

## Asia Pacific Mercury Monitoring Network

### **The 10<sup>th</sup> Annual Asia Pacific Mercury Monitoring Network (APMMN) Partners Meeting**

#### **Virtual Workshop**

**October 6, 2021**

**Starting at 9:00 am (Taiwan Time)**

**Organizers: Environmental Protection Administration Taiwan  
United States Environmental Protection Agency  
Center for Environmental Monitoring and Technology, NCU  
National Atmospheric Deposition Program**

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# About APMMN

## Mercury Concerns in Asia

Mercury (Hg), a persistent and bioaccumulative toxicant of increasing global concern, is dispersed worldwide primarily via long-range atmospheric transport. Methylmercury (MeHg), the most toxic species of Hg, is a neurotoxin that can cause long-term development delays in children. Because consumption of marine fish is the primary exposure route through which people are exposed to MeHg, methylation of inorganic Hg in aquatic environments and its subsequent accumulation in fish are major environmental concerns for human health. However, the main source of inorganic Hg is from the atmosphere for many aquatic systems, such as the open ocean worldwide.

Asia is the largest source region of atmospheric mercury and emissions continue to increase rapidly. The rapid growth of economic and industrial activities in Asia marked by the massive consumption of coal, petroleum, and fossil fuels has resulted in a dramatic increase of atmospheric mercury emissions. It is expected that mercury deposition within Asia will also continue to increase, leading to more mercury health issues in the region.

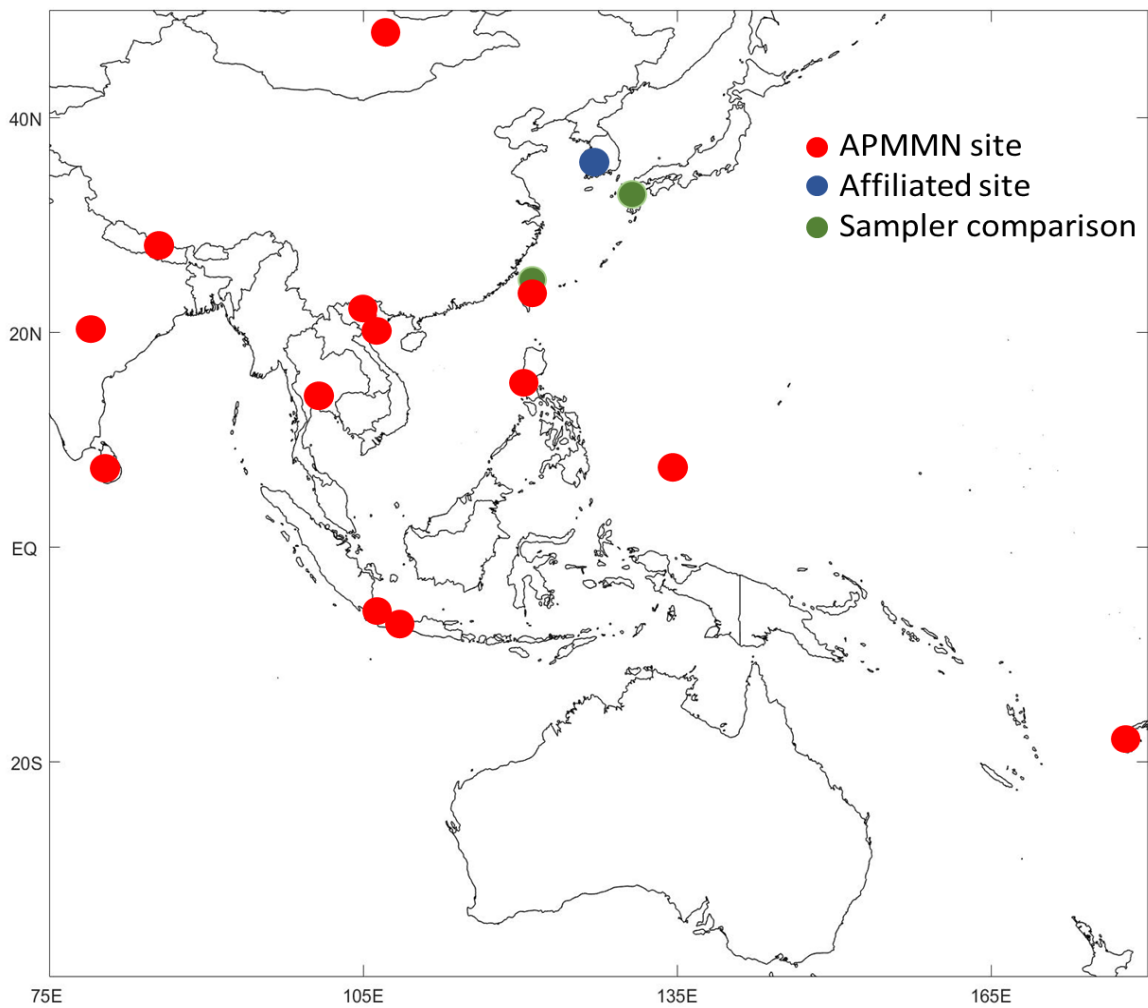
At present, scientists and decision-makers in the Asia-Pacific region must rely on limited information to understand and quantify the critical linkages between mercury emissions, environmental response, and potential human health concerns. As a primary mercury source region with limited mercury information and data, Asia is a particularly important region to further develop monitoring capacity.

The Asia Pacific Mercury Monitoring Network (APMMN) is a cooperative effort involving many different groups, including environmental ministries and federal government agencies, academic institutions, and scientific research and monitoring organizations. The goal of the APMMN is to systematically monitor wet deposition and atmospheric concentrations of mercury in a network of stations throughout the Asia-Pacific region. Objectives of the APMMN include:

- Determine the status and trends in: concentrations of ambient air mercury species - Gaseous Oxidized Mercury (GOM), Particulate Bound Mercury (PBM2.5), Gaseous Elemental Mercury (GEM); and wet, dry and total atmospheric deposition of mercury.
- Assist partner countries in developing their mercury monitoring and assessment capacity by providing training on multi-media (e.g., air, precipitation, water, sediment, biota) sampling and analytical methods, and best practices.
- Provide a robust dataset for regional and global model input.
- Share data and monitoring information among network partners.



# APMMN Sitemap

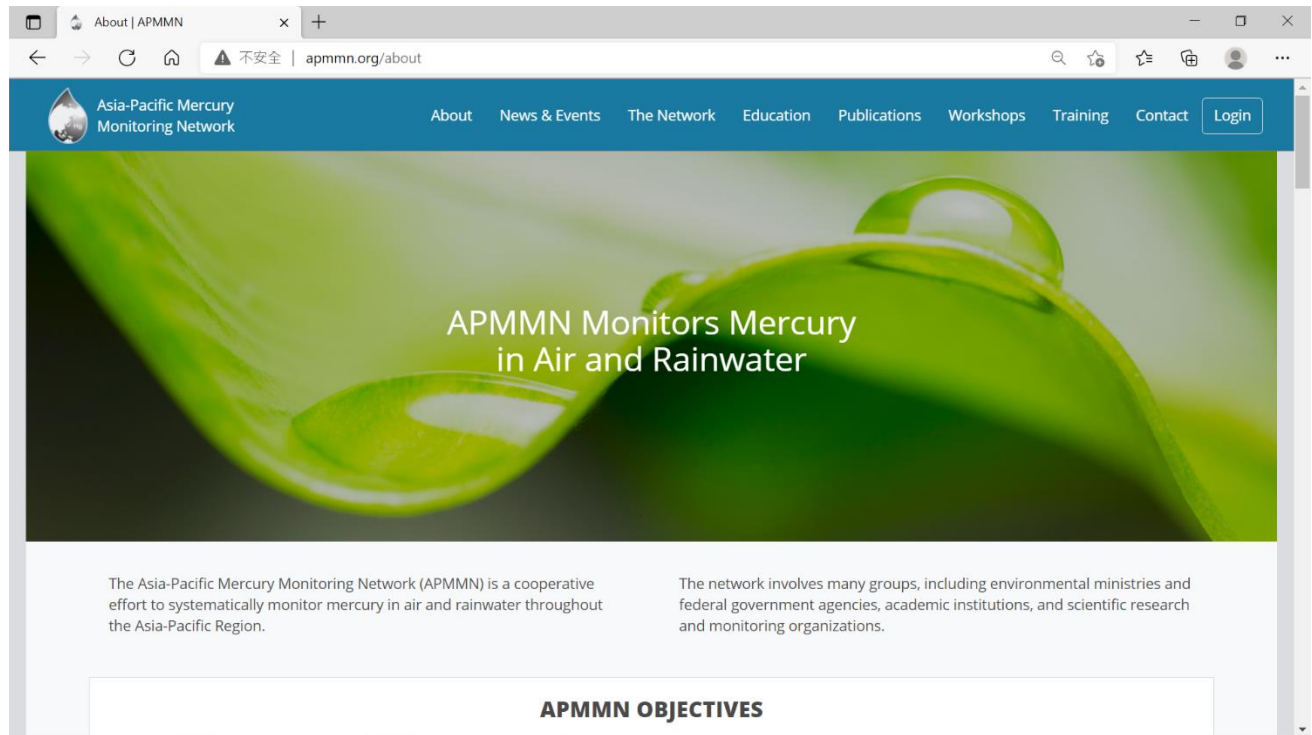


Country	Site ID
Fiji	APFJ01
India	APIN01
Indonesia	APID01
Indonesia	APID02
Korea	APKRA2
Mongolia	APMN01
Nepal	APNP01

Country	Site ID
Palau	APPW01
Philippines	APPH01
Sri Lanka	APLK01
Taiwan	APTW01
Thailand	APTH01
Vietnam	APVN01
Vietnam	APVN02

# APMMN Website

<http://apmmn.org/>



# Contact Information

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## United States Environmental Protection Agency

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## National Atmospheric Deposition Program

Dr. David A. Gay

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# Event Date

Starting at 9:00 am on Wednesday, October 6, 2021 (Taiwan Time)

Time zone	Country	APMMN		
		date	begin	end
UTC-4:00	Canada Eastern Time	5 Oct., 2021 (Tuesday)	21:00	01:00
UTC-4:00	United States Eastern Time	5 Oct., 2021 (Tuesday)	21:00	01:00
UTC-5:00	United States Central Time	5 Oct., 2021 (Tuesday)	20:00	24:00
UTC+2:00	South Africa	6 Oct., 2021 (Wednesday)	03:00	07:00
UTC+5:30	India, Sri Lanka	6 Oct., 2021 (Wednesday)	06:30	10:30
UTC+5:45	Nepal	6 Oct., 2021 (Wednesday)	06:45	10:45
UTC+7:00	Indonesia, Thailand, Vietnam	6 Oct., 2021 (Wednesday)	08:00	12:00
UTC+8:00	Malaysia, Mongolia, Philippines, Taiwan	6 Oct., 2021 (Wednesday)	09:00	13:00
UTC+9:00	Japan, Korea, Palau	6 Oct., 2021 (Wednesday)	10:00	14:00
UTC+11:00	Australia	6 Oct., 2021 (Wednesday)	12:00	16:00
UTC+12:00	Fiji	6 Oct., 2021 (Wednesday)	13:00	17:00

# Link to Meeting

The event will be held online using [Google Meet](#).



# Technical Specifications

To ensure the safety and healthiness of all event participants, the event will be held online using **Google Meet**. No cross-country travel will be required, and the participants can join the event at their own home or office via the internet. To ensure that the participants of this event will be able to efficiently interact with speakers, mentors, and other participants, we recommend the following Hardware minimum requirements

([https://support.google.com/meet/answer/7317473?hl=en&ref\\_topic=7306097](https://support.google.com/meet/answer/7317473?hl=en&ref_topic=7306097))

Attendees who joins via mobile device will be required to download the Google Meet application.

Before the workshop date, please see below for the instruction to download the application or joining with a web browser. If the participants cannot use the software, or for any other technical problems, please contact Mr. Da-Wei Lin (dwlin@g.ncu.edu.tw) for instruction.

## **[How to download a Google Meet Application]**

Mobile app for iPhone & iPad: <https://apps.apple.com/us/app/meet/id1013231476>

Mobile app for Android:

<https://play.google.com/store/apps/details?id=com.google.android.apps.meetings>

## **[How to Join a video meeting]**

Desktop app on Windows or Mac:

[https://support.google.com/meet/answer/9303069?hl=en&ref\\_topic=7192926&co=GENIE.Platform%3DDesktop&oco=1](https://support.google.com/meet/answer/9303069?hl=en&ref_topic=7192926&co=GENIE.Platform%3DDesktop&oco=1)

Mobile app for iPhone & iPad :

[https://support.google.com/meet/answer/9303069?hl=en&ref\\_topic=7192926&co=GENIE.Platform%3DiOS&oco=1](https://support.google.com/meet/answer/9303069?hl=en&ref_topic=7192926&co=GENIE.Platform%3DiOS&oco=1)

Mobile app for Android:

[https://support.google.com/meet/answer/9303069?hl=en&ref\\_topic=7192926&co=GENIE.Platform%3DAndroid&oco=1](https://support.google.com/meet/answer/9303069?hl=en&ref_topic=7192926&co=GENIE.Platform%3DAndroid&oco=1)

## **[How to share screen images in a video conference]**

Desktop app on Windows or Mac:

Present during a meeting

1. Join a video meeting.

2. In the bottom-right corner, select Present now.
3. Select Your entire screen, A window, or Chrome tab.
  - If you present a Chrome tab, it shares that tab's audio by default.
  - To present a different tab, at the bottom of your screen, select Change source.
4. Select the content you'd like to share.
5. Select Share.
6. If someone is presenting, confirm that you want to present instead.



If your camera is turned on, your video is active while you're presenting.

#### Stop presenting

- In the Meet window, click Stop Presenting.
- In the bottom-right corner, you can also click You are presenting > Stop presenting.

#### Present if someone else is already presenting

1. In the bottom-right corner, click Present now.
2. Select Your entire screen or A window.
3. Select Present instead.

If another participant presents their screen, you'll get a notification that your presentation is still visible to others. You can click the buttons in the notification to end or resume your presentation.

#### Join only to present

When you join to present, only your computer's window or application is displayed in the meeting.

No audio or other video is sent or received.

1. Go to <https://meet.google.com/>.
2. Select the scheduled meeting, or click Join or start a Meeting.
3. Enter a meeting code.
4. Click Present.
5. Select a window or application.
6. Select Share.

Mobile app for iPhone & iPad :

Present during a meeting

To present your mobile screen, start a broadcast on your iOS device.

1. Join a video meeting using the mobile app.
2. Tap More > Present screen.
3. Tap Start Broadcast.
4. Everything on your screen will be presented to everyone in the Meet meeting.

Join only to present

<https://storage.googleapis.com/support-kms-prod/AcqNC8dkSsLleBihQz2X4dXUN470wki54SUy>

When you join to present, only your window or application is displayed in the meeting. No audio or other video is sent or received.

1. Open the Meet app and select an option:
  - Swipe up from the bottom and select a scheduled meeting.
  - Tap Meeting code and enter the meeting code or nickname. The hyphens in the code are optional.
2. Instead of Join meeting, tap Present.

### 3. Tap Start Broadcast.

Everything on your screen will be presented to everyone in the Meet meeting. No audio is sent or received.

Stop presenting

In the Meet app, tap Stop Broadcast.

You can also tap the red banner at the top of any screen, and tap Stop.

Present if someone else is already presenting

You can present your screen even if someone else is already presenting.

**Mobile app for Android:**

Present during a meeting

To present your mobile screen, select the Present screen option in your Android Meet app.

1. Join a video meeting using the mobile app.
2. Tap More > Present screen.
3. Everything on your screen will be presented to everyone in the Meet meeting.

Join only to present

<https://storage.googleapis.com/support-kms-prod/AcqNC8dkSsLleBihQz2X4dXUN470wki54SUy>

When you join to present, only your window or application is displayed in the meeting. No audio or other video is sent or received.

1. Open the Meet app and select an option:
  - Swipe up from the bottom and select a scheduled meeting.
  - Tap Meeting code and enter the meeting code or nickname. The hyphens in the code are optional.
2. Instead of tapping Join meeting, tap Present.

Everything on your screen will be presented to everyone in the Meet meeting. No audio is sent or received.

Stop presenting

In the Meet app, tap Stop presenting.

Present if someone else is already presenting

You can present your screen even if someone else is already presenting.

# Agenda

## 10th Annual Asia-Pacific Mercury Monitoring Network Partners Meeting

Starting at 9:00 am on Wednesday, October 6, 2021 (Taiwan time)

Virtual Meeting on [Google Meet](#)

Time	
09:00-09:20	<b>Welcome, Meeting Overview, and Opening Remarks</b>  Hung-Teh Tsai, Deputy Minister, Environmental Protection Administration, Taiwan  Mark Kasman, Director, Office of International Affairs, US Environmental Protection Agency, USA
09:20-09:50	<b>APMMN Overview and State of the Network</b>
09:20-09:40	<i>State of the Network and Results of the Sampler Inter-Comparison and MerPAS Studies</i> Guey-Rong Sheu, National Central University, Taiwan
09:40-09:50	<i>Mercury Central Analytical Lab and Site Liaison Reports</i> Da-Wei Lin, National Central University, Taiwan
09:50-11:05	<b>Invited Talks</b>
09:50-10:15	<i>Using the HYSPLIT Model to Help Interpret Atmospheric Mercury Monitoring Data</i> Mark Cohen, National Oceanic and Atmospheric Administration, USA
10:15-10:40	<i>Latest Update of the Minamata COP4 and Outlines of Laboratory Proficiency Testing</i> Mick Saito, United Nations Environment Programme Regional Office for Asia and the Pacific
10:40-11:05	<i>An Update from the U.S. Mercury Networks (National Atmospheric Deposition Program)</i> David Gay, National Atmospheric Deposition Program, USA

<b>11:05-12:35</b>	<b>APMMN Partner Updates</b>
11:05-11:10	<b>Canada</b> Alexandra Steffen, Environment and Climate Change Canada
11:10-11:15	<b>Fiji</b> Vincent Lal, Univ. of the South Pacific
11:15-11:20	<b>India</b> Asif Qureshi, Indian Institute Technology
11:20-11:25	<b>Indonesia</b> Ely Rahmy Tapriziah, Centre for Standardization of Environmental Quality Instrument (CSEQI)
11:25-11:30	<b>Japan</b> Kohji Marumoto, National Institute of Minamata Disease
11:30-11:35	<b>Korea</b> Seunghee Han, Gwangju Institute of Science and Technology
11:35-11:40	<b>Malaysia</b> Ambun Dindang / Ahmad Fairudz Jamaluddin, Malaysian Meteorological Department (MET Malaysia)
11:40-11:45	<b>Mongolia</b> Enkhmaa Sarangerel, National Agency for Meteorology and Environmental Monitoring
11:45-11:50	<b>Nepal</b> Ashmita Oli, Department of Environment
11:50-11:55	<b>Palau</b> Darwin Florencio, Environmental Quality Protection Board
11:55-12:00	<b>Philippines</b> Jundy Del Socorro, Philippines Department of Environment and Natural Resources
12:00-12:05	<b>South Africa</b> Lynwill Martin, South African Weather Service
12:05-12:10	<b>Sri Lanka</b> Anurudha Karunaratne, University of Peradeniya
12:10-12:15	<b>Taiwan</b> Chihwei Andrew Chang, Environmental Protection Administration

12:15-12:20	<b>Thailand</b> Chanthiraporn Tangsuwan, Environmental Research and Training Center, Ministry of Natural Resources and Environment
12:20-12:25	<b>Vietnam</b> Pham Thi Vuong Linh, Northern Centre for Environmental Monitoring, Vietnam Environment Administration
12:25-12:30	<b>Vietnam</b> Le Hoai Nam, Southern Centre for Environmental Monitoring, Vietnam Environment Administration
12:30-12:35	<b>Australia</b> Jennifer Powell, Commonwealth Scientific and Industrial Research Organisation (CSIRO)
<b>12:35-12:45</b>	<b>Questions and Discussion</b>
	<b>Closing Remarks</b>