



# **Scientific Committee on Thermal Factors (SCTF)**

## **2<sup>nd</sup> Meeting Report**

**Time:** Monday, 28<sup>th</sup> October, 2019, 2:00p.m. to 3:30p.m.

**Venue:** University of Occupational and Environmental Health, Kitakyushu, Japan

**Participants:** Annex I

## 1. Welcome and Introduction

1.1 Jason Lee welcomed the participants and opened the meeting with the agenda:

- 1.1.1 To updates committee on action items from the first SCTF meeting;
- 1.1.2 to brief committee on upcoming heat health events;
- 1.1.3 to present, on behalf of Yuri Hosokawa, a research proposal on the use of cold water immersion as the preferred method to treat exertion heat stroke;
- 1.1.4 and to allow members to indicate collaborative opportunities.

1.2 Committee members<sup>1</sup> were briefly introduced.

## 2. Summary of presentations from the International Conference on Thermal Stress in Kitakyushu on 27<sup>th</sup> & 28<sup>th</sup> October 2019

2.1 Michihiko Tonouchi, Japan

*Recent Trend of Japanese Summer and Future Prospect*

Presentation slides available at: <http://bit.ly/35b0Y30>

2.2 Jason Lee Kai Wei, Singapore

*Advanced heat management strategies to optimize human performance and health*

Presentation slides available at: <http://bit.ly/2P55bQ2>

2.3 Kahori Hashimoto, Japan

*The efficacy of pre-cooling using cooling vest with chiller in hot environment*

Presentation slides available at: <http://bit.ly/2E7iuJe>

2.4 Rekha Shanmuham, India

*Association between high-heat exposures, DNA damage: Can HSP70 be an effective biomarker for heat-induced DNA damage?*

Presentation slides available at: <http://bit.ly/38j136F>

---

<sup>1</sup> Annex I

2.5 PK Latha, India

*Risk of anal calculi in steel workers exposed to high-occupational heat, exertion and dehydration: A cross sectional study from India*

Presentation slides available at: <http://bit.ly/2P9jNh6>

2.6 Hardinsyah Riden, Indonesia

*Hydration status, water intake and drinking habits of people residing in warm and cold areas in Indonesia*

Presentation slides available at: <http://bit.ly/2P8bEtn>

2.7 Vidhya Venugopal, India

*Occupational Heat Stress impacts on Health and Performance in changing the climate scenario — Current and potential future in developing country setting*

Presentation slides available at: <https://bit.ly/2XJWJIL>

2.8 Seichi Horie, Japan

*Strategies for the prevention of heat-related illnesses in Japan*

Presentation slides available at: <http://bit.ly/2LHGc30>

2.9 Takehiko Ito, Japan

*Thermal environment of elementary schools in western Japan considering both occupational and health aspects*

Presentation slides available at: <https://bit.ly/2OiVgG4>

2.10 Jason Glaser

*A hot topic — Chronic Kidney Disease among sugarcane workers and other heavy labourers in Mesoamerica: The known unknowns*

Presentation slides available at: <http://bit.ly/38seUHF>

### 3. Action items from last meeting<sup>2</sup>

3.1 Regarding the 'preparation of a joint scientific summary report of heat effects on working people and to identify current gaps in evidence': the committee has designed and issued a short survey to gather input on evidence gaps on heat and occupational health research.

Members are encouraged to complete the survey:

<http://www.surveymonkey.com/r/DF2YDJN>

3.2 Regarding preparing a standard protocol for field studies of heat effects in the workplace, the committee has decided to continue working on the Hothaps Research Protocol<sup>3</sup> designed by Kjellstrom et al. in 2009. Jason Lee will translate the Hothaps protocol into a manuscript and share with the committee members for their further inputs.

3.3 On funding opportunities, Jason Lee has secured a small grant (US\$0.2M) from the Global Asia Institute at National University of Singapore (GAI@NUS), and is leading a US\$4M research proposal based in Singapore. Jason Glaser's La Isla Network had secured a US\$2.5M grant from the German Development Bank for research on occupational heat and kidney diseases in field workers. The La Isla Network is currently doing field studies on sugarcane plantations workers in Nicaragua.

### 4. Announcements on upcoming conferences

4.1 *The 3<sup>rd</sup> International Forum on Climate Change and Health Response* will take place on 18<sup>th</sup> and 19<sup>th</sup> December 2019 in Guangzhou, China.

More details here: <http://www.keaipublishing.com/en/journals/advances-in-climate-change-research/call-for-papers/the-3rd-forum-on-climate-change-and-health-response/>

---

<sup>2</sup> These Action Items are contained in the conclusion of the 1<sup>st</sup> meeting report, section 5.1 through 5.4.

<sup>3</sup> <http://www.climatechip.org/HothapsProtocol>

4.2 *South Asia Heat Health Summit* will take place on 14<sup>th</sup> February 2020 in Pune, India.

More details here: <https://mailchi.mp/ghhin.org/southasiasummit2020>

4.3 A Heat Health workshop by the German Red Cross has been planned to take place on the first quarter of 2020 in Hanoi, Vietnam. Details and dates to be confirmed.

4.4 A Heat Health Conference by the Thai Military is planned to take place on 20<sup>th</sup> to 22<sup>nd</sup> May 2020 in Bangkok, Thailand. Details to be confirmed.

4.5 The 2<sup>nd</sup> *Global Forum on Heat and Health* will take place on 28 to 31 July 2020 in Copenhagen, Denmark. More information here: <http://www.ghhin.org/forum2020>

4.6 Elspeth Oppermann noted that we could subscribe to the Global Heat Health Information Network (GHHIN) newsletter to stay abreast of upcoming events globally. <https://www.ghhin.org/news>

## 5. Collaborative Opportunities & General Discussion

5.1 Yuri Hosokawa requested for members to participate in and disseminate to relevant groups a survey to examine the state of understanding, perception, and adherence to the use of cold water immersion for exertional heat stroke.

Her research proposal: *Adopting of Cold Water Immersion as Exertional Heat Stroke Treatment by Medical Practitioners in Asia*, was presented by Jason Lee.

5.1.1 The proposal noted that this treatment method has been well-studied and adopted mainly in the U.S., but its utility in Asia is poor.

5.1.2 Ross Di Corletto cited the lack of access to sufficient cold water in certain industries, especially worksites located in remote places. This prevents the viability of exercising such an option.

5.1.3 Jason Lee cited the use of portable advanced cooling gels (EMCOOL from Austria) as a first-aid option in cases where cold water immersion is not available. These are currently used in the Singapore military. He further noted that the cost of this option may be prohibitive in certain industries.

5.1.4 Jason Glaser noted that rigorous prevention and mitigation efforts should always be the primary focus.

5.2 Elspeth Opperman proposed that the ICOH can apply for an observer status at the UNFCCC. The next application is due August 31<sup>st</sup> 2020 and, if accepted, would allow ICOH to be a formal part of future UNFCCC processes, including in time for the UN Climate Change Conference (COP 26) in November 2020, where decisions will be made on climate policy at an international level.

5.2.1 Seichie Horie supported this proposal and cited the case where scientific committee members expressed concerns for the safety of migrant workers in Doha who are building the venues for the Qatar 2022 World Cup during a General Assembly in Seoul, June 2015. This led to the ICOH releasing a statement<sup>4</sup> in criticism of the worker conditions in Doha. This is an example where this committee's participation as an observer in various assemblies can empower the committee to express its concerns on relevant events.

5.2.2 Seichie Horie suggested that Elspeth approach other scientific committees in ICOH to rally support for the ICOH to apply for an observer status to the UNFCCC.

5.2.3 Jason Lee urged Yang Hsiao-Yu, who represents the scientific committee on reproductive hazards in the workplace to collaborate in this initiative.

5.3 Jason Glaser invited collaborators for their inputs on the association between heat stress and kidney disease. He is mainly looking out for studies on proper interventional methods and welcomes any input.

5.4 Cai Wenjia invited collaboration on working on a common methodology that translates heat related health impacts to monetary values. She is especially keen to learn about the economic costs of certain diseases, or costs of illnesses that are closely related to heat.

---

<sup>4</sup> <http://www.icohweb.org/site/multimedia/news/pdf/ICOH%20Statement%20Qatar.pdf>

5.5 Matthias Otto encouraged the committee to use the Hothaps and Climatechip database<sup>5</sup> to obtain climate data. Anyone who finds the software useful may approach him for help if needed.

5.5.1 Jason Lee noted that Tord Kjellstrom, Bruno Lemke, Matthias Otto and Cai Wenjia are contributors to the Lancet Countdown report<sup>6</sup>.

6. Jason Lee thanked the participants for joining the meeting. The next SCTF meeting will prospectively be held in 6 months in Bangkok.

---

<sup>5</sup> <http://www.climatechip.org/hothaps-software>

<sup>6</sup> <http://www.lancetcountdown.org/2019-report/>

## Annex I

### List of Attendees

1. Present:

Jason LEE (Chair), National University of Singapore, Singapore

Jason GLASER, La Isla Network, U.S.A.

Seichie HORIE, University of Occupational and Environmental Health, Japan

Vidhya VENUGOPAL, Sri Ramachandra University, India

Chikage NAGANO, University of Occupational and Environmental Health, Japan

Kimie FUKUZAWA, University of Occupational and Environmental Health, Japan

Hiroyuki HIBINO, University of Occupational and Environmental Health, Japan

Natsuko HOSHUYAMA, University of Occupational and Environmental Health, Japan

Kahori HASHIMOTO, University of Occupational and Environmental Health, Japan

Masashi NAKAYAMA, University of Occupational and Environmental Health, Japan

Kimiyo MORI, University of Occupational and Environmental Health, Japan

Hiroyuki TANAKA, University of Occupational and Environmental Health, Japan

Riho TANAKA, University of Occupational and Environmental Health, Japan

2. Present via Web:

Sirkka RISSANEN (Secretary), Finnish Institute of Occupational Health, Finland

CAI Wenjia, Tsinghua University, China

Ross DI CORLETTI, Queensland University of Technology, Australia

Nicholas GOH, National University of Singapore, Singapore

Elspeth OPPERMANN, Ludwig-Maximilian University of Munich, Germany

Matthias OTTO, Nelson Marlborough Institute of Technology, New Zealand

Hsiao-Yu YANG, National Taiwan University, Taiwan



Onsite Participants:



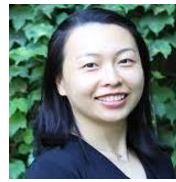
2<sup>nd</sup> Row, from left: Kimie Fukuzawa, Natsuko Hoshuyama, Kahori Hashimoto, Masashi Nakayama, Hiroyuki Tanaka, Hiroyuki Hibino, Kimiyo Mori, Riho Tanaka

1<sup>st</sup> row, from left: Seichie Horie, Vidhya Venugopal, Jason Glaser, Jason Lee, Chikage Nagano

Online Participants:



Sirkka Rissanen



Cai Wenjia



Ross Di Corletto



Nicholas Goh



Elsbeth Oppermann



Matthias Otto



Yang Hsiao-Yu



Onsite Participants at ICOH SCTF 2<sup>nd</sup> Meeting, University of Environment and Occupational Health, Kitakyushu, Japan, 28 Oct 2019.



ICOH SCTF at the *Impacts of Heat on Human Health and Performance* Conference, Kitakyushu International Conference Centre, Kitakyushu, Japan, 27 Oct 2019.