

Name	Institution	Country	My Biography	Abstract
Arrighi, Julie	American Red Cross & Red Cross Red Crescent Climate Centre	USA	Julie Arrighi holds a joint position between the American Red Cross and the Red Cross Red Crescent Climate Centre. She leads the Climate Centre's urban portfolio which includes a focus on heatwaves. Julie also leads the Climate Centre's partnership with the International Committee of the Red Cross which focuses on adaptation in conflict. For the American Red Cross Julie provides climate risk management advice to international programs. Prior to this joint position Julie worked for the Red Cross in East and Southern Africa on various rural and urban disaster risk reduction projects. Julie holds an M.A. in Climate and Society from Columbia University.	No Abstract
Ballester, Joan	Barcelona Institute for Global Health (ISGlobal)	Spain	No bio	No Abstract
Ban, Jie	China CDC	China	Jie Ban is an assistant researcher working in the National Institute of Environmental Health, Chinese Center for Disease Control and Prevention (China CDC). Her field is environmental epidemiology and environmental risk assessment. Now she is working in the health effects related to climate changes and air pollution, as well as risk communication to cope with these two environmental anomalies. Being driven by the interest, she has attended several high-level research programs on climate change and public health, including the research programs supported by national natural foundation. She also has published over 20 papers mainly focusing on environmental health risk assessment of air pollution and climate change, environmental health risk projection, as well as public health risk perception.	<b>mediating effects of risk perception on adaptive behavior in China.</b> Ensuring public behavioral adjustment to heat waves is an important aspect of public health intervention under climate change. However, the current adaptive action guides are insufficient because of the limited understanding of public perceptions of heat-related risk and the motivating factors for the public's diverse adaptive behaviors. Here, we conducted a survey on the behavioral adaptations of 3065 urban residents in response to heat. We provided evidence on the current state of residents' perception of heat and the mechanism of how risk perception mediates individual behavioral intentions upon exposure to high ambient temperatures. We found that the mediating effects of risk perception varied significantly with respect to different types of adaptive behaviors. Concern behaviors appeared to be motivated completely by the mediating effects of perceived concern and severity, while outdoor activity could be consciously adjusted according to temperature changes without those mediating effects. Indoor cooling behaviors and transportation behaviors are partially mediated by risk perception. Therefore, more targeted and detailed action guidelines are needed to improve the practicality of public adaptation according to the guidelines.
Bao, Junzhe	Sun Yat-sen University	China	No bio	<b>Effects of air temperature on upper urinary tract stones and the related economic burden</b> Junzhe Bao, Qiong Wang, Yiling He, Rui Ma, Cunrui Huang At present, the relationship between air temperature and the incidence of upper urinary tract stones in different seasons is not clear. In this study, the data of upper urinary tract stones were collected from Nanjing municipal human resources and social security bureau from January 1, 2013 to December 31, 2017. We fitted a time-series Poisson model in our study, estimating the association between daily mean temperature and upper urinary tract stones in different seasons, with a distributed lag non-linear model with 5 days of lag. We found that the significant exposure-response relationship mainly occurred in the summer and autumn, and mainly occurred in the ureteral calculus patients. In the summer, the risk of ureteral calculus increased significantly with the rose of temperature after it was higher than 23 °C. The heat-related attributable fraction of ureteral calculus was 18.6%, and it was 20.8% for medical costs; there were 13.20 million CNY costs could be attributable to heat in the summer.
Belorid, Miloslav	NIMS/KMA	South Korea	No bio	<b>Development of impact-based forecasting system for heat waves in Korea, integrated with Limited-area ENsemble prediction System (LENS)</b> Miloslav BELORID, Misun KANG, Ji-sun LEE, Kyu Rang KIM, Changbum CHO, Jong-Chul Ha In this research we designed, developed and calibrated a new heat wave impact-based forecasting system, which incorporates both impact of heat waves on human health and likelihood of a heat wave event. The new system utilizes probabilistic forecasts of daily maximum temperature (TMAX) and daily maximum perceived temperature (PTMAX). The alerts are assigned using 4 color scheme according to 4x4 risk matrix. The probabilistic forecasts are based on Limited-area ENsemble prediction System (LENS) that is run by KMA using Met Office Unified Model. The final products are maps providing alerts for 165 regions around South Korea for three days ahead. Criteria for impact were decided upon epidemiological, physiological and climatological studies. Overall, the alerts issued by the system show high correlation with morbidity data.
Bhan, Subhash	India Meteorological Department, New Delhi	India	Subhash Bhan is an operational weather forecaster and Coordinator, Climate and Health, India Meteorological Department. Associated with development of Ahmedabad Heat Action Plan- the first heat action plan in south Asia in association with the Ahmedabad Municipal Corporation, Indian Institute of Public Health and Natural resources Defence Council. Prepared "National Guidelines for Management of Heat" of National Disaster Management Authority, India as an expert member. The heat action plan was extended to 10 more cities and 17 heat prone states of India through multi-agency collaboration by establishing mortality thresholds and providing customised climate services. The coordinated efforts have led to significant reduction in heat related deaths in India from more than 2000 in 2015 to about 30 in 2018. I have been a part of the team which was awarded the 8th JSW-The Times of India Earth Care Award 2018 for contribution of Ahmedabad heat Action Plan towards UN Sustainable Development Goal 13 (Climate Action) and Goal 17 (partnership). I am also working as an expert member of the National Centre for Disease Control expert group on Climate Sensitive Diseases. I am also working as a member of the TIFAC (Technology Information Forecasting and Assessment Council) group for Technology Need analysis for Climate and Health.	<b>Heat Wave Warnings: Thresholds, Customization, Dissemination and Cooperation in India</b> SC Bhan, Anup Srivastava, Priya Dutta and Dilip Mavalankar The poster Describes the operational system of Heat Wave Warnings in India, Determination of locale specific thresholds of temperature for actions at different levels; Customization of weather warnings for contextual use; Dissemination mechanism, Multi-agency Cooperation mechanism for efficient actions and the impact of Heat-Health Warning system in India. Existing Challenges and future need are also discussed.
Burg, Victoria	Rollins College	USA	Victoria Anne Burg is a MPH candidate at Rollins College in Winter Park, FL with a keen interest in Epidemiology. Her background is in Art History and Anthropology, as she believes the best way to understand the populations she will serve in public health is by knowing how they function culturally. She hopes to begin her PhD in Epidemiology next fall with a focus on global infectious diseases and how global warming is affecting the incidence and prevalence of cases. Her work thus far has had a heavy focus on infectious pathogens in the warmest climates of the world and how those pathogens may soon have wider reaches due to the warming of the planet. By attending GHHIN, she hopes to learn more about the effects of global warming on all aspects of public health, as well as make professional connections for future collaborations.	<b>The impact of Global Warming on Permafrost-locked Pathogens: A Systematic Review</b> Victoria Anne Burg MPH(c), Allen Johnson, DrPH, MPH Rollins College Master of Public Health Program Winter Park, Florida USA Background: A systematic literature review was performed to investigate the relationship between global warming and emerging and re-emerging infectious diseases in the permafrost. Methods: A search of published studies on the effects of global warming on emerging and re-emerging infectious pathogens frozen in the permafrost was undertaken by probing PubMed for articles that met predetermined inclusion criteria. Results: Twenty-six studies were identified for review. Conducted in eleven different countries, overall, the studies suggested global warming has increased reductions in permafrost resulting in emergence of pathogens in areas not otherwise seen. Additionally, some pathogens identified in core samples have shown novel mutations. Conclusions: Global warming is having an effect on the emergence and re-emergence of pathogens that have been frozen in the permafrost.
Buyana, Kareem	Makerere University, Uganda	Uganda	Am a sociologist with a research interest in city initiatives on climate changes. Since 2012, I have written on the subject of climate change adaptation in cities. Am currently the lead researcher for a Programme known as leading intergraded research on Agenda 2030 (LIRA 2030) at the Department of Geography in Makerere University Uganda, with support from the International Science Council.	<b>Green Roofing and Urban Health in a Changing Climate</b> Buyana Kareem - Makerere University Uganda Green roofs (roofs with a vegetated surface and substrate) provide ecosystem services in urban areas, including improved storm-water management, better regulation of building temperatures, reduced urban heat-island effects, and safeguards from dust storms and excessive heat. This poster demonstrates the work of a green roofing movement in an informal neighborhood of Kampala City benefits and the contribution to overall ecosystem services. The potential of the green-roof function is emphasized as well as the civic capacity of local community actors in preserving and restoring urban ecosystem elements. Further research is needed to examine urban health in relation to the functioning and benefits of green roofs as an incremental and scalable solution to heat stress and air pollution.
Chan, Emily	CCOUC	Hong Kong	No bio	No Abstract

Chan, Gloria	CCOUC	Hong Kong	No bio	No Abstract
Chesini, Francisco	Ministry of Health and social development	Argentina	Francisco Chesini has a degree in Environmental Health and a post-graduate qualification in sanitary engineering. He has worked in municipal solid waste management and healthcare waste management. Since 2012 he leads the "climate change and health" operative area in the Argentinian Ministry of Health and Social Development. He is a university professor in the Universidad Metropolitana para la Educación y el Trabajo (UMET).	<b>ANALYSIS OF MORTALITY DURING HEAT WAVES ON 2013-2014 SUMMER IN ARGENTINA</b> Chesini F1, Herrera N2, Skansi MM2, González Morinigo EC2, Fontán S3, Savoy F4, de Tito EH1 1 Ministerio de Salud y Desarrollo Social, Argentina 2 Servicio Meteorológico Nacional, Argentina 3 Universidad Nacional de La Matanza, Argentina 4 Universidad Nacional de Entre Ríos, Argentina.  The aim of this study was to analyze the effects of the Heat Wave occurred in the summer 2013-2014 (December 2013 to February 2014) on mortality in the center-north region of Argentina, where 38 million people live over 19 provinces. It was carried out an observational study of ecological-type contrasting the mortality occurred during the heat waves of the summer 2013-2014 with the mortality of the same period in the years 2010-2011 to 2012-2013. The mortality was analyzed according to the following variables: age, sex, cause of death and place of residence. During the heat waves of the summer 2013-2014, 1877 deaths in excess were registered. Moreover, the death risk significantly increased in 13 of the 19 provinces analyzed. The mortality rates by sex revealed heterogeneity according to the time and spatial scale. The death risk was increased by age; this increase was particularly significant in four provinces for the 60-79 years group and in six provinces in people of 80 years and over. The death causes that showed significantly increments were: respiratory, cardiovascular and renal diseases as well as diabetes. The greatest differences between significant and non-significant increased mortality risk was
CHO, Changbum	NIMS/KMA	South Korea	Changbum CHO is a research scientist in National Institute of Meteorological Sciences (NIMS) / Korea Meteorological Administration (KMA). I received MS degree in atmospheric sciences from Pusan National University and have worked at NIMS/KMA from 2003. In my early career, I'd involved in a part of an Asian Dust monitoring and forecasting system development as an operational forecaster and research scientist. Currently, I belong to applied meteorological department and my research focus on weather and health especially, heat wave and allergenic pollen. I have developed The Korean Heat-Health Warning System (HHWS) and set up the allergenic pollen monitoring sites and it related warning system into KMA service.	<b>The Korean Heat-Health Warning System (HHWS) on a rural and an urban scale</b> C. CHO, B. JANICKE, M Belorid, K. R. KIM, J. LEE, M. KANG NIMS/KMA The Korean HHWS has been developed. It provides Temperature and Perceived temperature view options. In the national scale system based on a local ensemble weather prediction system, domain covers Korean Peninsular with 3kmx3km. Total 13 ensemble members apply for calculating an initial temperature field and an observation bias correction procedure is applied in the next step. Finally, Grid-Point Probability, Grid-Point Risk Map and Risk map using the weather impact matrix up to 3 lead-days for 165 provinces are provided to end-users. Urban scale HHWS based on BioCAS provides the maximum distribution of Tmax, PTmax, and an elevation of excess mortality rate on Seoul. As a climatological heat environment analyzing system, BioCAS had developed under two assumptions that a temperature deviation is existed between two point in an urban as well as this deviation has been linearly maintained because synoptic- and meso-scale atmospheric motion is insignificant during heat wave events. Currently, BioCAS's analyzing capability is higher than NWP model, and is comparable to an operational forecaster
De Cock, Marc	European Commission	Belgium	Marc De Cock works for the European Commission as project officer in Public Health. I am interested in heat health and I hope to update myself with the latest state of art and the link between research and policy in this field.	No Abstract
Deng, Shizhou	Sun Yat-sen University	China	No bio	No Abstract
Diene, Papa Daouda Amad	Institut de Recherche pour le Développement	Senegal	Daouda Diene is a statistician and I have been doing research for 3 years on the health impacts of heat waves in the Sahel. My research focused mainly on Senegal and Burkina Faso. A battery of statistical models and indicators were used to map the effects according to the layers of the population. This work was done as part of a research project aimed at setting up a heatwave warning system. This forum will allow me to align myself at the frontier of the research on these questions but also, to master all subtleties in the establishment of a warning system heatwave	<b>Heat-related mortality in the Sahel : who is sensitive to short- and long-term heat exposures?</b> Papa Daouda A. Diène, Richard Lalou, Abdou K. Diongue, Abdoulaye Dème, and Stéphanie Dos santos Our aim is to analyze the differentiated effects of extreme heat on people's health by the duration of exposure and the level of individual vulnerability (age groups) in Senegal. All the analyzes are based on a comparison between Generalized Estimating Equations through Generalized Linear Models with natural cubic splines and Generalized Additive Models. The duration of exposure is addressed through both a daily and a monthly count of deaths, each one being more adapted to one of these two specific models. Temperature has an effect on mortality for both short- and long-term exposures. When considering the overall population, the GAM model shows a U-type relationship between temperature and mortality over an extended period of exposure. High temperatures are also dangerous in the short term. The vulnerability varies according to age groups and heat exposure. The health of children under 5 is affected by short-term heat exposure. In contrast, elderly people's mortality risk increases for long- and short-term heat exposure.
Dogra, Nitish	International Institute of Health Management Research	India	Dr. Nitish Dogra has done his undergraduate (MBBS) and advanced medical education (MD) from University of Delhi. He has also received a Master of Public Health (MPH) degree from the Johns Hopkins University (JHU), United States. In addition he was selected for a Fulbright-Nehru Environmental Leadership Program Fellowship for 2013-14 by the United States Department of State and the Government of India. During this period Dr. Dogra was based at JHU as a Visiting Faculty. He convened the Understanding Climate and Health Associations in India (UCHAI) training workshop in 2015 which was co-sponsored by the National Institutes of Health (NIH), US Government. He has brought out the edited volume Climate Change and Disease Dynamics in India. This included a exclusive chapter on heat. Dr Dogra has also worked with the World Health Organization (WHO) as consultant, temporary adviser and project principal investigator at different points of time. This included a vulnerability and adaptation study which included a heat index. In August 2014, he delivered on request, an invited commentary at the Conference on Health & Climate at WHO Headquarters, Geneva. In addition he played a key role in the first National Heatwave Management Roadmap for India ( <a href="http://www.tinyurl/heathealthindia">www.tinyurl/heathealthindia</a> ). Through the Forum he hopes to understand the science of vulnerability and adaptation assessment by connecting with colleagues globally.	<b>TITLE: Heat Vulnerability Shift at Sub-national Level in India: Impact of Short Duration Changes</b> AUTHORS: Dr. Nitish K. Dogra and Dr. Pawan K. Taneja  Description In 2011 at IHMR, India, we carried out a Vulnerability and Adaptation assessment with funding from WHO (SEARO). This followed a common protocol followed by 15 countries globally. Subsequently, this experience contributed to the Climate and Health Vulnerability and Adaptation assessment guidance document. The India study was carried out at the subnational level (the State of Haryana) with a vulnerability index for malaria, diarrhea and heat stress. A detailed assessment was also carried out for two districts. Wet bulb temperature was taken as an indicator of exposure. Proportion of children under 6, proportion of population in low income group and population in primary sector were the sensitivity factors whereas coping capacity factors consisted of government response (public health providers and accessibility of health facilities) as well as community response (type of house and percentage of women aware of ORS). Data for this index is approximately 7 years old. The poster will demonstrate the extent of shift in vulnerability from 2011 to 2018.
Dubey, Aditya Kumar	Indian Institute of Science Education and Research Bhopal, India	India	No bio	No Abstract
Ebi, Kristie	University of Washington	USA	Kristie L. Ebi is director of the Center for Health and the Global Environment (CHaNGE), and Rohm and Haas Endowed Professor in Public Health Sciences at the University of Washington. She has been conducting research and practice on the health risks of climate variability and change for over twenty years, focusing on understanding sources of vulnerability, estimating current and future health risks of climate change, and designing adaptation policies and measures to reduce the risks of climate change in multi-stressor environments. She has supported multiple countries in Central America, Europe, Africa, Asia, and the Pacific in assessing their vulnerability and implementing adaptation measures. She has been an author on multiple national and international climate change assessments. She co-chairs the International Committee On New Integrated Climate change assessment Scenarios (ICONICS), facilitating development of new climate change scenarios. Dr. Ebi's scientific training includes an M.S. in toxicology and a Ph.D. and a Masters of Public Health in epidemiology, and two years of postgraduate research at the London School of Hygiene and Tropical Medicine. She has edited four books on aspects of climate change and has more than 200 publications.	No Abstract - Keynote Speaker and Session leader

Faucet, Jerome	German Red Cross	Vietnam	<p>I am Head of project Office for the German Red Cross (GRC) in Vietnam. The GRC in partnership with the Vietnam Red Cross (VNRC) is currently implementing a 3 years project which aims at reducing heatwaves impacts on the vulnerable populations of Hanoi. Not only is the GRC and VNRC are engaging in the challenging task of addressing heat waves in an urban setting, which is an increasing risk for cities in Asia and around the globe, it is also employing a new approach – Forecast-based Financing (FbF). With FbF, forecast information is used to act in anticipation of an extreme event, rather than responding afterwards. A threshold for an extreme event is identified, which triggers the activation of pre-identified early actions, while a funding mechanism covers the expenses.</p>	<p><b>REDUCING HEAT WAVES IMPACTS ON THE VULNERABLE POPULATIONS OF HANOI THROUGH FORECAST BASED FINANCING FOR ANTICIPATORY HUMANITARIAN ACTIONS</b> The German Red Cross (GRC) in partnership with the Vietnam Red Cross (VNRC) and the Vietnam Institute of Meteorology, Hydrology and Climate Change (IMHEN) is implementing a 3 years project which aims at reducing heatwaves impacts on the vulnerable populations of Hanoi. Not only is the project is engaging in the challenging task of addressing heat waves in an urban setting, which is an increasing risk for cities in Asia and around the globe, it is also employing a new approach – Forecast-based Financing (FbF). With FbF, forecast information is used to act in anticipation of an extreme event, rather than responding afterwards. A threshold for an extreme event is identified, which triggers the activation of pre-identified early actions, while a funding mechanism covers the expenses. This poster presents the methodology and first results of the project.</p>
Flouris, Andreas	University of Thessaly	Greece	<p>Dr Andreas Flouris is an Associate Professor at the University of Thessaly Department of Exercise Science in Greece and an Adjunct Professor in Environmental Medicine with the School of Human Kinetics at the University of Ottawa, Canada. He is the Founder and Director of FAME Lab [(F)unctional (A)rchitecture of (M)ammals in their (E)nvironment], a research unit of 16 full-time researchers investigating the health and performance effects of environmental factors with a particular focus on the effects of heat.</p> <p>He is a Coordinator or Partner in several funded projects in Europe and North America (18M euro in the past 9 years) and he has published 170 papers on the effects of different environmental factors on human health, productivity, and performance. He is a Section Editor for the scientific journal Temperature and a member of the Working Group tasked to develop prevention measures to reduce occupational heat stress for the Greek Ministry of Labour. Also, he is an Expert Consultant providing input for guidelines and policy pertaining to the health effects of environmental factors for different international organizations (World Health Organisation, United Nations, European Commission, NASA, and others).</p> <p>For more than a decade, Dr Flouris has been evaluating funding proposals for different organizations in Europe and North America including the European Commission, NASA and the European Space Agency.</p>	<p>No Abstract</p>
Fontan, Silvia	La Matanza University	Argentina	<p>Academic activity, teaching and research at University of La Matanza, Department of Health Sciences. Director of Research Projects and researcher on the relationship of climate and health in metropolitan areas of Latin America.</p> <p>Director of the CyTMA2 Research Project: Accessibility conditions for students with disabilities (2012-2016) UNLaM. C2SAL-018.</p> <p>2016. Researcher: Mortality due to heat waves in the warm semester 2013-2014 in the central and northern regions of the Argentine Republic. Ecological study. Ministry of Health of the Nation.</p> <p>2011-2012 Researcher: Climate variability and its probable impacts on health, in cities of Latin America: Santiago de Chile (Chile), Buenos Aires (Argentina), Montevideo, Salto (Uruguay) and Manaus (Brazil). Inter American Institute for Global Change (IAI), PAHO.</p> <p>Now writing my PhD thesis in Urban Studies: Climate and health in Buenos Aires (2005-2015).</p>	<p>No Abstract</p>
Galappaththi, Himan	Environmental & Occupational Health Directorate, Ministry of Health	Sri Lanka	<p>I'm a medical doctor graduated from the Faculty of Medicine, University of Colombo in Sri Lanka in year 2009. I completed MSc in Community Medicine in year 2014. Currently following my post graduate MD in Community Medicine to become a Public Health Specialist in Ministry of Health in Sri Lanka. I'm currently attached to Environmental &amp; Occupational Health Directorate, Ministry of Health as a part of post graduate training. I'm conducting a research project for my MD thesis on "Heat stress: prevalence, associated factors, acute health consequences and the vulnerability of outdoor working environments among traffic police officers in Colombo district".</p> <p>At the Ministry of Health I'm assisting the national programs of Environmental &amp; Occupational Health. I involved as a resource person in Preparing Heat Health Action Plan for Sri Lanka in Year 2017. I'm delivering my technical knowledge as a resource person in consultative and stakeholder meetings at the national level in relation to Environmental &amp; Occupational health.</p> <p>We are planning our national programs aiming to encouraging our work force and public on sustainable production and consumption as a requirement for Climate Change adaptation.</p> <p>My preferred research areas are Heat related health impacts, Environmental vulnerability studies, air pollution related health issues, Occupational Health and safety, migrant health issues and health system studies.</p>	<p><b>Glimpse of hidden heat health issues among Sri Lankan workers</b> Authors: HKA Galappaththi, SAIK Suraweera</p> <p>Sri Lanka is a tropical monsoon country with an increase of 1.40C during the recent 50 years. Increased heat causes harmful effects on occupational health and safety. Out of Sri Lankan work force of 8.2 million, 59.8% are in the informal sector in which 86.3% are in the agriculture sector. Indoor workplaces which produces excess amount of heat (furnaces, boilers, stoves) during the production procedure, expose their workers to heat health hazards (glass/iron/cement industry, bakeries, kitchens). Informal sector and other outdoor workers are also exposing to heat stress (farmers, laborers, construction workers, street vendors, masons, taxi drivers). Since this is a neglected health issue in Sri Lanka, it will affect the workers efficiency, productivity and country's economy. Excessive heat can reduce physical/mental task capacity, reduce productivity and increase accident rates. Studies on heat health and statistics on heat illnesses are limited in Sri Lanka. It is vital to have evidences on heat health issues among workers in Sri Lanka, for work environment modifications to enhance the workers health and productivity.</p>
Godsmark, Christie	University College Cork	Ireland	<p>Dr Christie Godsmark is a Lecturer in Occupational Health at the School of Public Health, University College Cork (UCC). Dr Godsmark joined UCC in 2018 after working in the Division of Environmental Health at the University of Cape Town, South Africa. She completed her PhD in environmental medicine at the University of Portsmouth, UK focusing on thermoregulation within the occupational setting of the military. Although Dr Godsmark's background is in physiology, her current lecturing and research focus areas include the impacts of climate change and extreme weather events on human health and wellbeing, with a particular focus on vulnerable populations. Dr Godsmark has also previously lectured on public health pesticides and has investigated health impacts of domestic pesticide use in the peri-urban, poverty-stricken areas of South Africa. Through her research, Dr Godsmark has published numerous peer-reviewed articles, a book chapter, industry-targeted reports, conference proceedings and policy briefs, whilst also developing health-focused risk communication materials for low-literate populations.</p> <p>Please note that I can only attend the GHHIN conference with travel support. I was advised by "GHHIN info" to express the need for travel support even though I am not from a low-income country, but rather a high-income country: Ireland. I am an early-career researcher, developing my research strategy around heat health.</p>	<p><b>State of importance of heat-related morbidity and mortality in a temperate environment through a climate change lens (Dr Christie Godsmark)</b></p> <p>Heat-related morbidity and mortality is not often a focus for temperate environments. Furthermore, heat-related impacts on non-communicable diseases and mental ill-health burdening high-income countries (HIC) is only emerging within the climate change landscape. Considerations of the thermally vulnerable in temperate, HIC generally lean toward the elderly, young and those chronically diseased. Further focus should be given to those living in cities and areas of high social inequality, weaving in issues of social justice and access to adequate health care. A neglected area in temperate, HIC is heat-related occupational health noting that Ireland currently does not have any guidance documents for outdoor workers during extreme heat. An analysis and critical review of Ireland's policy preparedness and capacity of the health sector to respond to increasing temperatures is urgently needed for a proactive approach. Additionally, given the fossil fuel culture of many HIC, attitudes to pro-mitigation behaviour change should be identified and exploited for use as an exemplar dossier globally.</p>
Guigma, Kiswendsida	University of Sussex	Burkina Faso	<p>I am PhD student from Burkina Faso, West Africa based at the University of Sussex, UK. My research is focused on the physical causes and the predictability of heatwaves in the Sahel, one of the hottest region of the globe. My aim is by the end of my thesis to provide information regarding the feasibility of setting a Heat-Health Forecast-Based Actions plan for this region. From this forum, I want to know how similar regions are tackling the heatwave issue regarding both predictability and health outcome aspects. I also expect to network with NGOs and humanitarian organisations as well as scientists working on similar topics.</p>	<p><b>HEAT WAVES IN THE SAHEL: COMPARISON OF THERMAL INDICES AND PHYSICAL PROCESSES</b> Authors: Kiswendsida H. GUIGMA, Martin TODD, Yi WANG The West African Sahel is one of the hottest places of the globe but suffers from an under-documentation of its extreme heat events. The present research work characterizes heatwaves and their underlying physical processes in this region. A new definition of heatwave based on both a fixed and an absolute thresholds is used in order to account for an effective impact on health. In addition, 05 thermal comfort indices are explored. To study physical processes, the Sahel was split into two subregions based on empirical orthogonal functions and only large scale events were considered. In terms of results, nighttime and daytime heatwaves are asynchronous over the Sahel. They are generally short-lasting (03 to 05 day duration), have intensities ranging from +2 to +7°C (deviation from climatology) and a frequency of around 02 events a year. As for the physical processes, they depend on the season, the day period and the subregion under consideration. Warm air advection, sensible warming and greenhouse effect of water vapour are however identified as leading processes.</p>

Guinto, Ramon Lorenzo Luis	Harvard T.H. Chan School of Public Health	Philippines	<p>A Filipino physician with broad interests in global health and sustainable development, Dr. Renzo Guinto is a third-year Doctor of Public Health (DrPH) candidate at the Harvard T.H. Chan School of Public Health.</p> <p>Currently, Renzo is based in the Philippines, conducting his doctoral thesis on building 'climate-smart' local health systems in developing countries, and is also establishing PH Lab, a 'glocal think-and-do tank' for generating innovative solutions for Philippine health, public health, and planetary health. He also serves as consultant for climate and health at Health Care Without Harm-Asia and as sole student member of the Editorial Advisory Board of The Lancet Planetary Health.</p> <p>While in Harvard, Renzo is president and founder of the Sustainability &amp; Health Student Forum at the Harvard Chan School; member of the university-wide Council of Student Sustainability Leaders; and researcher in the Climate, Energy, and Health Program at the Harvard Center for Climate, Health and the Global Environment. Previously, Renzo was a Climate CoLab Fellow at the Massachusetts Institute of Technology; consultant for climate and health at the World Bank; and 2016 New Voices Fellow at the Aspen Institute.</p>	<p><b>Protecting health from heat by building climate-smart local health systems: initial efforts from the Philippines</b></p> <p>In recent years, climate change has been recognized as a critical concern for health systems worldwide. Several frameworks have been proposed to capture the dual role of health systems in both mitigating and adapting to climate change, i.e. becoming 'climate-smart'. However, these frameworks do not particularly give special attention to the health impacts of increased ambient temperature and extreme heat events. This initial exercise aims to examine the usefulness and validity of these frameworks as applied to the local level especially in a developing country such as the Philippines and specifically on addressing the emerging public health issue of heat health. Several frameworks (ex. WHO's Climate-Resilient Health System, World Bank's Climate-Smart Healthcare) were reviewed, and five Philippine municipalities representing different geographies (i.e. island, upland, urban) and climate vulnerability types (i.e. typhoon, flooding, sea level rise) were selected for this multiple case study research.</p>
Gurung, Naba Raj	United Hands for Change (UHFC)	Nepal	No bio	No Abstract
Harris, Margaret	Independent	Hong Kong	<p>Margaret Harris Cheng who was born in Australia but now lives in Hong Kong, has spent most of her working life as a communicator, dealing with outbreaks and emergencies in Asia, Africa and Europe. She first trained to be a medical doctor but then became a journalist, working as a foreign correspondent in Europe and Asia for the Sydney Morning Herald/Melbourne Age and later medical editor for the South China Morning Post. During the 2003 SARS outbreak in Hong Kong she provided information about the protective strategies and behaviours people needed to adopt via a daily column. It was then she decided to study public health in order to apply the skills she had developed working as both a doctor and a journalist to public health risk communication. Since then Margaret Harris Cheng has spent much of her time working in risk communication for the World Health Organization and UNICEF, mostly in Asia, Africa and Europe, including during the West African Ebola outbreak in 2014-2016, the Korean MERS outbreak and the global Zika virus outbreak. During 2017 she worked with a group of expert emergency risk communicators to search for evidence supporting principles of effective risk communications and wrote the first evidence-based guidance on emergency risk communication. This guidance, 'Communicating Risk in Public Health Emergencies' was published in January 2018.</p>	No Abstract
He, Yiling	Sun Yat-sen University	China		No Abstract
Herrera, Natalia	SERVICIO METEOROLÓGICO NACIONAL	Argentina	<p>I am Natalia Herrera (36 years old) from Argentina. I am graduated in meteorology in 2008 and i work in the National Meteorological Service since 2009, in climate services. I work with seasonal forecasts (temperature and precipitation), and also with climate extreme indices, heat waves, cold waves, etc. The National Meteorological Service and the Ministry of Health and Social Development have been working together in a research about heat wave mortality. Such study was used to develop an early warning system that was implemented last year for the first time. Fortunately, it has been a successful experience. You could find a technical note about this system in <a href="http://repositorio.snm.gov.ar/handle/20.500.12160/772">http://repositorio.snm.gov.ar/handle/20.500.12160/772</a>. I am interested in know experiences in other countries about mortality and heat/cold wave, and to know about other early warning systems about health and weather.</p>	<p><b>EARLY WARNING SYSTEM OF HEAT WAVES AND HEALTH IN ARGENTINA</b></p> <p>Natalia Herrera1, Francisco Chesini2, M. Skansi1, M. Berón1, C. Campetella1, A. Cejas1, J. Chasco1, E. de Tito2, M. Gatto1, M. Saucedo1 and M. Suaya1</p> <p>1Servicio Meteorológico Nacional 2Ministerio de Salud y Desarrollo Social</p> <p>The Heat Waves are a natural threat to human health. In a scenario where extreme weather events will be more frequent and intense - especially heat waves- it is essential to have an early warning system, which can warn the population about the arrival of heat waves and to health systems, in order to implement health promotion and protection policies. The National Meteorological Service and the Ministry of Health and Social Development have been working together in a research about heat wave mortality. Such study was used to develop an early warning system that was implemented in the summer 2017-2018 for the first time in Argentina. This system works in an automated way for 57 localities in the country, issues a daily alert. The objective is that both the population and civil protection organizations can take appropriate prevention, mitigation and response measures at each level of alert.</p>
Ho, Janice	CCOUC	Hong Kong	No bio	No Abstract
Honda, Yasushi	University of Tsukuba	Japan	<p>Physician epidemiologist, a lead author of the IPCC AR4 (Asia) and AR5 (Human health), and a convening lead author of IPCC SREX.</p>	<p><b>Community Trial on Heat Related-Illness Prevention Behaviors and Knowledge for the Elderly</b></p> <p>Yasushi Honda</p> <p>This study aims to explore whether broadcasting heat health warnings (HHWs), to every household and whether the additional home delivery of bottled water labeled with messages will be effective in improving the behaviors and knowledge of elderly people to prevent heat-related illness. A community trial on heat-related-illness-prevention behaviors and knowledge for elderly (65-84 y.o.) was conducted in Nagasaki, Japan. Five hundred eight subjects were selected randomly from three groups: heat health warning (HHW), HHW and water delivery (HHW+W), and control groups. Baseline and follow-up questionnaires were conducted in June and September 2012, respectively. Of the 1524 selected subjects, the 1072 that completed both questionnaires were analyzed. The HHW+W group showed improvements in nighttime AC use, water intake, cooling body and reduced activities in heat compared with the control, while the HHW group improved hat or parasol use. An additional effect of household water delivery was observed in water intake and cooling body behaviors. HHW and household bottled water delivery improved heat-related-illness-prevention behaviors.</p>
Hondula, David	Arizona State University	USA	<p>David Hondula is an assistant professor at Arizona State University's School of Geographical Sciences and Urban Planning. His research examines the societal impacts of weather and climate with an emphasis on extreme heat and human health. Much of his work includes statistical analysis of health and environmental data sets to improve understanding of the impact of high temperatures on human morbidity and mortality, especially within urban areas. Hondula is also engaged in quantitative and qualitative field work to learn how individuals experience and cope with extreme heat. Hondula serves as a member of the core leadership team for the City of Phoenix (USA) HeatReady Initiative, which aims to build a replicable model for comprehensive management and evaluation of municipal efforts to address urban and extreme heat. At ASU, Hondula is part of the leadership teams for the Urban Climate Research Center and Central Arizona-Phoenix Long Term Ecological Research Program.</p>	<p><b>HeatReady Phoenix: A comprehensive framework for addressing extreme heat</b></p> <p>David M. Hondula, M. Hammett, P.M. Chakalian, M. Guardaro, M. Hartman, L.C. Kurtz, K. Peters, R. Quay, C. Redman, C. Stotler, K. Waller, A. Zafaranlou</p> <p>In 2018, the City of Phoenix identified heat as a pressing challenge to address through the Bloomberg Philanthropies U.S. Mayors Challenge. This poster introduces the city's HeatReady Framework, which aims to provide a structure for how cities can identify, prepare for, mitigate, track, and respond to urban heat dangers. This poster also describes the city's approach to the Champion Cities six-month "Test, Learn, and Adapt" process in which city staff prototyped critical components of the HeatReady concept. The project team benefited from the use of low-cost prototypes that allowed for quicker iteration and more authentic feedback than traditional methods. The City of Phoenix is now completing its first ever HeatReady Evaluation, with a focus on infrastructure, education, housing, and emergency preparedness. Phoenix pilot projects will result in the generation of how-to guides that will be available in an open access repository where cities who are working diligently on extreme heat mitigation can collaborate.</p>
Huang, Cunrui	Department of Health Policy & Management School of Public Health, Sun Yat-sen University	China	No bio	No Abstract
Ismahila, Koumare	Mali Meteorological Agency (MALI-METEO)	Mali	ISMAHILA KOUMARE is a Forecaster in Mali-Météo.	I'm very interesting in heat health, because my country is exposed to the heat wave. For example in 2015 and 2018 during the period of heat wave, many people are dead because of heat. I hope to get many things from this forum.

Issoufa ali, Fouad	Agence Nationale de l'aviation Civil et de la Meteorologie	Comoros	Issoufa Ali FOUAD from the Comoros is an Environmentalist, with experience in DRR and Climate Services.	No Abstract
Ito, Kazuhiko	New York City Department of Health	USA	Kazuhiko Ito, Ph.D., is the Executive Director of Environmental Research at Bureau of Environmental Surveillance of Policy, New York City Department of Health and Mental Hygiene. His epidemiologic research characterizes the adverse health impacts of weather and air pollution.	No Abstract
Janicot, Serge	IRD	France	I am a trained climatologist and currently research director, worked at Météo-France and then at the CNRS before joining the IRD (Research Institute for Development). I am pursuing research on climate variability in West Africa, and more recently on the detection of climate change and its impacts on agriculture and health. I have published a hundred scientific articles in international journals and supervised some twenty PhD and post-doctoral students. I coordinated on the occasion of COP21 a book published by the IRD "Climate change: what challenges for the South?". I am one of the main bearers of the AMMA program (African Monsoon Multidisciplinary Analyses, 2002-2020), a program recognized by the international community as the flagship scientific program in Africa on the African monsoon, its variability and its societal impacts. I am currently running a project funded by the French ANR on the establishment of a warning system for heat waves in the Sahel, with weather agencies in Senegal and Burkina. In this forum I hope to share respective experiences with other participants on heat wave early warning systems and communication with society and policy makers.	<b>The ACASIS project on heat waves and their health impact in the Sahel</b> Authors: S JANICOT, R LALLOU, O NDIAYE, P YAKA, R ROEHRIG, B POHL, F HOURDIN, F GUICHARD While the public health impacts of heat waves have been analyzed in developed countries, few actions have been implemented in developing countries, where the climate is warmer and the adaptive capacity weaker, to detect these heat waves and assess their health impacts. In West Africa however climate projections for the 21st century indicate that such episodes will most likely increase in frequency and intensity. In this context, the main objective of the ACASIS project was to set up a pre-operational system of warning of heat waves in Sahel adapted to health risks for the populations. It is focused on Senegal and Burkina where operational forecasting services already deliver products dedicated to health risks, and where several observatories for demographic and health monitoring have been operating for several decades. To carry out this project, an international and multidisciplinary consortium was formed bringing together climatologists, climate modelers, meteorologists, biostatisticians, demographers, epidemiologists, physicians and geographers from France, Senegal and Burkina.
Jay, Ollie	The University of Sydney	Australia	Ollie Jay is an Associate Professor in Thermoregulatory Physiology, and Director of the Thermal Ergonomics Laboratory, in the Faculty of Health Sciences at the University of Sydney, and Lead Researcher of the Charles Perkins Centre (CPC) Research Node on Climate Adaptation & Health. His research activities primarily focus on developing a better understanding of the physiological and physical factors that determine human heat strain and the associated risk of heat-related health problems during work and/or physical activity, as well as among vulnerable people during heat waves.  To date, he has a total of 110+ peer-reviewed research publications (75+ as senior author) and has received funding from organisations such as National Health & Medical Research Council (NHMRC), MS Research Australia, and the NSW Office of Environment & Heritage. He is also an Associate Editor for Journal Science and Medicine in Sport, and an Editorial Board member for Journal of Applied Physiology, and Medicine and Science in Sports and Exercise (MSSE). In 2017, he was the recipient of a 2-year University of Sydney Research Accelerator (SOAR) Fellowship, and the University of Sydney Vice-Chancellor's Award For Excellence: Outstanding Research and Teaching.	<b>Should electric fans be used in a heatwave?</b> Ollie Jay, Nathan Morris, Tony Capon University of Sydney, Australia  Electric fans offer a cooling strategy with a 50-times lower electricity requirement than Air-Conditioning. Yet despite no supporting evidence, public health agencies state that fans should be turned off above ~35°C as they "speed the onset" of heat exhaustion. We have recently published a series of laboratory-based studies showing that fan use is clearly beneficial for young adults, but detrimental for older (65+y) adults, in hot/humid (42°C, 50%RH) heatwave conditions. Fans are also detrimental for young adults in very hot/dry (47°C, 10%RH) conditions.  We have subsequently developed predictive models for young and older adults illustrating the combinations of air temperature and humidity at which fans are beneficial. A subsequent global analysis of historical weather data indicates fans can be uniformly recommended during heatwaves across most regions of North America, South America, Europe, Central/Eastern/South-Eastern Asia, and Southern Africa. Fans should not be routinely recommended during peak heatwave conditions in the Southwestern US, Middle-East, Pakistan, and the far north of India and Bangladesh.
Jones, Hunter	NOAA Climate Program Office (UCAR Affiliate)	USA	Hunter Jones is a Climate and Health Projects Manager within the National Oceanic and Atmospheric Administration (NOAA) Climate Program Office (CPO) serving as a UCAR CPAESS Affiliate. He is currently leading several local pilots of the National Integrated Heat Health Information System (NIHHIS) along the US Mexico border, and in the Northeast, to improve climate and health information for enhanced heat-health resilience. He is a founding member of the Global Heat Health Information Network (GHHIN), serves on its steering committee, and is working to plan the first GHHIN Global Forum in Southeast Asia. Hunter Jones is a Climate and Health Projects Manager within the National Oceanic and Atmospheric Administration (NOAA) Climate Program Office (CPO) serving as a UCAR CPAESS Affiliate. He is currently leading several local pilots of the National Integrated Heat Health Information System (NIHHIS) along the US Mexico border, and in the Northeast, to improve climate and health information for enhanced heat-health resilience. He is a founding member of the Global Heat Health Information Network (GHHIN), serves on its steering committee, and is working to plan the first GHHIN Global Forum in Southeast Asia.	No Abstract - Session Chair - Event Co-Organizer
Klassen, Sarah	The Start Network		As a Crisis Anticipation Technical Advisor within the Start Fund, my role is to support Start Network members to act in anticipation of crises. I work with forecasting information providers to improve the robustness of the Start Network's forecasts, and with Start Network members on the ground to analyse and act on escalating risks. I initially joined FOREWARN- the technical advisory group that supports the Start Fund's Crisis Anticipation Window in 2016, when I was working in the humanitarian context analysis and scenario development team at World Vision UK.	No Abstract
Kolli, Rupa Kumar	World Meteorological Organization	Switzerland	Rupa Kumar Kolli is the Chief of World Climate Applications and Services Division in WMO Secretariat, Geneva, Switzerland. His responsibilities include supporting the implementation of the World Climate Services Programme (WCSP), enhancing national capacities, coordinating regional and global networks of climate service providers, user liaison in climate-sensitive sectors, and research-operations linkages. He made significant contributions to the development of Regional Climate Centres (RCCs) and Regional and National Climate Outlook Forums (RCOFs/NCOFs), which are recognized to be key operational elements of the Global Framework for Climate Services (GFCS) which he actively supports as a WMO priority, mainly focusing on the development of its Climate Services Information System (CSIS) pillar including through the implementation of externally funded projects focusing on climate services at the regional and national scales. Dr Kolli also leads professional support to the WMO Commission for Climatology, in the focus areas of "CSIS Operations" and "Climate Services for Societal Benefits", as well as the overarching implementation coordination of the CSIS. Rupa Kumar has earlier worked at the Indian Institute of Tropical Meteorology (IITM), Pune, India, from 1982 to 2006, and was the Head of IITM's Climatology and Hydrometeorology Division before moving to join WMO. Rupa Kumar co-authored a book on "Climates of South Asia" published by John Wiley in 1997, published a number of research papers on seasonal prediction and climate change for the Indian monsoon. He contributed as one of the Lead Authors on regional climate projections for the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) released in 2007. Rupa Kumar received his Ph.D. (1981) and M.Sc. (1976) degrees in Meteorology from Andhra University, Visakhapatnam, India.	No Abstract

Kosatsky, Tom	British Columbia Centre for Disease Control	Canada	Tom Kosatsky is Medical Director, Environmental health Services at the BC Centre for Disease Control, Vancouver, Canada (www.BCCDC.ca) and Scientific Director of the Canadian National Collaborating Centre for Environmental Health (www.NCCEH.ca). An occupational physician, Tom has worked at the CDC, WHO, McGill University, and Montreal Public Health Department. He has been involved in many research and action programs in the broad area of climate change and health.	No Abstract
Kovats, Sari	LSHTM	UK	Sari Kovats is an Associate Professor in the Department of Public Health, Environments and Society at the London School of Hygiene and Tropical Medicine, the leading research institution on public health in the UK. Since 2014, Dr Kovats has been the Director of the NIHR-funded Health Protection Research Unit (HPRU) in Environmental Change and Health. This 6-year research programme will undertake world leading research on sustainable development and public health including climate change impacts, adaptation, and the health benefits of low carbon development, in partnership with Public Health England. Sari has a PhD in environmental epidemiology and her research interests are primarily on methods to assess the health impacts of climate change. She has worked on a range of (observational) studies on climate/weather to quantify their impacts on health, and developed frameworks for the assessment of future climate change impacts on human health. Sari was co-lead for the chapter on People and the Built Environment of the evidence report for the UK's Second Climate Change Risk Assessment. Sari was Coordinating Lead Author for the multi-disciplinary regional chapter on Europe in the Fifth Assessment Report for the Intergovernmental Panel on Climate Change (IPCC). She has also co-authored several key scientific assessments on climate change and health at national and regional levels. Sari is a member of Editorial Board of Global Environmental Change. She has provided expert advice on climate change, climate variability, global environmental change and health to WHO, WMO, Defra, the Department of Health, Public Health England, Greater London Authority.	No Abstract - Session Chair
Kysely, Jan	Institute of Atmospheric Physics CAS	Czech Republic	No bio	<b>The 2015 heat waves in the Czech Republic and their mortality impacts</b> Ales Urban, Hana Hanzlikova, Eva Plavcova, Jan Kysely We evaluate heat waves in summer 2015 and their impacts on mortality in the Czech Republic (Central Europe). The summer of 2015 was record-breaking in the total duration of heat waves as well as their total heat load. Consequently, the impact of the major heat wave in 2015 on the increase in excess mortality relative to the baseline was greater than during the previous record-breaking heat wave in 1994 (265% vs. 240%). Excess mortality was comparable among the younger age group and the elderly in the 1994 major heat wave while it was significantly larger among the elderly in 2015. The cumulative excess heat factor explains the magnitude of excess mortality during a heat wave better than other characteristics such as duration or average daily mean temperature. Comparison of the mortality impacts of the 2015 and 1994 major heat waves suggests that the recently reported decline in overall heat-related mortality in Central Europe has abated and simple extrapolation of the trend would lead to biased conclusions even for the near future.
Lalou, Richard	IRD - French National Research Institute for Sustainable Development	France	As a social scientist, I have conducted research for over 20 years on health care practices and systems in West Africa. I led several research projects on malaria and HIV/AIDS control in West Africa and carried out research on the implementation, evaluation and sustainability of public health interventions. I am currently focusing on the impacts of climate change (extreme heat events) on human health. Since 2010, my research has addressed vulnerabilities and adaptive capacities of rural societies to climate change in the Sahel. It aims to: i) characterize the relationship between temperature and morbidity/mortality through modeling, and ii) analyze the vulnerabilities and adaptive capacities of individuals and systems of health. I explore whether present adaptations can effectively predict the capabilities that will be useful for future climate change adaptation. I have carried out more than 15 surveys in Africa and was involved in the management of a population and health observatory in Senegal. I am interested in the improvement of information systems and alert services. I expect the Forum to engage the expert community to improve information systems and awareness in Africa, where extreme heat is a killer still silent.	<b>Heat-related mortality in the Sahel. Who is vulnerable to short- and long-term heat exposures?</b> R. Lalou, D. Diene Extreme temperatures are known to be associated with excess mortality, especially in North countries. Less is known about the vulnerability of African populations to extreme heat. We aim to analyze the differentiated effects of extreme heat on people's health by duration of exposure and level of individual vulnerability. Data is drawn from an observatory in Senegal. The analyses are based on a comparison between Generalized Linear Models with natural cubic splines and Generalized Additive Models (GAM). The duration of exposure is addressed through both a daily and monthly count of deaths. Temperature has an effect on mortality for both short- and long-term exposures. The GAM model shows a U-type relationship between temperature and mortality over an extended period of exposure, with a mean temperature threshold of 30 °C. High mean temperatures are dangerous in the short term with a threshold of 30.2° C. When the temperature is above the threshold the mortality rate is increased by 3.7%. Under-five health is affected by short-term heat exposure. Elderly people's mortality risk increases for long-term heat exposure.
Lam, Holly	CCOUC	Hong Kong	No bio	No Abstract
Lee, Jason	National University of Singapore	Singapore	Dr. Jason Lee is an Associate Professor in Yong Loo Lin School of Medicine at the National University of Singapore. Prior to that, he directed the Human Performance Programme at the DSO National Laboratories. He obtained his PhD in Exercise Physiology under sponsorship from the UK Overseas Research Scholarship and Faculty Studentship. Jason is a Fellow of the American College of Sports Medicine. Tapping on his experience as a Commando Officer in the Singapore Armed Forces and domain knowledge, he serves in various national and international panels related to human performance and safety. Jason's main research interests are in fluid balance, thermoregulation and mitigation strategies for improving human performance. He studies the physiological demands associated with heat stress and how humans adapt to ensure optimal performance and survival. A key outcome of his research is the formulation of a holistic heat management system. This is achieved through profiling the associated heat strain in humans under various settings, formulating and evaluating heat mitigation strategies (physical conditioning regimes, heat acclimatisation, pre-activity cooling, work-rest cycles and hydration) and finally translating them into policies such as training directives, training safety regulations and lesson plans. Knowledge gained from his research has also benefitted several agencies in formulating performance and safety guidelines and policies.	<b>Thermal impact on human performance and health</b> Excessive heat stress compromises endurance performance and increases the risk of heat injury. The rapid rise of body deep temperature when working in the heat often results in impairment of exercise capacity and performance. The debilitating effects of heat strain on humans can be counteracted by various heat mitigation strategies. However, current understanding in this field of research is based largely on data collected from non-heat acclimatised cohorts. Therefore, its validity remains unanswered for tropical natives. In this talk, I will provide an overview on the principles of attenuating heat strain and practical recommendations to optimise work productivity and health in the heat.
Lee, Ji-Sun	KMA	South Korea	Ji-Sun Lee is currently a researcher at National Institute of Meteorological Sciences (NIMS), which is part of Korea Meteorological Administration. She is a Ph. D candidate in atmospheric science at Pukyong national university in Rep. of Korea. She main area of expertise is forecasting of thermal index and evaluating of heat-stress impact for human. She developed the Accumulated Heat-stress Index (AHI) based on time-weighted function and the real-time forecasting system of thermal indices over Korea (PT, HI, WBGT, Tmax) based on UM-LDAPS of 1.5km resolution. Recently, the forecasting system of PT and excess mortality rate on urban residential and forest area using BioCAS of 10m resolution is being developed.	<b>Heat-stress and health impact assessment of building scale by land cover based on BioCAS-PT</b> . Ji-Sun LEE, Kyu Hang Kim, Changbum Cho, Britta Janicke, Misun Kang, Miloslav Belorid, Jong-Chul Ha. National Institute of Meteorological Sciences, South Korea. Heat stress is evaluated differently not only by temperature(TA) but also by humidity, solar irradiation, and individual activity. In this study, we simulated the temperature and the mean radiant temperature of 10m spatial resolution considering the topography, land use, height of buildings and vegetation using BioCAS. And these data were combined with the heat budget model of the human body to calculate the perceived temperature(PT). Then, the thermal environment of the residential area and the forest area by the administrative district was compared. In addition, we analyzed the rate of excess mortality according to the intensity and duration of the heatwave using the case-based vulnerability analysis method. First, the RMSE of our system was evaluated that TA was 1.44°C and PT was 1.58°C during the heat-wave days from 2000 to 2017. The maximum difference in TA and PT between the standard observatory and the administrative district was 1.1°C and 4.1°C, respectively.
Leung, Czarina	Chinese University of Hong Kong	Hong Kong	I am an academic-intensive care physician-public health student (MPH at Johns Hopkins University). For the past 17 years, I have had some field experiences on providing healthcare and health worker training that served vulnerable communities internationally. I contributed as a co-author on a chapter on heat health in the upcoming Adaptation Report. I am particularly interested in learning about and participating in heat related public health interventions and research that address the needs of vulnerable populations.	No Abstract

Li, Tiantian	National Institute of Environmental Health, China CDC	China	Tiantian Li, PhD, is the director of Department of Environmental Health Risk Assessment, National Institute of Environmental Health (NIEH), Chinese Center for Disease Control and Prevention. Her major research interests include environmental health risk assessment, air pollution, climate change and health.	Extreme heat events have recently become more frequent and represent an increasing risk of damage to public health. However, the existing prediction of heatwave related health effects has limited representativeness and verification. Our study addressed the prediction of heatstroke occurrences based on three years' data of typical cities of hot temperature in China, and examined the importance ranks of model parameters including meteorological and socioeconomic status (SES) factors. The results show that meteorological factors contributed the most to model estimation of the parameters evaluated, and SES parameters, such as the search index, were also important indicators of heatstroke prediction. The model had a satisfying performance compared to traditional linear regression models. The model established in our study can be further applied to extreme weather-related impact research and reduce economic loss due to public health expenses.
Li, Walton	Greenpeace East Asia	Hong Kong	I am Walton Li, Energy and Climate Campaigner at Greenpeace East Asia (Hong Kong). Advocating for Climate Change is not enough to minimise its impacts on our lives, Climate Change adaptation must be incorporated into governments' long-term policy. Therefore, I hope I get to know more about how Climate Change is affecting human's health and how we can reduce this health risk.	
Liao, Wenmin	Department of Health Policy & Management School of Public Health, Sun Yat-sen University	China	No bio	No Abstract
MacDonald, Melissa	Environment and Climate Change Canada	Canada	Melissa MacDonald is a Project Meteorologist within the Meteorological Service of Canada (MSC), Environment and Climate Change Canada's (ECCC) Health and Air Quality Services program (HAQS). Melissa is the program Heat Lead under HAQS, working with multiple levels of government in public health and emergency services under the modernization and enhancement of ECCC's Heat Warning program. ECCC is working towards implementation of evidence-based heat warning criteria and enhanced service as part of a chain of actions to reduce heat-health risk across Canada. Melissa has experience working with international working groups aimed at sharing and developing heat-health initiatives. The GHIN Global Forum and Network will offer ECCC opportunities to learn from other nations and share Canada's heat-health and modernized heat warning program experiences.	<b>Development and Implementation of an Impact-Based Heat Warning and Information Service for Canada</b> Author: Melissa MacDonald Climate change and variability are affecting the health and well-being of people around the globe and these risks are increasing. In Canada, the health of Canadians is being impacted by climate change through extreme heat events among others. Prior to 2015, Environment and Climate Change Canada (ECCC) used heat warning criteria based solely on climatological data. With the new WHO and WMO joint guidance on warning system development to reduce heat health risk and available health analysis, ECCC is modernizing their Heat Warning criteria to reflect a standardized service with regional character. This presentation will detail how historical climate data and GIS mapping have been used to develop heat warning regions, supported by health expertise, to develop evidence-based heat warnings across Canada. Both the national and regional perspective in the implementation of the new impact-based heat warning service will be highlighted. Details on the client-focused service, the importance of relationship development, and how lessons learned have shaped the ongoing improvement of the service will be shared.
Magotra, Rohit	Integrated Research & Action for Developemnet, IRADe	India	Mr. Rohit Magotra is currently working as Deputy Director of IRADe, has a masters in Environmental Science with an advanced degree in Management from IIFM, Bhopal, India. He has over 16 years' international experience working on thematic of Environment & Climate Change, Climate Resilience, Natural Resource Management & Sustainable Development, Disaster Risk Reduction, Disaster management and mitigation strategies, vulnerability assessment, assessment & monitoring, strategies formulation, methodology development policy research & advocacy and ICT4 Development in South Asia. He has expertise in developing and conducting national training courses, managing and coordinating regional projects to central, state and local level governments and International organizations and Non-Government Agencies in strategic and programme planning and capacity development. He engaged in past with multi-donor projects and programmes of USAID, Oxfam GB, World Bank, United Nations Development Programme (India); Ministry of Environment & Forests, India; Ministry of Urban Development, India; GTZ, International Development Research Centre, Canada; Food & Agriculture Organization etc. He has authored/co-authored/contributed several papers and publications.	spatially differentiated adaptation plans and execution in India and South Asia. With climate change, average temperatures, frequency and severity of heat waves are predicted to increase in India & South Asia, with rise in death rates. There is little understanding and quantification of impact on affects health, work productivity and livelihoods of socio-economically marginalized population. This requires multi-disciplinary research and is critical for formulating a Heat Stress Action Plan (HSAP). The study investigates the implications of extreme heat on health and livelihoods of vulnerable groups-occupational workers, women and senior citizens- poverty, dwellings and poor sanitation conditions. The study gathers evidence to develop spatially differentiated adaptation plans and execution in India and South Asia. It aims to improve people's resilience to heat stress, reduce cost of adaptation and impacts on the health, improve capacity of city officials, doctors and health officers, improve communication systems within city that may be replicated in other cities, and increase awareness among policy-makers.
Man, Asta	CCOUC	Hong Kong	No bio	No Abstract
Mason, Kerry	Forensic Science SA	Australia	I am working as a Senior Forensic Toxicologist in Adelaide, South Australia. In 2009 we had a heat event that resulted in a significant number of excess deaths and we were underprepared. The toxicological findings of these cases were similar to non-heat related deaths. This prompted a collaboration with John Nairn (BOM) and we determined that the excess heat factor (EHF) correlated with mortality for this event. Since 2009 we have had a number of heatwaves and we now monitor the EHF to indicate the potential severity of the heat event and our emergency response. I have an ongoing research interest in heatwaves in regard to mortality and morbidity, preparedness and mitigation.	No Abstract
Matthews-Trigg, Nathaniel	City of Auburn Emergency Management & Washington Service Corps	USA	Nathaniel Matthews-Trigg, MPH is a climate change & health researcher, and disaster educator with the City of Auburn Emergency Management Office and Washington Service Corps, in the United States. Nathaniel graduated from the University of Washington Department of Global Health with a Master of Public Health and a Graduate Certificate in Climate Change & Health (GCeCCH) from the University of Washington Center for Health & the Global Environment. Nate interned with the World Health Organization & World Meteorological Organization Joint Office for Climate Change & Health where he helped develop GHIN and carryout research on global HHAPs. Nate has worked as a consultant for Chemonics/USAID ATLAS and Public Health - Seattle & King County on HHAPs. Nate aspires to work in the field of public health preparedness with a focus on climate change and health adaptations. At the GHIN Forum, Nate hopes to network with fellow heat-health researchers, practitioners, and decision-makers, and learn about new and innovative developments in extreme heat research, mitigation, preparedness, and response.	<b>Title: Local Emergency Management Planning for Extreme Heat Events in Auburn WA, USA.</b> Author: Nathaniel Matthews-Trigg, MPH Description: Extreme heat and wildfire smoke are growing hazards in the Pacific Northwest United States. Auburn Washington, a small town of 70,000 residents located 48km South of Seattle, experienced the hottest July (avg Tmax) and smokiest August on record, this last summer. The City of Auburn Emergency Management Office (EM) is looking to share their current heat response plan to get expert input and feedback, and incorporate the latest climate science into their upcoming plan update. This poster will share the current City of Auburn EM heat plan, provide background and context, and offer discussion prompts aimed at generating conversation and ideas that can inform the City of Auburn's EM approach to extreme heat prevention, mitigation, and response.
Matzarakis, Andreas	Research Center Human Biometeorology, German Meteorological Service	Germany	Prof. Dr. Andreas Matzarakis is leading since August 2015 the Research Center Human Biometeorology of the German Meteorological Service in Freiburg and responsible for the Heat Health Warning System in Germany. Appointed as extraordinary Professor at the University of Freiburg since October 2006. He received a degree in Meteorology in 1989 from the Physics Department, Ludwig-Maximilians-University of Munich in 1989 and a Ph.D. degree in Meteorology and Climatology from the Aristotle University of Thessaloniki. From 1995 to 2001 he was a scientific assistant at Meteorological Institute of the Albert-Ludwigs University of Freiburg and earned his habilitation about the "thermal component of the urban climate" in 2001. He is appointed to Professor at the University of Freiburg in October 2006. His research is mainly focused on urban climatology, human-biometeorology, tourism climatology and climate impact research. Several models and tools in applied climatology and biometeorology i.e. RayMan Model, SkyHelios Model and CTIS (Climate-Tourism/Transfer-Information-Scheme) have been developed by him.	No Abstract
Mavalankar, Dileep	Indian Institute of Public Health, Gandhinagar	India	I a public health expert. Director of a School of Public Health - the first public health focused university of India. We have developed south Asia's first Heat Action Plan in City of Ahmedabad. This plan is showing results in terms of reducing mortality in the city during peak heat waves. This plan is now being scaled up in many cities and states of India.	This poster will depict the <b>Development of Ahmedabad Heat Action Plan</b> - south Asia's first city based heat action plan. This plan was started in 2013 and has been implemented in the city every year since then. The heat action plan is a partnership effort between Ahmedabad Municipal Govt., IIPHG, Indian Meteorological Dept. and NRDC. This plan has helped reduce the daily mortality during the peak of heat waves after the plan was implemented. The mortality is reduced by 30 to 40%. This data will be presented. We will also discuss the actions taken in the heat action plan and what are the challenges. It will help other countries and cities to develop similar action plans to protect the people from heat waves.

<p>McGregor, Glenn</p>	<p>Durham University</p>	<p>UK</p>	<p>Glenn's research explores the relationship between atmospheric circulation and surface environmental processes and the extent to which weather patterns, air mass types and modes of atmospheric circulation (e.g. ENSO, NAO) might influence the intra-seasonal to inter-annual variability of health outcomes. This interest manifests itself most strongly in the field of Biometeorology, the discipline concerned with understanding the relationship between atmospheric processes and living organisms. Within this field Glenn is particularly interested in the impacts of extreme heat and cold events on human health (mortality and morbidity) and the extent to which short to medium term weather/climate forecasts can be used in heat and cold event risk management. Glenn is actively involved in climate and health research and has recently published a number of useful overviews on 'heat and health', 'humidity a primer for public health researchers' and 'El Nino Southern Oscillation and Health: an overview for climate and health researchers'. Glenn is former WMO Lead Expert of Climate and Health, previous Chief Editor of the International Journal of Climatology and President of the International Society of Biometeorology and a past and current (6AR) IPCC Working Group II lead author. Glenn was also lead editor for the widely consulted WMO/WHO publication 'Heatwaves and Health: Guidance on Warning System Development'</p>	<p>No Abstract - Session Chair</p>
<p>Mostafa, Amira</p>	<p>Egyptian Meteorological Authority (EMA)</p>	<p>Egypt</p>	<p>I'm a Meteorologist, with a background in Biophysics. My research focuses on heat health science and climate change impacts on health. The regions of interest for my research include Africa, with special focus on Egypt. That is why I'm very interested in heat health since Egypt is considered one of the most vulnerable countries to rising temperatures and their adverse effects on health, with recently more occurrences of severe heat waves. I see GH-HN as a potential opportunity to engage with experts, scientists, and policymakers and to share knowledge and experiences, which will enrich and enhance my research ideas and practices and help take correct actions to mitigate the heat deleterious impacts.</p>	<p><b>Diagnostic Study on Severe Heat Event over Egypt: A Case of Summer 2015</b> Amira N. Mostafa, Endalkachew Bekele, Wassila Thiaw, Ashraf S. Zakey, M. M. Abdel Wahab In this study, we examined the heat wave that hit Egypt in 2015 and persisted from late July through end of August. The heat wave event resulted in the death of 87 and led to the hospitalization of 1205 people due to extremely hot and humid weather conditions. On August 7, 2015, 62% of the recording stations had temperature values greater than 40°C and 31% of the stations had heat index values greater than 40°C. This specific heat wave event was unusually linked to the heat event in Europe of same period. Normally, excess heat events in Egypt are linked to anomalous conditions in the Indian Monsoon system. Model forecast verification skills were computed for selected global models (European Centre for Medium-Range Weather Forecasts, National Centers for Environmental Prediction, and UK Met Office). The three models underestimated the heat event in its beginning, and then the skill improved through the end of the event. Generally, the UK Met Office showed better skill among the three models in predicting this event, followed by and European Center model.</p>
<p>Mücke, Hans-Guido</p>	<p>German Environment Agency</p>	<p>Germany</p>	<p>Air quality and health scientist and manager of the WHO Collaborating Centre for Air Quality Management and Air Pollution Control at the German Environment Agency, Berlin/Germany. Responsible for the co-operation with the WHO European Centre for Environment and Health, Bonn office, and partners of the 53 Member States of the WHO European Region in the field of air hygiene and climate change.  Climate change and health expert since the establishment of the German Climate Change Adaptation Strategy in 2008. Supervisor to national projects, co-partner in and advisor to respective projects in this field. Invited speaker at the EU side event of the COP23 in Bonn December 2017. Co-author of the Recommendations for Action Heat Action Plans to protect human health in Germany (2017; <a href="https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Klimaschutz/hap_handlungsempfehlungen_en_bf.pdf">https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Klimaschutz/hap_handlungsempfehlungen_en_bf.pdf</a> )</p>	<p><b>Recommendations for the compilation of heat-health action plans in Germany</b> Wolfgang Straff and Hans-Guido Mücke for the National Ad-Hoc Working Group 'Health adaptation to Climate Change' As in recent years, heat can result in adverse health effects and heat waves can pose a problem for the public health sector. Aside from climate action measures, undertaking joint efforts to prevent the heat impacts on the population, vulnerable groups in particular, can help counteract this. Action plans would be suitable for this purpose to efficiently communicate the health impacts of climate change, e.g. of heat extremes, and to achieve an appropriate individual risk behaviour and to establish preventive options for action. The action plans should contain behavioural and setting-based preventive measures in all fields of prevention. These recommendations should be viewed as a uniform basis for drawing up and establishing coordinated and practical heat action plans in Germany directed at the level of the Federal States and municipalities. Drawing up heat action plans can significantly contribute to an overarching climate change adaptation strategy in the health sector.</p>
<p>Murray, Virginia</p>	<p>Public health England</p>	<p>UK</p>	<p>Professor Virginia Murray is the Head of Global Disaster Risk Reduction for Public Health England and is co-chair of the recently developed WHO Thematic Platform Health and Disaster Risk Management Research Network, member of the Integrated Research on Disaster Risk (IRDR) scientific committee, co-sponsored by the International Science Council (ISC) and the United Nations Office for Disaster Risk Reduction (UNISDR) and Co-Chair of IRDR's Disaster Loss Data (DATA) amongst other commitments. She is a Visiting/Honorary Professor at several universities including University College London (2013) and at the United Nations University International Institute for Global Health (2017) and has published widely.</p>	<p>No Abstract - Keynote Speaker</p>
<p>Nairn, John</p>	<p>Bureau of Meteorology Australia</p>	<p>Australia</p>	<p>Since joining the Bureau in 1980 John has pursued client focused deployments in Antarctic operations, Australian severe weather, specialised operations at Sydney Airport, Sydney Olympic and Paralympic Games, and multiple interstate bushfire emergencies apart from operational forecaster roles in Northern Territory, Victoria, NSW and South Australia. John's has extended South Australian services to include embedded fire and emergency services, and targeted briefings for industry (including energy and wine). John has developed the Bureau's national heatwave service and is collaborating with international heatwave service partners. National and international partnerships have benefited from a Churchill Fellowship on heatwaves, visiting the UK, Germany and USA in 2013. John has an MBA, Dip Ed and a BSc Hon in Meteorology and Oceanography, has been a member AICD and is undertaking a part time PhD (heatwaves).</p>	<p><b>Performance of Excess Heat Factor severity as a heatwave health impact index.</b> John Nairn, Bertram Ostendorf and Peng Bi In response to recent rising heatwave impact, national meteorological agencies aim to develop seamless climate, forecast and warning heat impact services, spanning all temporal and spatial scales. The ability to diagnose heatwave severity using EHF has allowed the Australian Bureau of Meteorology to publicly release 7-day heatwave severity maps since 2014. National meteorological agencies in the UK and USA are evaluating 7-day and multi-week EHF heatwave severity probability forecasts, whilst the Bureau contributes to a Copernicus project to supply the health sector with EHF severity heatwave projection scenarios. Heatwave intensity and severity using the Excess Heat Factor has demonstrated skill in scaling human health impacts. Heatwave intensity determined by short and long-term temperature anomalies at each locality must be normalized for spatial analysis and inter-site comparison. Dimensionless heatwave event moments of peak severity and accumulated severity correlate with noteworthy events around the globe offering new insights into current and future heatwave variability and vulnerability. <b>weather early warning system on heat waves in Senegal</b> by Ousmane Ndiaye and Papa Ngor Ndiaye We develop an pre-operational early warning system based on weather forecasting on extreme temperatures (min and max) beyond the 95 percentile. Base on such forecast an early warning system is develop with health sector where risk maps are issued to the community.</p>
<p>Ndiaye, Ousmane</p>	<p>ANACIM</p>	<p>Senegal</p>	<p>I work at the research department for Senegalese meteorological office, my work include delivering climate services and understand the gaps while engaging with user community. But most of my work these recent years consisted of training and delivering climate services to farmers communities and health sector. In health we work on setting an early warning system on heat waves and other climate related disease.</p>	<p>No Abstract - Session Leader</p>
<p>Nissan, Hannah</p>	<p>International Research Institute for Climate &amp; Society (IRI), Columbia University, London School of</p>	<p>UK</p>	<p>Hannah Nissan is an Associate Research Scientist at the International Research Institute for Climate and Society at Columbia University. She joined in 2015, as an Earth Institute Fellow and a Fulbright Scholar working in partnership with the Red Cross Red Crescent Climate Centre. She specializes in the production, tailoring and use of climate information for public health, and in identifying how climate change information can be incorporated into decision-making and policy. Her work on heat has focused on the development of seasonal and sub-seasonal climate services in the Caribbean, and on understanding the characteristics and changing risks of heat waves in Bangladesh and their health impacts.  Dr Nissan serves on the Board of Environment and Health at the American Meteorological Society and on the Steering Committee of the Global Heat Health Information Network. She holds a PhD in Atmospheric Physics from Imperial College London, a Postgraduate Diploma in Economics from the University of Cambridge and a bachelor's degree in Physics from the University of Bristol in the UK. She has held previous posts at Imperial College London, the International Centre for Health and the Scottish Government.</p>	<p>No Abstract</p>
<p>Nybo, Lars</p>	<p>University of Copenhagen</p>	<p>Denmark</p>	<p>Professor Lars Nybo has an educational background in Human Physiology and has since 2001 worked in the area of Human Thermal Physiology with particular focus on cerebral factors of importance for fatigue during prolonged exercise in the heat. He became doctor of Science in 2004 and has since 2012 been employed as professor in human physiology at the Faculty of Science. To date, he has published 100 peer-reviewed journal articles, and has received more than 8000 citations. Furthermore he is project coordinator for the inter-sectoral Heat-Shield project.</p>	<p>No Abstract</p>



Oppermann, Elspeth	Technical University of Munich	Germany	Dr. Elspeth Oppermann is a critical geographer specialising in how societies adapt to environmental challenges. In her current role she examines practices of co-creation in innovation projects, specifically in relation to urban settings and energy use. She has an ongoing engagement with the discourses, technologies and social practices through which heat is communicated and managed in tropical environments, particularly in relation to industrial occupations in northern Australia.	No Abstract
Parks, Robbie	Imperial College	UK	I am a PhD student interested in examining how climate change and extreme weather may be influencing the patterns and trends evident in intra-year variability of mortality.  I am also interested in simulating extreme heat waves at return periods much larger than available data, using stochastic weather generators. I am involved in using and developing the Imperial College Weather Generator (IMAGE) for this purpose.  My research includes building mathematical models, including Bayesian spatiotemporal models, both to analyze past trends of seasonality of human mortality and to forecast possible futures for climate change risk assessment.	No Abstract
Razzak, Junaid	Johns Hopkins University School of Medicine	Pakistan	I am working jointly with the School of Public Health with Professor Maïd Ezzati and Space and Atmospheric Dr. Razzak is the Director of Center for Global Emergency Care, Director of Telemedicine and Professor of Emergency Medicine and International Health at the Johns Hopkins University School of Medicine. Before joining Hopkins, Dr. Razzak spent ten years in Asia and Middle-East. He has worked in Pakistan as the Professor and founding chairman of the Department of Emergency Medicine, Director of the World Health Organization Collaborating Center for Emergency Medicine and Trauma in the Eastern Mediterranean Region and as the CEO of Aman Healthcare Services a large health system in Karachi. He was involved in the development of a innovative public health program including telemedicine. Dr. Razzak has received numerous awards including Award for Outstanding Contribution by the American College of Emergency Physicians and Globalization and Achievement Award by the Global Emergency Medicine Academy and has published over a hundred peer-reviewed manuscripts. Dr. Razzak did his MBBS from Aga Khan University, completed his residency in Emergency Medicine from Yale University and Ph.D. in Public Health from Karolinska Institute. He is the Principal Investigator on recently completed HEAT Trial in urban slums of Karachi, Pakistan.	HEAT Trial in urban slums of Karachi, Pakistan.
Ren, Meng	Department of Health Policy & Management School of Public Health, Sun Yat-sen University	China	No bio	No Abstract
Saha, Shubhayu	US Centers for Disease Control and Prevention	USA	Shubhayu Saha is a health scientist with the Climate and Health program at the Centers for Disease Control and Prevention (CDC). Part of his research involves spatiotemporally linking environmental exposures (like heat, precipitation, pollen) with health outcomes to assess the epidemiologic risk associated with those exposures. He also conducts cost-effectiveness analysis of community-level health intervention strategies.	No Abstract - Session Co-Chair
Sahabi abed, Salah	Office National de la Météorologie	Algeria	Salah SAHABI ABED is working since 2016 as a director of the National Climate Center at the Algerian National Meteorological Office. He is a former deputy-director of Hydrometeorological Institute for Training and Research located in Oran- Algeria which is a WMO Regional Training Center. Mr Sahabi has several scientific national and international contributions and is recently working much more on the bioclimate field. In this issue, he is a co-author of 2 international peer-reviewed papers recently published (2017 and 2018) and respectively entitled "Seasonal Regional Differentiation of Human Thermal Comfort Conditions in Algeria" and "Quantification of the Tourism Climate of Algeria Based on the Climate-Tourism-Information-Scheme" with Prof.Dr. Andreas Matzarakis.	<b>Title: Seasonal Regional Differentiation of Human Thermal Comfort Conditions in Algeria</b> Authors: Salah Sahabi Abed (1) and Andreas Matzarakis (2) (1): Office National de la Météorologie, Centre Climatologique National, 1, Av.Mohamed Khemisti, BP 153, Dar El Beida, Algiers, Algeria (2): Research Center Human Biometeorology, DeutscherWetterdienst, Stefan-Meier-Str. 4, 79104 Freiburg im Breisgau, Germany Abstract: The thermal conditions of the bioclimate of Algeria are investigated applying especially the physiologically equivalent temperature (PET) seasonal variability of five main Algerian cities representing different climate and geographical conditions: coastal region, highland region, and Sahara zone. The physiologically equivalent temperature (PET) calculated for this study at 12.00UTC (13.00 local time) is used to emphasize the impacts of climate on human heat stress in different seasonal and regional regimes. This study is important since it is performed for the first time in Algeria using a deterministic approach through the calculation of PET based on the body-atmosphere energy balance using the Munich Energy-BalanceModel for Individuals (MEMI).
Sahai, Atul Kumar	Indian Institute of Tropical Meteorology	India	Dr Sahai has developed a Dynamical Ensemble Prediction System for the extended range prediction of intraseasonal fluctuation over Indian continent. For the first time, this system has been developed for Indian region under the Monsoon Mission Program of Ministry of Earth Sciences. The system has been found very skilful/useful in predicting 2-4 weeks in advance, the onset, active/break spells and withdrawal phases of the Indian summer monsoon, heavy rainfall events, cold waves, heat waves, cyclogenesis etc. Due to the remarkable skill of this system, it has been awarded the ISO 9001:2008 standard certification in the year 2016, and has been transferred to India Meteorological Department for operational use. These forecasts are extensively used in Agriculture, Hydrology, Health, Energy and disaster management. Keeping in view of his active role in Indian climate services and forecasting community, and several original research contributions, he has been given additional charge as Head of Climate Research and Services of India Meteorological Department.	<b>Title: Heat Waves over India: A Step towards Extended Range Prediction</b> Authors: Raju Mandal, Susmitha Joseph, A. K. Sahai, R. Phani, A. Dey, R. Chattopadhyay and D. R. Pattanank Abstract: Heatwaves over India occur during the months of March to June. For the real-time monitoring and prediction of heatwaves, a criterion has been developed based on the observed daily gridded maximum temperature dataset for the period 1981-2010. This criterion has been constructed using the thresholds of actual, departure from normal and the percentile values of maximum temperature. It is noticed that the multi-model ensemble prediction system, developed at Indian Institute of Tropical Meteorology, India has good skill in predicting the extreme temperatures and heatwaves over India at least 2 weeks in advance. Based on the verification of few recent heat wave spells over India during the hindcast period 2003-2017, it is found that the developed criterion has great potential in providing an outlook on the forthcoming heat wave spells with sufficient lead time. This has been found very useful in Heat-action plans.
Sarkar, Sayantan	Natural Resources Defense Council (NRDC)	India	Sayantan has worked on climate change and sustainability issues in the international, national and sub-national context for eight years. At NRDC he works on climate resilience (particularly extreme heat resilience) and air pollution. Before joining NRDC he worked as a Senior Climate Change Adviser at the British High Commission, New Delhi, where he focussed on international climate negotiations and led work around political and business leadership to promote low carbon growth in India. Prior to this, he worked at Emergent Ventures India (EVI), a sustainability and climate change consulting firm. At EVI he worked on both Kyoto Protocol and Montreal Protocol issues.	No Abstract
Scherdel, Lucas	WHO	UK	No bio	No Abstract - Session Co-Chair
Shumake-Guillemot, Joy	WHO/WMO	Switzerland	Joy Shumake-Guillemot leads the WHO/WMO Climate and Health Joint Office in Geneva Switzerland, and is the co-coordinator of the GHHIN. She is an environmental health scientist and public health practitioner who has worked with WHO, WMO, UNICEF and others to develop public health policy and programming for climate adaptation and risk management. She has extensive field experience in Africa, Asia, and Latin America supporting public health and humanitarian assistance programs. Her current work focuses on enabling WMO and WHO to work together to accelerate the availability, access and use of climate and weather information that can improve public health policy and practice. She plays a leading coordination role for the Health, Environment, and Climate Change Coalition (HECCC) between UN Environment, WHO, and WMO. Joy received her Doctor of Public Health in Environmental Health Sciences from Johns Hopkins University in Baltimore, Maryland.	No Abstract - Session Chair - Event Co-Organizer

Singh, Roop	Red Cross Red Crescent Climate Centre	UK	Roop is a Climate Risk Advisor for the Red Cross Red Crescent Climate Centre. She provides technical support to disaster managers and adaptation practitioners to access, interpret and use climate risk information for decision-making, as well as supporting learning around climate risk management. She is the operational lead for work on extreme event attribution with the World Weather Attribution partnership, increasing the relevance of attribution findings for climate change adaptation. Roop also supports the Climate Centre's urban portfolio with a focus on heat risk. She has Master's in Climate and Society from Columbia University, and a Bachelor of Science in Atmospheric Science from Cornell University.	No Abstract - Session Co-Chair
Streatfield, Peter	icddr, Bangladesh	Bangladesh	Background in physiology, medical demography. Australian but lived as researcher in Bangladesh since 1991, current focus on climate change and health & population (migration), also MCH, FP, NCDs, environment.	No Abstract
Su, Yanan	Department of Health Policy & Management School of Public Health, Sun Yat-sen University	China	No bio	No Abstract
Suraweera, Inoka	Ministry of Health, Sri Lanka	Sri Lanka	Dr. Inoka Suraweera is a Board Certified Specialist in Community Medicine. I graduated from the Faculty of Medicine, University of Colombo, Sri Lanka with second class honors and hold Master's and Doctoral Degrees in Community Medicine from the University of Colombo, Sri Lanka. I had my post doctoral training at the Monash Centre for Occupational and Environmental Health at Monash University in Melbourne Australia. I am currently working at the Directorate of Environmental and Occupational Health at the Ministry of Health, Sri Lanka as the National Technical Programme Manager for Environmental and Occupational Health. I am engaged in both undergraduate and post graduate medical teaching in the areas of occupational and environmental health. Currently I am supervising a MD student working in the area of heat health effects on traffic police officers in Sri Lanka. I was involved in developing the National Adaptation Plan for Climate change 2016-2024 in Sri Lanka and identified heat related morbidity and mortality as a priority area for action under the Health Adaptation Plan section. Additionally I was responsible for the development of Heat Health Action Plan for Sri Lanka and work with the Meteorology Department in issuing heat related health warnings to Public. I am a member of the ICOH and a prestigious member of the College of Ramazzini in Italy.	<p><b>Developing a Heat Health Action Plan for Sri Lanka</b></p> <p>Dr Inoka Suraweera, Dr Yasaswi Walpita, Dr Himan Galappaththi</p> <p>Rising temperature will adversely affect human health in different ways and young children, elderly, people already having health problems and outdoor workers are vulnerable for heat related health outcomes. In the recent 2-3 years Sri Lanka has experienced increasing temperatures and the Meteorology Department of Sri Lanka has confirmed that observed temperatures in certain districts have exceeded by 3-5 0C than the average temperature expected.</p> <p>Adverse health effects of increasing temperature are largely preventable by developing a well articulated heat health action plan. All relevant important stakeholders were identified and were invited for consultative meetings. Stake holders were divided in to within health and outside health groups.</p> <p>Desk reviews were done and four thematic areas were identified.</p> <p>Early warning systems and coordination</p> <p>Building public awareness</p> <p>Capacity building</p> <p>Promotion of adaptive measures and reducing exposure</p> <p><i>Draft action plan was again discussed with all the relevant stakeholders and was finalized.</i></p>
Tan, Tat Ui David	United Nations University International Institute for Global Health	Malaysia	David Tan is a postdoctoral fellow at United Nations University International Institute for Global Health (UNU-IIGH). I use systems thinking to explore complex connections and contexts that shape health, health systems, and health interventions. This includes systems dynamics modelling for scenario exploration, transdisciplinary workshops using systems approaches to facilitate cross-sector conversation for holistic problem-mapping, and using systems diagrams to capture and communicate complex issues in case studies. My work at UNU-IIGH is focused on low- and middle-income countries, especially in the South-East Asian region. My interest in the intersection of heat and health comes out of issues of urban health and sustainable development. With rapid urbanisation in developing countries—particularly in the tropical and subtropical regions—and rising temperatures from climate change, it is critical to strengthen the connections between the health and urban planning sectors as part of the effort to achieve sustainable, climate-sensitive development. In the GHHIN Global Forum and through the Network, I hope to meet others working in the intersection of health and urban planning, and to develop collaborations for transdisciplinary work in this area.	<p><b>Exploring residential air-conditioning use under various climate sensitive building uptake and climate change scenarios using systems dynamic modelling.</b></p> <p>David Tan, Yi Gong, and Jose Siri</p> <p>Dependence on air-conditioning (AC) for residential cooling and ventilation may create systemic health risks and inequities. In hot temperatures, climate-sensitive buildings (CSB) can complement and/or substitute for AC use in achieving thermal comfort. Many countries facing such conditions are developing quickly, with rising populations and income creating demand for new housing and AC. This presents a window for adoption of CSB but could also result in long term lock-in of AC-dependent buildings. Here, a simple system dynamics model is used to explore the potential and limitations of subsidies to affect futures of housing stock and night-time AC use in Malaysia. The effectiveness of subsidies in achieving high uptake of CSB and resulting health benefits is highly dependent on homebuyer willingness to pay (WTP). A detailed understanding of WTP in the Malaysian context and factors that can shift WTP is necessary to determine if CSB subsidies can be a good policy mechanism for reducing health risks from heat in an equitable manner.</p>
Taneja, Pawan	Indian Institute of Public Administration	India	<p>Dr. P. K. Taneja, Ph.D., a policy analyst specialized in health system research and health financing is working as Sr. Faculty at Indian Institute of Public Administration (IIPA), New Delhi, a policy research think tank and training Institute of Government of India. He has more than 18 years of rich varied experience in teaching, research and industry. He has also worked with Indian Institute of Health Management Research (IIHMR), New Delhi prior to IIPA. He has coordinated more than 20 operational research projects in the areas of Climate Change and Human Health, Health care Financing and Disaster Management supported by Government of India, UNICEF, WHO, BMGF etc. Dr. Taneja teamed with Dr. Dogra for the project titled Assessment of Vulnerability, Impact and Adaptation for Climate Sensitive Diseases at the Local Level in India funded by WHO (SEARO).</p> <p>Dr. Taneja is conducting training and capacity building programs on Climate Governance and Human Health, Health System Strengthening for senior bureaucrats, civil servants, scientists not only from India but also from other developing countries at IIPA.</p> <p>My Participation in this Global Forum on Heat and Health will help me to get updated on going evidence bases research and share my experiences from fellow participants. Knowledge gained at forum will help me to build capacity of policy planners in India and other developing countries.</p>	<p><b>Heat Vulnerability Shift at Sub-national Level in India: Impact of Short Duration Changes</b></p> <p>AUTHORS: Dr. Nitish Dogra and Dr. Pawan K. Taneja</p> <p>In 2011 at IIHMR, India, we carried out a Vulnerability and Adaptation assessment with funding from WHO (SEARO). This followed a common protocol followed by 15 countries globally. Subsequently, this experience contributed to the Climate and Health Vulnerability and Adaptation assessment guidance document. The India study was carried out at the subnational level (the State of Haryana) with a vulnerability index for malaria, diarrhea and heat stress. A detailed assessment was also carried out for two districts. Wet bulb temperature was taken as an indicator of exposure. Proportion of children under 6, proportion of population in low income group and population in primary sector were the sensitivity factors whereas coping capacity factors consisted of government response (public health providers and accessibility of health facilities) as well as community response (type of house and percentage of women aware of ORS). Data for this index is approximately 7 years old. The poster will demonstrate the extent of shift in vulnerability from 2011 to 2018.</p>
Tawatupa, Benjawan	Ministry of Public Health	Thailand	No bio	<p>Title: <b>ASSOCIATION BETWEEN TEMPERATURE AND HEALTH OUTCOMES OF POPULATION IN THAILAND</b></p> <p>Author: Benjawan Tawatupa</p> <p>Abstract: This research aims to identify temperature effect on mortality in Thailand. Daily mortality of 242,963 deaths classified by the ICD-10 for cardio-circulatory (I00-I99) and respiratory systems (J00-J99) from 20 provinces during 1999-2015 were used. The mortality data was linked with daily mean temperatures at lag 0-13 by using statistical analysis based on Poisson regression models. There was a significant relationship between the sum of mortality and temperature in inverse J-shape. The age group above 60 years was at the highest risk. The northern and northeastern parts were the areas where populations were at the highest risk with regard to temperature changes. In summer, relative risks on mortality were constant at the low temperature range and then when the temperature reached 30 degrees Celsius, mortality gradually increased along with higher temperatures. Findings from this research can be used as baseline for monitoring long-term impacts of temperature on health. An implication of this findings can be to monitor an achievement of goals set in health adaptation plans of Thailand.</p>

Thiaw, Wassila M.	National Oceanic and Atmospheric Administration	USA	<p>Dr. Wassila Mamadou Thiaw is a meteorologist with NOAA and the Team Leader for the Climate Prediction Center (CPC)'s International Desks at NCEP. He has worked extensively on climate monitoring and forecasting for Africa and the tropics. The International Desks supports the U.S. Government humanitarian mission overseas. This includes the provision of real time weather and climate information that supports decision making in various socio-economic sectors including agriculture, water, and food security. This information is also provided to meteorological institutions around the world in support of U.N. World Meteorological Organization (WMO)'s effort to develop capacity to improve weather and climate services. More recently, Dr. Thiaw has been leading his team to develop real time climate products relevant to the health sector, and more specifically heat-health and infectious diseases. Dr. Thiaw leads the CPC residency training program for scientists from developing countries. He received a doctorate degree in meteorology, University Clermont-Ferrand-II, France and a BS in meteorology, University of Dakar, Senegal. He was a U.S. National Academy of Sciences, National Research Council postdoc fellow at NOAA/NESDIS. He's served on the AMS Council and in various AMS and WMO committees.</p>	<p><b>NCEP global ensemble forecast system (GEFS) to accurately represent heat waves in Africa.</b>The scientific community has now clearly recognized that short-term climate variations from weeks to seasons can have significant impacts on human health. In particular extreme weather events such as heat waves associated with extremely elevated air temperature and relative humidity can cause cardiovascular illnesses. The impact of climate variability on health is a global issue, but proven to be more acute in the developing world, especially Africa. This presentation focuses on the ability of the NCEP global ensemble forecast system (GEFS) to accurately represent heat waves in Africa. Heat waves are defined in two ways: (1) three consecutive days in a week with the maximum air temperature exceeding the 90th percentile in a thirty year climatological record from 1981-2010; and (2) a heat index representing a combination of air temperature and relative humidity exceeding 40°C for three consecutive days. Results show that the GEFS can depict heat waves events reasonably well with Heidke skill scores well above 50%. The model's forecast performance from historical events and a transition of the experimental forecasts to operations are discussed.</p>
Tonouchi, Michihiko	Japan Meteorological Business Support Center	Japan	<p>We develop 'Heat Stroke Information' as a part of the Ministry of Environment Agency project and also publishing a guideline for heat stroke prevention with researchers in bio-meteorology and acute-medication doctors. Our contribution is mainly for collecting/issuing observation/forecasting data for heat strokes.</p>	<p>No Abstract</p>
Tran, Trong	Vietnam Institute of Meteorology, Hydrology and Climate Change	Vietnam	<p>I am a researcher at Vietnam Institute of Meteorology Hydrology and Climate Change (IMHEN). I am head of Applied Climate Division. My main area focus on applied climate, climate change, tropical cyclones, climate prediction. Currently, the German Red Cross (GRC) in partnership with the Vietnam Red Cross (VNRC) and the Vietnam Institute of Meteorology, Hydrology and Climate Change (IMHEN) is implementing a 3 years project which aims at reducing heatwaves impacts on the vulnerable populations of Hanoi. In this project, IMHEN is engaging in the challenging task of addressing heat waves in Hanoi, Vietnam. Including of discovery the impacts of heat waves on public health, definition of heat waves in Vietnam as well as a threshold for triggering the activation of pre-identified early actions. During the GHHN Global Forum, I hope to know how heat waves are predicted from other countries and how to apply in FbF. Also, I hope to know more scientific in heat wave area to exchange data, methodology for heat wave prediction</p>	<p><b>REDUCING HEAT WAVES IMPACTS ON THE VULNERABLE POPULATIONS OF HANOI THROUGH FORECAST BASED FINANCING FOR ANTICIPATORY HUMANITARIAN ACTIONS</b>  <b>Abstract:</b> The German Red Cross (GRC) in partnership with the Vietnam Red Cross (VNRC) and the Vietnam Institute of Meteorology, Hydrology and Climate Change (IMHEN) is implementing a 3 years project which aims at reducing heatwaves impacts on the vulnerable populations of Hanoi. Not only is the project engaging in the challenging task of addressing heat waves in an urban setting, which is an increasing risk for cities in Asia and around the globe, it is also employing a new approach – Forecast-based Financing (FbF). With FbF, forecast information is used to act in anticipation of an extreme event, rather than responding afterwards. A threshold for an extreme event is identified, which triggers the activation of pre-identified early actions, while a funding mechanism covers the expenses. This poster presents the methodology and first results of the project.</p>
Trtanj, Juli	NOAA	USA	<p>Juli Trtanj is the One Health and Integrated Climate and Weather Extremes Research Lead for the National Oceanic and Atmospheric Administration (NOAA) and the Climate Program Office. She is responsible for developing and coordinating NOAA health-related activities and programs with other federal, state, local and international Agencies, academic and private sector partners. Ms. Trtanj is leading efforts to build the National Integrated Heat Health Information System (NIHHIS) in partnership with the Centers for Disease Control and Prevention (CDC), FEMA, OSHA, NIOSH, NIEHS, EPA and other agencies. She coordinates the NOAA One Health Working Group which brings together NOAA data, research, information and actions to inform health decision making. She started and ran the first multidisciplinary and multi-partner research program on Climate Variability and Human Health. She developed and directed NOAA's Oceans and Human Health Initiative focused on Early Warning Systems, Health Benefits from the Sea, and Graduate Training.</p> <p>Ms. Trtanj co-chairs the US Global Change Research Program, Climate Change and Human Health Group (CCHHG) and represents NOAA on the Pandemic Prediction and Forecasting Science and Technology Working Group. She also co-chairs the Group on Earth Observations (GEO) Health and Environment Community of Practice. She has lead or authored numerous publications and several climate and health assessments.</p>	<p>No Abstract - Session Chair - Event Co-Organizer</p>
Tyagi, Ajit	Indian Meteorological Society	India	<p>Prof Ajit Tyagi is currently Senior Advisor at Integrated Research and Action for Development, New Delhi and Member of Monsoon Panel of World Meteorological Organisation. He has served as President, Indian Meteorological Society, Distinguished Chair Professor with Ministry of Earth Sciences, Director General of Meteorology, India Meteorological Department. He was Permanent Representative of India (2009-2013) with World Meteorological Organisation and member of its Executive Council. He has served on the Governing Councils of SAARC Meteorological Research Centre, Indian Institute of Tropical Meteorology and National Atmospheric Research Laboratory.</p> <p>Prof Tyagi played key role in modernisation of India Meteorological Department and brought significant improvements in weather forecasting and warning of high impact weather events in the country. Under his leadership Agro Advisory Services were extended to 640 districts and Nowcast system was implemented during Commonwealth Games 2010. Dr Tyagi was the member of Core Group constituted by National Disaster Management Authority engaged for preparing Guidelines for the management of Tropical Cyclones, Urban Flooding and Heat Waves. He has been actively involved in developing Early warning for Heat waves and linking it to Hwat Action Plan in different parts/cities of India.</p>	<p><b>Urban Heat Stress Thresholds in India</b> The impacts of the heat waves can be significant and at times catastrophic as happened in large number of deaths in Europe in July and August 2003 and in Russia in July and August 2010. India too witnessed a large number of heat wave related deaths in many states of the country in recent past. Urban areas experience higher levels of heat exposure than surrounding rural areas because of Urban Heat Islands (UHI) effect, whereby temperatures in general are 3-10C higher than. The UHI is an artefact of the complex build environment, the lack of vegetation and high density of human, commercial and industrial activities in the urban areas. The UHI effect is going to increase with growth of urbanization specially in developing countries. This calls for an operational Early Warning System linked to Heat Action Plan to reduce adverse effect of Heat waves on health. As Heat waves are relative to a location's climate, there is no universal definition and criteria for Heat Wave. Therefore, determination of heat-stress thresholds is critical for an effective Early Warning System. In India attempt has been made to develop thresholds for cities affected by Heat waves and link it with four stage warning system and Heat Action Plan.</p>
Van Meerbeek, Cedric	Caribbean Institute for Meteorology and Hydrology	Barbados	<p>I am the Climatologist at the Caribbean Institute for Meteorology and Hydrology (CIMH) and a lecturer in Climate Science at the University of the West Indies, Cave Hill, both in Barbados. I serve with the WMO's Commission for Climatology mainly in the areas of climate prediction and climate capacity development.</p> <p>As part of the WMO designated Regional Climate Centre (RCC) for the Caribbean located at CIMH, my main role is to assist National Meteorological and Hydrological Services (NMHSs) in the Caribbean in building their capacity to provide a combination of generic, hazard-focused and sector-tailored climate information. A major player in the region is the Caribbean Climate Outlook Forum (CariCOF), of which I lead the product development and technical training for NMHSs. One recent focal area of the CariCOF, as informed by the region's public health sector, has been heat-health. As such, CariCOF has started a campaign in May 2016 to develop and deliver heat stress early warning information on operational basis. Within the context of CariCOF, the Caribbean RCC now delivers seasonal heat information including seasonal heatwave frequency forecasts.</p>	<p><b>Title: Seasonal heat outlooks for the Caribbean</b>  <b>Authors:</b> Cedric Van Meerbeek, Hannah Nissan, Simon Mason, Teddy Allen, Wazita Scott, Adrian Trotman.  <b>Description:</b> Traditionally, little focus has been paid to the dangers of heat stress in the "always hot" Caribbean region, where temperature rarely varies more than 5C. Nevertheless, the concern has recently become a focal area in public health. This shift is ascribed to the region's temperature rise in recent decades to the point that health care professionals perceive a rise in morbidity during the hottest parts of the year. However, data on heat-related morbidity and mortality are not readily available, e.g. because there is no legal requirement to categorise Non-Communicable Diseases specific to heat stress. In response to a need to quantify the effects of excessive heat exposure, the Caribbean Climate Outlook Forum (CariCOF) prioritized the development of heat early warning information. The first step, in 2016, has been to develop seasonal heatwave frequency forecasts that supplement and contextualise seasonal heat outlooks. These outlooks, though experimental, are made available on a monthly basis during the hotter part of the year.</p>

<b>Vedrasco, Livi</b>	<b>World Health Organization</b>	<b>Thailand</b>	<p>Dr. Livi Vedrasco has an extensive career in global health, humanitarian affairs and disaster risk management with UN agencies, philanthropies and NGOs in Africa, Americas, Europe, and Asia. Livi was awarded a Medical Doctor degree (1996) from Medical University in Moldova and an MPH (1999) from the Johns Hopkins Bloomberg School of Public Health with a focus on global health.</p> <p>Since June of 2014 Livi serves as Programme Officer with WHO Thailand managing a portfolio that includes Health Systems Strengthening, Global Health Diplomacy, International Trade and Health, Road Safety, Climate Change and Environmental Health.</p> <p>Prior to Thailand, Livi worked with WHO-Myanmar and at HQ in Geneva. In 2014 Livi was deployed to Sierra Leone to support the WHO Ebola emergency response operation. Prior to WHO Livi held leadership roles with UN, philanthropies and NGOs including Chief of Party for USAID PREPARE project in Washington, DC (2009-11), UN Regional Pandemic Readiness Adviser for West and Central Africa with UNOCHA in Dakar (2007-09), Health Adviser with the International Rescue Committee on the Thai-Myanmar Border (2004-07), Country Director for Georgia with International Medical Corps (2002-04); and Programs Director with the Soros Foundation in Moldova (1994-97).</p>	NA
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Wahabi, Rachid	Ministry of Health	Morocco	No bio	No Abstract
Wang, Qiong	Sun Yat-sen University	China	Qiong Wang, School of Public Health, Sun Yat-sen University My research focuses on maternal extreme temperature, air pollution exposure and their joint effects on pregnancy induced complications (pregnancy induced hypertension, GDM, etc.) and adverse birth outcomes (preterm birth, low birth weight, etc.). I'm also interested in applying advanced statistical models in this area (e.g. identifying exposure windows for maternal exposure to air pollution on preterm birth using distributed lag model).	<b>Short-term effects of heatwave and PM2.5 exposure on the risk of preterm birth in Guangzhou, China: A survival analysis</b> Qiong Wang, Tarik Benmarhnia, Shakoor Hajat, Luke D. Knibbs, Cunrui Huang We aimed to investigate the short-term effects of different definitions of heatwaves (n=12) and PM2.5 exposure on PTB and further explore interactive effects on the PTB risk. We included 249,489 singleton live births that occurred in the warm season (May 1-October 31) between January 2015 and July 2017, in Guangzhou. A series of cut-off temperatures and durations were used to define heatwaves (HW). Distributed lag models (DLMs) incorporating Cox proportional hazard models were used to estimate the effects of HW and PM2.5 exposure during the last week before delivery, and their additive interactive effect on PTB. For most HW definitions used, an increased risk of PTB was observed for the women experienced at least one HW event, with hazard ratios (HRs) of PTB ranging from 1.24 (95% CI: 1.01-1.52) to 1.78 (1.48-2.15). We did not observe the short-term effects of PM2.5 during the last week, nor an interaction with heatwave, on PTB. Our results suggest exposure to heatwaves late in gestation are associated with greater risk of PTB in Guangzhou.
Ward, Ashley	CISA (Carolinas Integrated Sciences and Assessments)	USA	Ashley Ward is the Climate Integration and Outreach Associate for CISA (Carolinas Integrated Sciences and Assessments). Her work centers on connecting communities and policy decision-makers with relevant climate and health data and information, particularly that related to vulnerabilities and impacts. Ashley works communities to advance scientific understanding of health impacts of climate processes in the Carolinas and to develop and communicate this information in a way that is relevant for use by decision makers. Her work with heat-health has focused on rural, vulnerable populations; maternal health; and early warning systems.	No Abstract
Ward, Nicola	Red Cross Climate Centre	UK	I work for the Red Cross Red Crescent Climate Centre as a Knowledge Management and Learning Advisor specialising in facilitating knowledge exchange and learning on climate-smart development, climate change adaptation and disaster risk reduction. I have worked in the development sector for over ten years for organizations like Oxfam GB, UNICEF UK and CARE International, specializing in climate-smart development since 2010, and have a master's degree in climate change and development from the Institute of Development Studies at Sussex University. The impacts of climate change in urban areas and heat health particularly have become an increasingly important focus of the work of the Climate Centre, and for me personally since moving to Asia, so I hope the GHHN forum will enable me to connect with specialists and further my knowledge in this area as I have previously worked mostly on climate-smart development in rural areas in Africa (Ghana, Kenya, Niger, South Africa).	No Abstract
Wilson, Leigh	University of Sydney	Australia	Dr Leigh Wilson is a Senior Lecturer in the Faculty of Health Sciences Ageing, Work and Health Research Group. Leigh has a PhD and a DrPH from the School of Medicine, University of Sydney. Dr Wilson has a strong background in research into the effects of extreme weather and climate change on the health of older and vulnerable populations. Her primary research interests are in: evidence based healthcare, environmental aspects of climate change (particularly heat-waves), aged care, public health, health policy, research methods, community health and behavioural health. Leigh hopes to make collaborative partnerships through the forum and keep up to date with current international heat health research at an international level.	<b>The implications of urbanisation in Sydney, NSW</b> Wilson LA, Black DA, Morgan GG Introduction: Australia is known for its wide open spaces and availability of land. Approximately two thirds of the population live on the Eastern Coast in the cities of Sydney and Brisbane. Increasingly the urban population has grown, as a result of overseas migration and rural migration to the cities to obtain accessible medical care and health services. As land prices increase high density housing has increased. This study aims to investigate 1) opinions of urban populations on the changes to urban living, and 2) knowledge and awareness of heatwave health in high rise apartments. Methods: This qualitative study used face to face interviews to investigate the opinions of 50 Sydney residents on the increasingly urbanised landscape. Results: Residents were concerned about the impact of increased housing density on aspects of living such as parking, traffic and infrastructure. Conclusions: High density living is the way of the future in Sydney, Australia, however additional resources should be put into educating people about the implications high-rise living may have on health in extended periods of extreme heat
Win, Ei Mon	International Labour Organization	Myanmar	Ei Mon Win is the researcher and evaluator from Myanmar with the wide range of experience in the rural and urban area of Myanmar, especially in livelihood, land rights, cattle trade, labour rights and environmental studies. She started her research career in the local research firm and now working as M and E officer in international Labour Organization (Yangon). Concerning with Urban health care, she has involved in the study on the economic impact of urban heat island (in Thailand) and WASH sector improvement for sake of combating tropical disease in Urban Slums (in Myanmar). She finished her bachelor degree in Yangon University of Pharmacy and Master degree in the Economics Faculty of Chiang Mai University.	<b>Urban Heat, workers and migration in Myanmar</b> As a least developed country, Myanmar is still stuck in virtuous cycle of the poverty trap and, as you all well noticed, the status of health and education and thereby the living standard is on the long way to be in decent condition, while the political regime transition, civil war and conflicts are putting the country in the tight situation. Same with global wave, rural residents in Myanmar have been migrating a lot to urban cities more than ever before. The push and pulls factors are well studied in the previous studies, and the main pull factor is higher income in cities but they could barely see the unexpected consequence of the worse living conditions of the urban poor. But the knowledge gap is to what extent the migrant workers are suffering from the urban heat island of the cities of Myanmar and how the heat health impact on their lives and work sectors.
Wong, Paulina py	Lingnan University	Hong Kong	Paulina PY WONG is currently an Assistant Professor in the Science Unit at Lingnan University. She joined Lingnan in August 2017 and she is now also a Centre Fellow of the Centre for Social Policy and Social Change. She completed her Bachelor (Physics) and Master (Geography) studies in New Zealand and obtained her Doctoral degree in 2014 from the University of Hong Kong. She has 8 years of academic research experience and has worked for 6 years in New Zealand and Hong Kong mainly on ecological and practical applications of Geographical Information Systems (GIS). In 2013, she was awarded a 6-month Fulbright-Lee Hysan scholarship to conduct microclimate studies at the University of California in Berkeley, USA. She is also a certified GIS Professional (GISP). Her areas of specialization include air pollution, urban climate, GIS modeling and environmental health. Her current research interests concern environmental impact assessments with particular reference to health-related problems in Hong Kong. She has published in international journals including Environment International, Science of the Total Environment, Social Science and Medicine, Building and Environment, Social Indicators Research, and Tourism Management.	<b>A vertical approach to monitoring microclimates of urban street canyons</b> Paulina Wong The lack of greenery, high traffic volume and high density development have contributed to thermal discomfort in urban areas. This study utilized small and low-cost logging sensors (placed on the walls of buildings at vertical distances of 5-6 meters apart up to 50 meters above the street level) to measure the vertical temperature and vapour pressure distribution (or relative humidity) at a narrow street canyon and an open street. The logging sensors were installed on every other storey of a building to take temperature and relative humidity measurements at 15-minute time interval for 7 consecutive days in the hot and cold months. The results were visualized and presented using a geographic information system. This observational study may not be precise but it furnishes interesting findings about vertical microclimate variation even though more refined measurements (including wind speeds and directions) are necessary to explain factors contributing to the variation. Given that modern cities have mixed landuses and are increasingly vertical, this kind of microclimate study can better inform best practice on street designs and building forms.
Yaka, Dieudonné Pascal Alda	Global Framework for Climate Services	Burkina Faso	Pascal Yaka, PhD, bioclimatologist, lecturer-researcher, Regional Coordinator of the Global Framework for Climate Services and chairperson of WMO-RA1 Climate Services and Applications Working Group. I am working on Applied research and helping to strength developing countries capacities on EWS on heatwaves impacts on human health and socio-economic sectors. My target area is Africa, particularly on Sahel countries that are most affected in western Africa. I am leading some projects and I am looking for partnerships to build networks for sharing results and opportunities.	No Abstract
Zhang, Na	Department of Health Policy & Management School of Public Health, Sun Yat-sen University	China	No bio	No Abstract