsequent technical paper may be developed using initial findings from cataloguing HHEWS and combining with projections of future temperature for those cities (maybe a handful of cities or countries representative of different approaches) so we can show how, according to the heatwave trigger of each HHEWS, how dire or manageable the situation will be in the future. (E.g. according to India’s HHEWS criteria of X, by 2050 there will be 45 extreme heat days triggering action compared to 20 in 2020.)*

# Develop and Launch GHHIN Outreach Strategy

The member-driven network will depend upon a strong outreach programme. Outreach is critical to facilitate exchange of ideas and increasing the efficiency and speed at which innovation can occur by sharing ideas, results, and needs. As a virtual network an online platform is envisioned to serve as the connecting place for members. However, an outreach strategy and package of materials developed to guide GHHIN and support members. Preparation is needed to inform how outreach and communications will work and be managed, develop templates and ideas for the website components, and outline a GHHIN outreach strategy. Specific tasks needed include:

* 1. **Conceptualize and develop the outreach and marketing function of the GHHIN.**

E.g. Identify and synthesize in a short report GHHIN member outreach and communication needs and propose opportunities and strategies that could be used for engagement.

* 1. Develop a GHHIN outreach strategy and toolkit (e.g. package of materials developed to guide GHHIN and support members).
  2. Develop concept and templates for creating member driven heat health country profiles.
  3. Member management plan, to identify, engage, and builds network membership and community over time.
  4. Develop online functions and manage and actively update website

# Global Heat Health Forum 2017 **Bangkok or Hong Kong**

**Background**

Leading health, weather, and climate experts[[1]](#footnote-1) convened in Chicago in July of 2015 to discuss current practices to address the growing global problem of extreme heat and its health impacts. The workshop focused on the application of both weather and climate information, identified the basis for a common framework, and produced an action plan wherein participants agreed to work together on an integrated approach to extreme heat. Participants agreed to reconvene within 2 years to discuss progress and the way forward in an international context, as well as to review national developments toward the international goals. The current proposed forum is a follow up to this workshop, with the expressed intent to launch the Global Heat Health Information Network (GHHIN) as a mechanism to fulfil the identified needs and accelerate implementation of heat-health priority actions.

**Forum Goal and Objectives**

The forum serves as an international platform to promote the integrated use of climate, weather, and health information for evidence based policy and actions to improve the management of extreme heat risks. The forum will bring together the community of experts and practitioners implementing various aspects of heat health information systems and action plans in order to share experience, inform a global common agenda, strengthen the network, and formally launch the **Global Heat Health Information Network** .

**Aims**

* Provide the opportunity for national, regional, and international sharing and networking between heat - health experts;
* Share experience and identify emerging issues across five common thematic areas;
* Provide a learning session on understanding and communicating heat risks;
* Specific focus on communicating heat risk, will engage local and global media in heat health communications;
* Review and codify the global technical agenda and launch GHHIN.
* Achieve agreement on the highest priority gaps in research, information, and action.

**Expected Outcomes**

* Increased awareness within the global health and meteorological community of the health decisions, concerns, timeframes, and needs for improved information to inform local action to reduce heat risk;
* Improved networking and exchange information on good practices (i.e. locally feasible and sustainable actions), tool and resources, and lessons learned across health, and climate and weather agencies that are developing and delivering heat wave early warning and early action systems;
* Documented and prioritized community needs, with an action plan to drive fulfilment of these needs.

# Logistics and Planning

Participants – 125 - 150 pending resources

Special invitation and organize activities with and for the media

Focus Regions:

* North America (NIHHIS – US, Mexico, Canada via NACSP and NACCHH)
* Europe (Leaders are UK, DE, FR…)
* Southest Asia & South Asia

Possible Logistics: UCAR: Brian Jackson

Resource Requirements: 65,000-80,000 USD

# Engagement Plan

* Announcement letters – save the date message by June 15?
* Seek Sponsorship
* Base budget for Media Engagement.

|  |  |  |
| --- | --- | --- |
| Agency/Organization | Role to Play | Status of Engagement |
| * WMO * NOAA * USGCRP * CDC * EPA * NIH/NIEHS * USAID * US State * CIMH * SMN (Mexico Met) * INSP (Mexico NIH) * COFEPRIS (Mexico CDC/FDA) * BKMG (Indonesia Met) * JMA (Japan Met) * UKMet/PHE * DWD * HKO * European Commission * Wellcome * CKDN * Health and Environment Canada * Future Earth * US Mission Bangkok * WHO Regional Offices * NRDC * ESRI * Google |  |  |

## Work plan and Budget Overview

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | **Activity** | **Description** | **Expected Outcomes** | **Annual Costs** |
| 1.  Coordination | Organize annual forum | See Concept Note | Annual forum held | $75,000 |
| Support virtual technical working groups (est. 5) | Concept note needed | Virtual Working Groups address needs for Standards and Guidance;  Vulnerability and exposure impact Research; Data;  Forecast Products / Alert Systems/ Decision Tools;  Interventions | $250,000 |
| Develop 5 year plan and monitor progress |  | Annual plan updated with progress and emerging priorities | $2,500 |
| Fundraising |  | Funds raised for meetings, coordination, and products | $0 |
|  | Outreach plan | See concept note | Guidance on member outreach | $5,000 |
| 2.    Technical Support | Develop and manage technical resource database | Website build – concept to be developed Summer 2017 | Access to technical resources improved | $35,000 |
| Develop and manage heat health action profiles | The heat health action profiles can gently encourage competition and increase participation in the network.  (concept based on stocktaking reports to be developed Summer 2017) | New resource made available to members that assimilates and helps track information on national heat health research and action. | $100,000 |
| Develop and manage heat alert and support desk | As a global phenomenon, heat waves may occur in the southern hemisphere during boreal winter and vice versa. This support desk will facilitate the global tracking of heat waves at all times during the year and in all parts of the globe, ensuring that attention can be focused on all events, and that capacity can be focused on areas experiencing heat waves from areas that are currently not experiencing them. This serves not only to leverage underused capacity, but also gives countries an opportunity to share approaches when they’re needed by another country, and to share in the focus that a heat wave demands, even during winter. | New resource made available through member base to provide support to high risk and emergency phase areas. | $30,000 |
| 3.    Outreach | Prepare and publish annual report | See Concept Note | Annual report on state of heat health exposure and vulnerability, plus emerging issues from forum made publically available. | $25,000 |
| Manage and actively update website |  | Timely resource of news, opportunities, and latest science assembled and made available to members. | $10,000 |
| Develop GHHIN Communications Strategy and Information Kit |  | Communications strategy and package of materials developed to guide GHHIN and support members. | 25,000 |
| Member identification and Marketing | The marketing function of the network is important, facilitating a better exchange of ideas and increasing the efficiency and speed at which innovation can occur by sharing ideas, results, and needs. It also | Identification of members builds network membership. | volunteer |
| 4.    Capacity Building | Manage learning/  mentoring programme | Student exchanges and formal mentoring programs increase knowledge and skills but also to be a tool of science diplomacy. This exchange support function will facilitate the matching of interested students with potential hosts to help apply for funding and will provide structure for developing an experience or lesson plan that will make the exchange fruitful. It will describe the many existing programs that enable such an exchange to occur and will also serve as a mechanism for harvesting the productive outcomes of the exchange by documenting them and encouraging those involved to publish results, develop case studies, and act to build capacity in their home countries. | New resource made available to members that helps identify, match, and support learning exchanges for participating students, cities, and academics. | $300,000 |
| Monitor and develop use Member profiles | Profiles characterize the extreme heat risk of each country, the status of various heat resilience items such as a heat action plan and environmental and health data availability, and the organizations and individuals involved in heat health activities. The profiles can be updated any time, but an annual refresh is linked to the annual meeting. They can be used to evaluate progress and rank like countries, and can be a source of information for like countries. | New resource of heat health expertise assembled and made available to help members identify experts and actors. | $0 |
|  | Guidance Documents | Modification of WHO/WMO Heat Health Guidance | User friendly version of guidance document |  |
| Staff and running costs | Senior Technical Staff  25% |  |  | $50,000 |
| 1 technical coordinator | See TOR |  | $250,000 |
| 1 admin staff (50% FTE) |  |  | $85,000 |
| Overheads (10%) |  |  | $120,000 |
|  |  |  |  | **$1,362,500** |

## Annex 1: Staff Technical Coordination Function

Until dedicated staff can be secured, the coordination function is being held by Joy Shumake at WHO/WMO, Hunter Jones and Juli Trtanj at NOAA, and a NOAA based SeaGrant Fellow for 2017.

**TOR for Consultant (to be updated)**

A technical consultant is required from XXX, 2017 – XXX, 2017 to coordinate and oversee the initialization of the Global Heat Health Action Network.

**Background:**

The imminent increase in exposure of populations to extreme heat events worldwide demands immediate action by the global public health community to save lives and protect communities. In April 2016, in response to the burden of extreme heat impacts in South Asia, the WMO led South Asia Climate Service User Forum. This expert group identified the need to establish a regional Heat-Health Action Network and proposed a provisional work plan for regional and national action. In parallel, a global community of practice has also identified the need for a similar global scale resource network to accelerate the sharing of knowledge and information on managing the health risks of extreme heat events to empower and mobilize the global health community.

As a result, the WMO/WHO joint office for climate and health, in coordination with US-NOAA, have launched and will support the start-up of a Global Heat-Health Information Network, including a South Asia Node. A full time consultant is needed to help with the startup activities, coordinate the existing partners to solidify this common agenda, help mobilize resources for priority activities.

**Scope of Work**

1. Develop GHHIN Communications Strategy and Information Kit
2. Support the coordination for the preparation and publication of the Annual Synthesis
3. Coordinate the development and organization of the first GHHIN meeting
4. Manage the development of the online platform
5. Provide support to regional actors to develop the South Asia Regional HH Action Network (SAR-HHAN) partnership, action plan, and activities
6. Support the organization and reporting of regular SAR-HHAN and GHHIN coordination teleconferences
7. Identify potential funding resources and support partners with proposal development and writing

**Qualifications**

* + Sound university level education with at least a Masters Degree in Public Health, Epidemiology, Meteorology, Environmental Science or allied sciences relevant to climate and health applications;
  + Demonstrated project management and coordination skills and experience;
  + Strong writing skills in the preparation of proposals, reports, project briefs, etc.
  + Fluency in English, excellent verbal and written communication skills; other UN languages an advantage.
  + Excellent interpersonal and communication skills and ability to work in international
  + settings with staff from various geographical regions.
  + (Preferred) Experience in environmental health research and training

**Consultant reports to**: Dr. Joy Shumake-Guillemot, WHO/WMO joint office for climate and health, Officer-in-Charge.

**Location of work:** World Meteorological Organization, 7bis, Avenue de la Paix, CH-1211 Geneva

**Additional terms:** Office space and computer access will be provided; A Carte de legitimation in Switzerland will be facilitated by WMO.

## Annex 2: Agenda Global forum

**Day 1:** Global Experience in Heat Health Action and Information Systems

* + **Welcome**
  + **Keynote**
  + **Critical Scientific Advances on Heat Health and Emerging Research Needs**
  + **National Progress Updates and Lessons learned on key issues, synthesis of research and data needs as per:** 
    - Institutional Capacity and Partnerships
    - Communication and Engagement
    - Data, Forecast Products and Information
    - Research on Vulnerability, Heat Parameters and Health Outcomes
    - Health Action

**Breakout Sessions on Emerging Issues/Priorities/Challenges/Innovations**

* + - Institutional Capacity and Partnerships
    - Communication and Engagement
    - Data, Forecast Products and Information
    - Research on Vulnerability, Heat Parameters and Health Outcomes
    - Health Action
* **Evening Event** – **interactive cocktail ? Sharing innovation session // Structured Networking –/ More than posters, create specific thematic booth where innovations can be showcased by theme.**

**Day 2:** Thematic Workshop: Communicating Extreme Heat

**Part 1: Learning space – invited speakers, coaching, designing messages and products**

Invited speakers from broadcast media, social researcher to reflect on how to communicate   
(and not communicate) risk before and during a heatwave to trigger protective behaviour? As a meteorological scientist, how to communicate across timescales - seasonal/sub-seasonal?

**Part 2: Workshops** Hands on sessions working with a regional outlook. Communicate summer prediction on extreme heat. What to do with this once you go home. How to connect with the information?

1. **Workshop for Media (b) Workshop for Scientists**

**Day 3:** GGHIN Meeting - 1

* + Launch network
  + Workgroups to refine work plan based on Day 1 emerging issues session
  + Affirm priorities
  + Activities to seek/commit engagement in coordination and work plan

**Closing Launch**

* + **Press Conference**

1. the US National Oceanic and Atmospheric Administration (NOAA), German Deutscher Wetterdienst (DWD), the US Centers for Disease Control and Prevention (CDC), the World Meteorological Organization (WMO) and the Global Framework For Climate Services (GFCS) and many other research and operational health partners from India, the UK, Australia, Canada, and Sweden [↑](#footnote-ref-1)