

2017 Operationalization Plan

*Under revision by Steering Committee*

Update Version: August 1, 2017

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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 |

# 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

**A Steering Committee** of the following members have shaped the development of GHHIN in 2016. Recommendations from the ad-hoc committee are needed to identify others who should be contacted or invited to the formalized advisory committee.

**Public Health Experts**

* Kris Ebi Professor, Global Health, University of Washington, Seattle
* Shubhayu Saha US Centers for Disease Control
* Angie Bone/Tom Waite Centre for Radiation, Chemicals and Environmental Hazards Public Health England
* Kim Knowlton National Resources Defense Council
* Pat Kinney Boston University

**Climate and Meteorology Experts**

* Kumar Kolli WMO, Climate Prediction and Applications
* 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)**

* Tord Kjellstrom, ANU Occupational Health, Australia
* Emily Chan, Director CC - Medical/ Disaster & Humanitarian Response Chinese University of Hong Kong
* Virginia Murray, UNISDR STAG – PHE, UK
* Chao REN, Associate Professor, School of Architecture, The Chinese University of Hong Kong
* China CDC or Shanghai HH
* Hans Guido Mucke, Germany Federal Environment Agency (UBA)
* Somenath Dutta, India Meteorological Department
* University of East Anglia
* MeteoFrance
* Health research community
* Peter Berry, Health Canada
* Dave Henderson Senior Advisor, Health and Air Quality Services, Meteorological Service of Canada
  + Or Sharon Jeffers, Met Service, ECCC, Canada
* Philippe Gachon (Ph.D) Centre pour l'Étude et la Simulation du Climat à l'Échelle Régionale (ESCER), Université du Québec à Montréal
* Sarah Perkins-Kirkpatrick (Climate Change Research Centre, UNSW, Australia)
* Mexico SMN or COFEPRIS or INSP ? Jorge L. Vazquez (University of Veracruz)or Grea Litai Moreno Banda INSP

# 

# Global Heat and Human Health Synthesis Report

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

The GHHIN Global Heat Health Synthesis report will be published every 2 years to synthesize the state of science and practice to monitor, predict, and address extreme heat risks to human health. serve as a

It does not aim to be a global assessment itself, but will synthesize research and action, serve establish baseline conditions confronting the heat-health community; help track progress of impacts, as well as learning and responses over time; highlight knowledge, action, and research gaps; and provide an authoritative voice upon which members can advocate more effectively. It will be presented in an accessible format with key figures, focused case studies, and visualization to engage a broad readership. The report will be structured according to a recognized risk framework covering aspects of the hazard, exposure, impacts, risk management, a focused section on heat health warning systems will be the exception. Each section will include a status update of key indicators, analysis of trends or issues, a presentation of science and information needed for decision-making; and section describing new innovations and case studies.

The GHHIN synthesis is different from a scientific review. It will draw on the scientific literature and align with standing and special reports of IPCC, WMO State of Climate, Lancet Tracking Change, etc. However, its unique nature will highlight local initiatives and learning from the GHHIN Member base, which may not be published in the peer-reviewed literature. In order to do this, the GHHIN synthesis will draw heavily on member inputs to the web portal and what is reported and learned during the bi-annual forums about new research, initiatives, events, outcomes, indicators, and other items. These three activities will need to work in tandem – and its for this reason a common framework is desirable to help synchronize information flow.

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

Overall goals:

1. To help harmonize the characterisation and track the magnitude and heterogeneity of hazards, exposure, vulnerability, impacts, and global response capacity.
2. To draw out and articulate evidence based key messages, emerging and pressing issues needing advocacy, investment, and attention.
3. To accelerate global learning about risk reduction, which is not waiting on the scientific literature process – but can provide a credible high profile venue to showcase and draw upon member information – bringing to light in success stories, national progress which may otherwise go unnoticed.

1. To identify and document scientific progress - observational and surveillance, process study, biomedical, climate and multidisciplinary research, and information needs to improve decision making for more effective action.

**Proposed Structure**

|  |  |
| --- | --- |
| **Sections** | **Content Description** |
| **Executive Summary** | **Key Messages and Emerging Issues**   1. Drawn from summation of contents below (hazard, exposure, vulnerability, responses). Showcasing headline figures, key successes and remaining gaps. 2. Heat Health Tracker: 10 indicators/10 gaps key figures draw on contents from other chapters and are easy to update and display as a sort of dashboard upfront. 3. Statement on mitigating climate change vs. managing risks |
| **Introduction to GHHIN and the Report** | What is GHHIN  Why is it needed  How it works  Synthesis report scope/purpose |
| **Chapter 1 –**  **Heat: a human health hazard**  (review needed by Met expert Team)  Jon Gottschalck  Robert Kopp  KMA person  Sarah Perkins-Kirkpatrick | 1. **Status:** ***What is the magnitude and dimensions of the problem?*** Global overview of observed status and latest projections of global heat hazards. 2. **Analysis: *How are dangerous heat conditions changing?*** Describe relevant trends, climate drivers such as ENSO, or notable regional and country dimensions (e.g. where air quality magnifies the health hazard) 3. ***What do we need to know?* Science-Information- Decision-making:** Availability and skill to forecast and predict EHE. 4. **Innovations and Experience:** Reporting scientific innovations in understanding or monitoring the hazard,Feature case Study of member experience predicting hazardous conditions/creating warnings (source: members) |
| **Chapter 2 –**  **Heat Exposure**  (review needed by mixed team)  **Census/population trends expert**  **Sociologist (Eric Klinenberg)**  **Economist**  **Climate Expert**  **Gregg Garfin** | 1. **Status: Who is exposed to increasing temperatures and EHE*?***  * Framing: relative nature of dangerous exposure * Provide key indicators, figures and maps of regions, populations at risk, urban heat islands. * **Status update:** (future reports) summary of changes detected in key indicators and new knowledge about global exposure.  1. **Analysis: Trends and tracking change:** Highlights new findings regarding understanding and monitoring changing human exposures to heat. (source: new publications and findings of previous 2yr). 2. ***What do we need to know?* Science-Information- Decision-making:** Availability, access, and use of knowledge about exposure.   (source: members)   1. ***Innovations and Experience:*** Reporting scientific innovations in understanding or monitoring exposure; Feature case Study of member experience characterizing local exposure. (source: members) |
| **Chapter 3 - Human vulnerability**  (review needed by public health expert Team)  Sharon Jeffers  Robert D. Bullard | 1. **Status *Who is vulnerable to heat, where, when?***  Baseline understanding of global vulnerability to negative health impacts.  * **Status update:** (future reports) summary of changing vulnerability indicators over the past 2 year reporting period. (source: new publications). * **Analysis**: Discuss how vulnerability is changing? Maps of how are drivers of vulnerability changing (e.g. Urbanization. Aging. Migration. Energy Access). * **(option) Feature:** Reports may want to rotate featured vulnerable populations with more in-depth coverage of workers, elderly etc. Ask key questions? E.g. What we can expect from acclimatization. Where are the limits?  1. ***What do we need to know?* Science-Information- Decision-making:** Availability, access, and use of knowledge about vulnerability   - highlight what indicators of vulnerability are/could be available at national, sub-national levels?   1. **Innovations and Experience:** Reporting scientific innovations in understanding; monitoring, or forecasting vulnerability; Feature case Study of member experience characterizing/studying vulnerability |
| **Chapter 4 –Human Health Impacts**  (review needed by public health expert Team)  Shubhayu Saha  Pat Kinney | 1. **Status:** ***How is heat affecting people?***   Summarizes global literature as baseline. Describes types of direct impacts, but reference to indirect impacts   1. Provide key impact figures: *key indicators and sources to track, morbidity, mortality, productivity, etc* 2. (future reports) **Status update:** summary of changing impact indicators over the past 2 year reporting period. (source: new publications). 3. **Analysis:** Are impact trends changing? What can be said of future impacts? 4. ***What do we need to know?* Science-Information- Decision-making:** Availability, access, and use of knowledge about impacts   - highlight what indicators of impacts are/could be available at national, sub-national levels   1. **Innovations and Experience:**: Reporting scientific innovations in understanding or monitoring exposure; Case Study snapshot characterizing or forecasting impacts, health surveillance.(source: members) |
| **Chapter 5 – Heat Health Warning Systems (HHWSs)**  (review needed by mixed team)  Rachel Lowe  Joan Ballester | 1. **Status:** ***What is being done to predict and classify extreme heat events (EHEs)?***   Baseline understanding of what is being done predict and classify EHEs, derived from national/regional/global HHWSs   1. Provide key mechanisms of HHWSs: *key metrics and definitions of EHEs* 2. (future reports) **Status update:** summary of new and updated HHWSs (source: new publications). 3. **Analysis:** How effective are HHWSs once they’re being used? *Skill, advance timing, trigger threshold methodology,* 4. ***What do we need to know?* Science-Information- Decision-making:** Availability, access, and use of knowledge about HHWSs  * *provide framework for detailing what a HHWS consists of*  1. **Innovations and Experience:** Reporting scientific innovations in HHWS;  Feature case Study snapshot characterizing effective/new HHWS (source: members) |
| **Chapter 6 –**  **Risk Management**  (review needed by public health expert Team) | 1. **Status:** ***What is being done to reduce risk of increasing and extreme heat?***   Baseline understanding of what is being done to reduce risks at different timescales annual planning cycles, EHE preparedness/response cycle, long term vulnerability reduction. Different categories. (source: stocktaking)  (future reports) **Status update:** will track changing implementation and investments (source: new publications + member inputs to database over the past 2 year reporting period)   1. ***(Gap Analysis) Risk : Response Equation – based on the data base relative to known risks where is action needed, and what kind of action.*** 2. ***What do we need to know?* Science-Information- Decision-making:** Availability, access, and use of knowledge about interventions - highlight what indicators of effectiveness are/could be available at national, sub-national levels. Pointing to knowledge gaps. 3. **Innovations and Experience:**  Case Study snapshot characterizing local action (source: members) Commentary on what is being reported as effective (or what is not) Advances in science and application. Showcase new approaches (source: new publications + member inputs to database/forum) |
| **Chapter 7 –**  **Recommendations** | Synthesis and focus on knowledge/information needs to make better decisions, as well as political and action.   * **Monitoring Impacts and Action:** Track over time key indicators, report back * **Information:** critical data and observations used and needed * **Research** * **Capacity**: * Local action * Advocacy and communication; |
| **References** | Glossary of Key Terms – see <https://link.springer.com/article/10.1007/s00484-013-0729-9> |

**Heat Health Tracker - Dashboard Corresponding to Chapters**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Monitoring Key indicators**  **Specific Indicators Need Ideas** | **Monitoring Key Knowledge or Action Gaps**  **Specific Indicators Need Ideas** | **Regional Factsheets** |
| **Heat Hazards** | **Key figures and 2 indicators**   * key global thresholds and related indicators for extreme heat * annual mean temperature change (positioning extremes in the trend) * heatwave incidence (proposed: >95% T-Avg relative to 1981-2010 for 2+ days) * heat index relevant for labour productivity   Should reference key standing scientific reports and processes. |  |  |
| **Heat Exposure** | **Key figures and 2 indicators**  *See: Future population exposure to US heat extremes, Jones et al.*   * Person-days of exposure to high temperature * Projected population change * % population in urban areas * Demographic make-up * Socioeconomic factors |  |  |
| **Heat Vulnerability** | **Key figures and 2 indicators**  Proposed Key Indicators for consideration:   * % Population Less Than 5 Years Old * % Population 65 Years Old or Old * % Population Living in Urban areas * % Adult Population with little formal education * % People Living Alone * % Adult Population with No access to health care * % land area covered with Impervious Surfaces * % Covered by Forest Canopy * Proportion of adults employed as outdoor workers * % Adults with heat exacerbated illnesses – Diabetes, Asthma, Hypertension, Obesity, |  |  |
| **Human Impacts** | **Key figures and 2 indicators**   * Morbidity, * Mortality, Productivity, Infrastructure * Heat-Related ED Visits (per 100,000 people per year) * Excess deaths during extreme heat events (per 100,000 persons per year)   (identify key sources to build on e.g. emdat.be)  https://ahs-vt.maps.arcgis.com/apps/MapSeries/index.html?appid=5bfd71bdeff242d4a8f0d2780369807a |  |  |
| **Heat Warning** | **Key figures and 2 indicators** |  |  |
| **Risk Reduction** | **Key figures and 2 indicators**  *No of cities with heat health action plans* |  |  |

1. **Bi-annual Production Process**

The production of any major assessment report requires significant dedicated effort, with enough ongoing investment in monitoring and reporting of updates to the web portal, during the forum, and at other community meetings. For this reason the common framework is very desirable, and this section outlines such a framework for production.

The initial GHHIN Synthesis Report will require the largest level of effort because it is accomplishing something hitherto undone – the collection, synthesis, and publication of the actions of and progress made by the international heat health community toward addressing the current and future threat posed to society by extreme heat. The initial report will not only be much larger than subsequent reports in order to document global progress in addressing heat health, but will also be primed by two stocktaking papers that will perform a one-time collection and synthesis of detailed information on global heat risk.

**Initial Report Preparation**

The GHHIN Coordination Unit based in Geneva and staffed by two interns, with support from the Steering Committee is structuring the initial report, and leading the development of contents by producing two stocktaking papers (one on interventions and one on heat early warning systems).

Expected inputs to the initial report include: Stocktaking and Published Literature. Future reports will draw from the Heat Hub, Forum, and Published Literature

Details on the Stocktaking papers, the Global Forum, and other Reports can be found in other GHHIN documentation. The GHHIN Heat Hub, will include Member Profiles, Country Profiles and Wiki function that will soon be elaborated in a supporting document. The Country profiles will contain basic information on the operational status of heat health actions by each country as well as basic information on the heat hazard, exposure, and vulnerability of its citizens – including indicators which will be tracked and available for aggregation on the GHHIN portal.

A dashboard of key indicators will be created to track impacts, gaps, and progress, for example tracking:

* Registered heat waves experienced annually, per country
* National reported impacts
* City level heat plans
* Legislation specific to population protection from heat

The profiles will be featured and updated during Global Forums and through requests issued during sourcing for material for the Global Synthesis. It is expected that members of the GHHIN community will take the responsibility of updating the profile of their own country, but regular passes (every 6 months) will also be made by the GHHIN Coordination Unit to refresh content.

**Target Publication Date**: September 2018 and every two years thereafter (2020, 2022, etc…) in sync with Global Forum meetings.

* **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 – September** : publication production

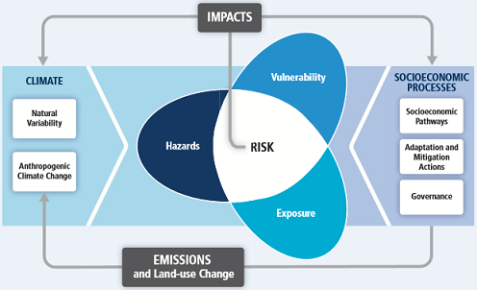
Publication Target to Align with other Policy and Reporting Processes: Notably, Lancet Tracking Climate and Health (annual Oct/Nov), WMO State of the Climate (Impacts section)(annual Oct/Nov release pre-COP), IPCC AR6. Outreach to research funding agencies and institutions, to the earth observation community, and to key international organizations (IPCC, WMO, WHO)

Subsequent reports will be an assessment of progress made since the previous report, and will thus be much more abbreviated. The stocktaking report will provide a one-time input to establish the current state of affairs, in the absence of other data collection opportunities. Other input sources, (e.g. Forum, Hub, Literature) for the subsequent GHHIN Synthesis Reports.

Decision Point: Do we attempt to do this in-house and manage the production process with a dedicated GHHIN committee, or do we outsource elements of the production process to a third party?

# Comparative Heat-Health System Stocktaking Report

**Overview of GHHIN Stocktaking Papers**

A one-time technical paper will be prepared during summer 2017 to inform the common framework of issues and activities that GHHIN will focus on and track through its web-platform, forums, and synthesis report. They will inform the likely content for the global synthesis report; serve to collect baseline content information; and help expand upon previous guidance documents and identify alignment with the NOAA National Integrated Heat Health Information System.

The reports have been organized around the principles of the IPCC climate risk framework. They will take stock of the relevant categories of heat-health knowledge and information which are required to inform decisions and actions across timescales to reduce risks across the dimensions of hazard, vulnerability, exposure, risk reduction, and monitoring impacts. We hope to emphasize the circular nature of science/information feeding into responses, and back to informing science/information needs.

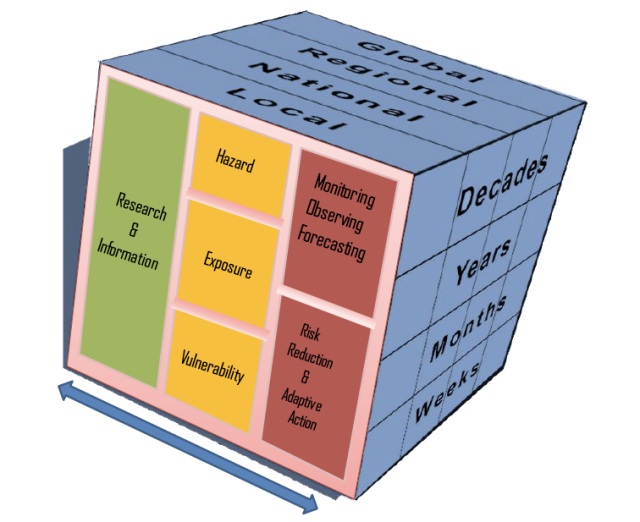
**Expected Outcomes of Stocktaking Paper**

1. Help organize and inform a common thread framework of domains of information and action to be followed by the GHHIN
2. Provide grounding and content for the development of the global synthesis report, as a one-time effort prior to mechanisms of the platform and forums are established to collect information.
3. Inform core templates for comparative information categories, that can be used as the basis of the country/member profiles.
4. Collect data on existing actions to begin to populate the initial web-based sharing platform and identify key stakeholders, before GHHIN members are asked to contribute.

Chapters on global heat hazards and human exposure across timescales will cover Monitoring, Forecasting, and EWS will come under this section – and not responses – and will build on some efforts to compare different HHWS systems, and notably update p 28, table 4 (which compared local and national systems in US, Canada, Germany, Spain, France, UK, China, Hong Kong, Japan, Australia) **to include more countries** of the WHO/WMO Heatwave and Health Guidance on Warning System Development Guidance Document.

Chapters on human vulnerability to heat and risk reduction actions across timescales will notably update Chapter 6 of the WHO/WMO Heatwave and Health Guidance on Warning System Development Guidance Document.

**Stocktaking of Global Heat Risks and Responses.**

**Page target 50, with annexes as required**

This stocktaking report will help identify and outline the global state of the science to understand, predict ambient heat related hazards and exposures to increasing and extreme temperatures.

It will quickly summarize the literature on the state of the hazard; outline and highlight similarities and differences in systems for characterizing the hazards, and temperature prediction across timescales (weather, S2S, and decadal). It will present key considerations used in the literature for measuring human population exposure to extreme and increasing temperatures. It will help identify and outline the global state of understanding human vulnerability to heat exposures, and the broad range of responses and actions which can be taken to reduce human exposures and impacts. It will describe categories of vulnerable populations; highlight similarities and differences in response opportunities and systems, from behavioral to infrastructural, and legal actions which can be taken over different timeframes. Intervention effectiveness will be cited as available.

This stocktaking will inform a common thread framework for GHHIN to track progress being made in key categories, synthesize current action and science in a standard way, and establish indicators to help structure country profiles that will be completed by GHHIN members autonomously. It may lead to the creation of indicators of risk and adaptation for extreme heat that can be part of a GIS-based dashboard and GHHIN country profiles.

**Chapter 1: Temperature Hazards**

**1.1: Hazard: Ambient heat hazard characterization**

Describe observed trends of increased warming, of high night time temperatures, extreme heat events, of heat hazards in combination with conditions of humidity/air quality.

**1.2: Hazard: Research:** what is the research/method used to inform how an extreme heat event is defined? Inclusion of mortality/morbidity/hospital admission data?)

**1.3: Hazard: global, regional, and national temperature observation and monitoring systems** of (climatological records, RCC capabilities eg: IMD Regional Forecast)

**1.4: Hazard: Extreme Heat Prediction**: State of the science in products, sources of predictability, by timescale: climate predictions, climate outlooks, forecasts, warnings); indices

**1.5: Hazard: Early Warning Systems.** Diverse priorities across timescales: reference table of comparative heat alert systems; parameters, definitions

**Chapter 2: Population Exposures**

**2.1 Exposures:** Characterization: Introduce the metrics that define quantifiable exposure

**2.2 Exposures:** Research: What is the current state-of-the-art in terms of quantifying exposure? Share good examples

**Chapter 3: Population Vulnerabilities**

1. This section will outline identified diverse population groups whom are vulnerable to exposure to ambient heat conditions, and represent target populations for protection. It should describe geographic, social, temporal and physiological sensitivities.
2. Activities which can reduce vulnerabilities
3. Decision makers who have the ability to take protective actions for these high-risk groups (table). E.g. Workers: Business Owners; Psychotropic pharmaceutical patients: Pharmacists/Physicians; Elderly: Families/Social Services.

**Chapter 4: Responses**

1. **Planning and Governance**: Heat Health Action Plans, legal classification of heat as national emergencies
2. **Institutional Capacity & Partnerships**: Common institutional partners engaged to define and respond to needs. (e.g. who should be/ is involved in forecasting, preparing and responding to the hazard – agreement on lead body)
3. **Engagement and Communication Strategies:** What communication strategies are used and most effective both during an event and for long lead time planning – do communications strategies include targeted outreach to vulnerable populations?
4. **Training and Capacity:** what kinds of training and capacity is needed to better understand and respond to heat health risks
5. **Exposure and vulnerability reducing interventions**
6. Individual
7. Community
8. Work Place
9. Health Facility
10. Policy/Legislative/Regulation
11. Social Services
12. Specified targeted interventions for vulnerable populations

**Chapter 5: Monitoring and Evaluation**

* intervention effectiveness (evaluation products – conference, report),
* information sufficiency (e.g. vulnerability id, warning accuracy),
* feedback mechanisms (ie complaint line, town halls, etc.) .

# Develop and Launch GHHIN Engagement 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 |
| 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)  Templates to be developed for discussion | 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 | Outreach plan | See concept note | Guidance on member outreach | $5,000 |
| 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)