



## Minutes of CLIVAR/GEWEX Monsoons Panel Meeting

### MEETING INFORMATION

Meeting Number	2024-6	Meeting Title	CLIVAR/GEWEX Monsoons Panel Meeting
Objective/Purpose	Discuss on the Agenda Items and progress on action items		
Time & Date	13 September 2024 06-08 UTC	Venue	Microsoft Teams Video Conference

### MEETING DETAILS

Chairperson(s)	Leila Carvalho (MP Co-Chair)	Rapporteur(s)	E.N. Rajagopal
Attendees	<b>MP:</b> Leila Carvalho, Annalisa Cherchi, Satyaban Ratna, Hiroshi Takahashi, Hui Su, Samson Hagos, Thea Turkington <b>WCRP Secretariat:</b> Lian Xue <b>IMPO:</b> E.N. Rajagopal, Rupakumar		
Absentees	<b>MP:</b> Suryachandra Rao A., Jhan-Carlo Espinoza, Ruth Cerezo-Mota, Shabehul Hassan, Salvatore Pascale, Ajaya Mohan Ravindran, Rondrotiana Barimalala, <b>IMPO:</b> Susmitha Joseph		

### ACTIONS

Deadline	Action	Responsible
As and when required	Updating of contents of webpages and websites of Monsoons Panel, populating the IMPO webpage with more information on the activities of panel and WGs.	MP & IMPO
Ongoing	Continue to build connections with other panels and Light House Activities (LHA) of WCRP and make strong linkages with partner projects.	MP members & Co-Chairs
Ongoing	MP members to participate in WG meetings of their interest and collaborate on any activity.	MP members & Co-Chairs
15 December 2024	MP's 2024 Annual Report finalization	Co-chairs of MP & WGs and IMPO
31 December 2024	MP's 2025 Membership updation	MP Co-chairs & IMPO
31 December 2024	Reconstitution of all regional Working Groups after consultations with various stakeholders	MP & IMPO

## AGENDA AND KEY OUTCOMES

Agenda Point	Description
1	<p><b>Opening Remarks (Leila):</b></p> <ul style="list-style-type: none"> <li>Leila (Co-Chair) welcomed all the members present in the meeting. Screenshots of the in-progress online meeting can be found in Appendix-I.</li> </ul>
2	<p><b>Updates from the Regional Working Groups:</b></p> <p>❖ <b>WG on Asian-Australian Monsoons [WG-AAM]: - (Thea)</b></p> <p><b>1) Activity Highlights of the Sub-Groups (SG):</b></p> <ul style="list-style-type: none"> <li>SG1: Monsoon Processes and Teleconnections: <ul style="list-style-type: none"> <li>Group met to discuss how to proceed in this group. During this meeting, identified topics of interest (that people are working on that others are interested to contribute to), and plan is to publish work together (along with researchers outside of the group).</li> </ul> </li> <li>SG2: R2O for monsoon seasons in SE Asia: <ul style="list-style-type: none"> <li>Continued work on the development of a wind-based index for the monsoon seasons in Southeast Asia, with a draft paper under preparation (aim to submit end of the year).</li> </ul> </li> <li>SG3: High impact weather events: <ul style="list-style-type: none"> <li>While there was little discussion during the boreal summer, group has met recently start work on the paper again (on comparison of high-impact events across the AAM region). Plan to have meetings monthly to keep the momentum going.</li> </ul> </li> </ul> <p><b>2) Other Activities:</b></p> <ul style="list-style-type: none"> <li><i>Updates on membership:</i> 5 members are ending their terms in the working group, with 5 new members being proposed (to be submitted soon to the monsoon panel). The two Co-chairs (Gill Martin and Tieh Yong) will be stepping down end 2024 and mid-2025, respectively. Potential replacements have been identified, and nominations to be sent to MP soon as well. Some members will request to continue, and others may rotate off, and WG will consider suggestions for new members.</li> <li><i>GEWEX article:</i> This has been finalized and will be published when the next issue comes out. Discussing about what to do about monsoon 2024 (as well as the austral summer monsoon). Potential to have short report on website, or maybe even a short journal article. Plan to discuss the monsoon over the past year in Oct/Nov.</li> <li><i>GEWEX OSC:</i> Joint meeting (MP &amp; AAM) took place, with a number of WG members attending in person.</li> <li><i>IWM-8:</i> A number of members have joined the International Scientific Committee (ISC). WG members were encouraged to submit to this conference, and a couple of submissions have been identified.</li> <li>Discussed the AAS special issue with Annalisa, where she raised the potential to include those from IWM-8.</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>Discussions on the 2024 Asian Summer Monsoon, which followed the WG-AMM's updates are given in Appendix-II</li> <li><i>Rajagopal:</i> Gill has submitted WG-AAM's proposal on membership revisions for 2025. WG-AAM's recommendations are summarised below: <ul style="list-style-type: none"> <li>To extend the tenures of 12 of their existing members till the end of 2026 (except Dr. Gill Martin till 2025)</li> </ul> </li> </ul>

- To rotate off 5 existing members (Drs. H. Annamalai, Suryachandra Rao A., Usha Tune and Huqiang Zhang, P. Mukhopadhyay).
- To fill up the 5 vacant positions for the period 2025-2027 with the following:
  - 1) Dr. Hui Su (Current MP Member from China)
  - 2) Dr. Hiroshi Takahashi (Current MP Member from Japan)
  - 3) Dr. Tim Cowan (BoM/University of Queensland, Australia)
  - 4) Dr. Zizhen Dong (Yunnan University, Kunming, China)
  - 5) Dr. Ankur Srivastava OR Dr. Maheshwar Pradhan (IITM, Pune, India)
- To make Dr. Lin Wang and Dr. Thea Turkington as Co-chairs from January 2025 and July 2025 respectively as replacements of the current Co-chairs.

❖ **WG on African Monsoons [WG-AFM]: - (Samson)**

**1) Activity Highlights:**

- The paper on the African monsoon rainfall has been submitted to the special issue on Global and Regional monsoon in Advances in Atmospheric Sciences, Coordinated by Annalisa.
- There is a new [African Meteorological Society](#) (AfMS), which is a consortium of national meteorological associations and as well as a lot of Africans in diaspora. They have a plan to have a Joint [AfMS-WMO Conference](#) in Addis Ababa, Ethiopia during 27-30 April 2025 and there is a call for papers. More details are available [here](#).

**Comments from members:**

- *Leila*: Last time there was a mention about a subgroup also studying extremes and ENSO teleconnection. Were there any meetings to discuss further on this?
- *Samson*: Rondo has this plan of discussing the impacts of the most recent SST patterns on extremes, but she probably got quite busy with many other things she has not followed up yet.
- *Rajagopal*: What happened to the observational campaign over East Africa project which has been submitted to U.S. Department of Energy (DoE), Atmospheric radiation Measurement (ARM)?
- *Samson*: It is an Observational Facility to eastern Africa to the northeastern coast of Lake Victoria in the African Highlands to study convection during the rainy seasons of the region. The proposal is still pending, and we are hoping to hear from the DoE by the end of September.
- *Lian Xue*: Just a kind reminder that the call for WCRP Fellowship focus on Africa is still open (until 30th September), maybe it is worth for advertising it in WG-AFM and the African Meteorological Society: <https://www.wcrp-climate.org/about-wcrp/fellowship-global-south>

❖ **WG on American Monsoons [WG-AMM]: - (Leila)**

- Ruth is busy with the organization of the Workshop on the American Monsoons in Mexico for which ICTP has provided some funds. They could not get funding from CLIVAR or GEWEX
- Alice has been trying to put together the special edition for the journal “Advances in Atmospheric Sciences” on the South American monsoon.

**Comments from members:**

- *Rajagopal*: Both CLIVAR and GEWEX are very critical about WG-AMM and feels that WG not doing enough. Under these circumstances, it is difficult to get funds from both. There is a possibility of getting travel support to participate in IWM-8 next year.
- *Leila*: US-CLIVAR will provide funding only if US scientists are involved in the activity.

## Updates from IMPO (Rajagopal):

### 1) Activity Highlights:

- **Activities related with GEWEX OSC-2024 (8-12 July 2024, Sapporo, Japan):**
  - IMPO played a key role in the organization of the **Sixth Session of CLIVAR/GEWEX Monsoons Panel** and the **Joint Meeting between MP and WG-AAM** held in hybrid mode on 11<sup>th</sup> July 2024 during 7-9 PM (Japan Time).
    - Nine members from MP and WG-AAM attended the session in-person.
    - Xubin Zeng (Co-chair, GEWEX SSG) and Francois Engelbrecht (Co-chair, CLIVAR SSG) attended in-person as special invitees. Hindumathi Palanisamy attended as WCRP Secretariat representative. Sonya Legg (Co-chair, CLIVAR SSG) attended online
    - MoM of the Sixth session was finalized & circulated on 2<sup>nd</sup> September and the MoM was also uploaded into Monsoons Panel Notebook.
  - IMPO supported the Monsoons Panel in the successful organization of the Session 10 on “Monsoons (Special Session celebrating 150 years of IMD)” held in 2 parts on 10<sup>th</sup> July 2024.
  - IMPO Executive Head participated in the GEWEX OSC with IITM travel support.
- IMPO is playing a key role in the organization of the Eighth WMO International Workshop on Monsoons (IWM-8) at IITM Pune, India to be held during 17-21 March 2025:
  - Actively participated in the in-person discussions between IWM-8 ISC Co-chairs (Yali Luo and R. Krishnan) on the scientific programme of IWM-8, number of Invited/Oral talks, etc., held on 9<sup>th</sup> July 2024. After the meeting a draft “Scientific Programme Template” was created and circulated to the Co-chairs, which was subsequently finalized based on the suggestions from the Co-chairs on 11<sup>th</sup> July 2024
  - The first announcement circular of IWM-8 was drafted and circulated to all ISC members for comments/suggestions and subsequently released to the public.
  - Initiated the development of IWM-8 website (<https://wmo-iwm8.tropmet.res.in>) with the help of IITM IT support team and made public before the release of the first announcement circular of IWM-8.
  - IMPO played a key role in obtaining approvals from MoES for the organization of IWM-8.

### 2) Future Activities:

- a) IMPO will continue to provide support in the organization of IWM-8 at IITM, Pune.
- b) IMPO will work on MP Membership revisions for 2025
- c) IMPO will work on reconstituting the regional WGs as their membership tenures are ending in December 2024

### Comments from members:

- *Thea*: The in-person meeting according to WG colleagues who attended was really nice. Particularly that first subgroup actually meeting in-person and discussing has really motivated them to go forward, which is something that is difficult to do online, especially if you're not really so familiar with each other. In future MP sessions meetings too, hopefully we can continue doing this rotation for being able to meet in person, which can be valuable.
- *Leila*: Will there be travel support for IWM-8 from CLIVAR and GEWEX?
- *Rajagopal*: Both CLIVAR and GEWEX have in-principle agreed to provide 10K CHF/USD each respectively to fund members from developing countries/ECRs. So, it may be possible to support few members who have submitted abstracts. WWRP has also allocated 20K CHF for participants from ECRs/developing countries.

	<ul style="list-style-type: none"> <li>○ <i>Rajagopal</i>: CLIVAR is planning to have an in-person meeting with all their panels including MP in the second half of next year. The processes for fixing the location and dates are ongoing. They may be able to support some of the members to attend.</li> <li>○ <i>Rupakumar</i>: Is there any scope for some cross panel activity in the side-lines of IWM-8? At least with the Indian Ocean Region Panel (IORP) and the Pacific Region Panel (PRP) could be contacted. This could be useful to MP's cross-panel activities.</li> <li>○ <i>Rajagopal</i>: Shall discuss with IWM-8 ISC and Surya on this.</li> </ul>
4	<p><b>Discussions on the Sixth Session of CLIVAR/GEWEX Monsoons Panel and the Joint Meeting between MP &amp; WG-AAM held at Sapporo (Rajagopal):</b></p> <ul style="list-style-type: none"> <li>• Most of the things on the outcome of six session have been already discussed earlier under IMPO updates. The detailed minutes of the session were sent to all members.</li> <li>• One important item, which Surya committed in the meeting is to prepare a Concept Note on how to integrate all the cross-panel activities and seek support from CLIVAR and GEWEX, which can subsequently become an independent activity involving many of the CLIVAR/GEWEX panels. The deadline for preparing the Concept Note is 31<sup>st</sup> October 2024 as mentioned in minutes of the 6<sup>th</sup> Session.</li> <li>• Co-chairs of all the four GEWEX panels were invited to attend the 6<sup>th</sup> session either in-person or online. However, none could attend the meeting due to other commitments.</li> </ul>
5	<p><b>Discussions on Scientific/Technical/Cross-Panel Activities (Rajagopal):</b></p> <ul style="list-style-type: none"> <li>• Surya has proposed to have some discussions/presentations on Scientific/ Technical/ Cross-Panel Activities from the members in every MP meeting. Surya has been attending GEWEX SSG meetings regularly and found that each of their panels also report their scientific/technical activities in the SSG meetings. So, he wants to bring in some scientific/technical discussions into MP meetings along with the routine discussion on updates of WGs/IMPO.</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>○ <i>Leila</i>: So, the idea is to bring more scientific discussions MP meeting. In today's meeting we had some discussions what is happening with the monsoon this year. These discussions could be led by the Co-chairs of the working groups or MP members.</li> <li>○ <i>Rajagopal</i>: Suppose one has an interesting idea and then that can be presented, subsequently, it can go back to regional working groups to start some new activity.</li> <li>○ <i>Thea</i>: It is a great idea. We can add quite a bit of structure to it, so that it is just one in each meeting of 20 minutes. We will need to coordinate the time zone with the speakers and fix it in the good time zone for them.</li> <li>○ <i>Annalisa</i>: The idea to have more science in MP meetings could be great as it could probably help a bit more to fully understand what is happening in the different working groups, even if we have the update. So, sometimes I attend the meetings of WG-AAM to understand their activities more. However, sometimes it is a bit difficult to find a way to effectively do science together with the other members and hence having this spot within MP meeting would help a bit more to have as these exchanges.</li> </ul>
6	<p><b>Open Discussion on the ongoing MP &amp; WG activities (All):</b></p> <ul style="list-style-type: none"> <li>○ <i>Satyaban</i>: China Meteorological Administration (CMA) is planning to prepare an international programme entitled "Asian-African Australian (3A) Monsoons" to promote the understanding of weather and climate extremes (WACE) and their impacts under the background of global warming in the region of 3A monsoons. This programme also aims at developing the high-resolution numerical model</li> </ul>

	<p>prediction system to improve the seamless forecasting capabilities of WACE over this region. In order to communicate with partners and improve the proposal, CMA intends to host an open discussion workshop on 19<sup>th</sup> November 2024 at Qingdao International Conference Center, Qingdao, Shandong, China.</p> <ul style="list-style-type: none"> <li>○ <i>Satyban</i>: I also got an invitation from them to attend this hybrid meeting. Have other MP members got invitation? I wanted to know how the current MP and WG activities can be linked to this new programme?</li> <li>○ <i>Rajagopal</i>: Many MP members (Surya, Thea, Satyaban, ) have got invitations. Surya plans to attend online. WCRP JSC Chair is keen to know who all from MP and WGs plans to attend this workshop. He is a bit apprehensive of this new programme as it overlaps with WCRP's activity on monsoons. ICPO has also requested for the list of attendees.</li> <li>○ <i>Thea</i>: They have sent the agenda for this workshop; it is only a 2-hour event. It has discussions on recent progress on Asian, African, and Australian monsoon program.</li> <li>○ <i>Annalisa</i>: WCRP may be thinking that there is the risk that CMA's new programme is going eventually to ask for money to do their activities in this framework, which could overlap with our activities or eventually put down the activities that we are doing within the WCRP.</li> <li>○ <i>Rajagopal</i>: That is the fear I think WCRP has, because we have 2 programmes, which are almost similar doing the same work.</li> <li>○ <i>Lian Xue</i>: I believe CMA does not want to overlap or replace anything in the WCRP's monsoon activity, so they are seeking some advice or suggestions from our monsoon experts to see if they have any ideas or suggestions about this new project proposal. They just want people from the Monsoons Panel, CLIVAR, GEWEX to give them some feedback or their opinions about the proposal.</li> </ul>
7	<p><b>Any other business:</b></p> <ul style="list-style-type: none"> <li>• Lian Xue of WCRP Secretariat introduced herself. She is employed as a Junior Professional Officer for 1 year and mostly works with Hindumathi to support projects involving hydrology, precipitation, and monsoons. She will be supporting the upcoming IWM-8 as well.</li> <li>• <i>Thea</i>: WG-AAM was interested in organizing a webinar under Joint WCRP/WWRP MP Monsoon Webinar series next year. Are there plans to continue with Monsoon Webinar series?</li> <li>• <i>Leila</i>: It is a great idea. We should continue with the series. In the next round we should talk about specific things like climate change and regional monsoons or extremes, etc.</li> <li>• <i>Thea</i>: Will we have that support again to help prepare the Flyers, for the registration of attendees, and set up the zoom link? If the support is not there, then maybe we shouldn't do the webinar as it would take lot of work.</li> <li>• <i>Rajagopal</i>: Shall discuss with Hindumathi and Lian and get back soon. If we are doing it, 2 months' notice will be required.</li> <li>• <i>Rajagopal</i>: As we are approaching year end, inputs for the MP 2024 Annual Report may be consolidated. Will be writing to all WG Co-chairs and MP members for their inputs. If the other 2 WGs also follow how WG-AAM updates the MP Notebook, it would have been easier to compile the activities.</li> <li>• <i>Annalisa</i>: We were supposed to have this special issue in AAS about the global and regional monsoons. We have a few papers submitted, but they are a bit fewer than we were expecting as it was based on an invitation. So, my idea is to write to the guest editor and asking whether they would agree to check if it is possible to extend the deadline. The IWM-8 is also planning to have a special issue and this special issue could happen later at the end of 2025. Having a few more contributions also from the abstracts of IWM-8 would be helpful to make AAS special issue a bit larger collection, otherwise we have just very few contributions,</li> </ul>



	<p>unless there are some paper that you have ongoing within the working group that could be submitted in a few months.</p> <ul style="list-style-type: none"> <li>• <i>Leila</i>: Alice Grimm is also organizing a special issue on the American Monsoon for the AAS. So, perhaps you should talk to her. I don't know how this will work because there are two special issues on monsoons accepted in AAS.</li> <li>• <i>Annalisa</i>: It seems so, because when I was asked to if I was interested in helping with this special issue on the global monsoons, they already had this discussion ongoing about the special issue on the American Monsoons. I don't know why It was not proposed to merge both. I don't know how this contact and decision at the very beginning went. But yes, afterwards Alice promised a submission, a review paper on the American Monsoons for this global and region monsoon collection which I am coordinating. And now I am going to check what is the status of this and additionally check her views on merging the two.</li> </ul>
8	<p><b><i>Date/time of next meeting (Lead: Leila):</i></b></p> <ul style="list-style-type: none"> <li>• The next meeting will be in November at a time convenient to American Continent</li> </ul>

**NEXT MEETING**

<b>Meeting Number</b>	2024-7	<b>Meeting Time &amp; Date</b>	16-18 UTC in the 2 <sup>nd</sup> half of November 2024
<b>Location</b>	MS Teams Online Meeting		

The screenshot shows a Microsoft Teams meeting window. The main content area displays a document titled "Monsoons Panel Notebook" with the following text:

**MP: 2024-6 (13 Sept2024)**  
09 September 2024 11:03

**CLIVAR/GEWEX Monsoons Panel (MP: 2024-6) Meeting**  
**13 September 2024 (06-08 UTC)**

**Agenda**

1. Opening remarks (Leila & Surya) - 4 min
2. Updates from WGs:
  1. WG-AAM (Thea) - 5 min
  2. WG-AFM (Rondro) - 5 min
  3. WG-AMM (Ruth) - 5 min
3. Updates from IMPO (Rajagopal) - 5 min
4. Discussions on the outcomes of the Sixth Session of CLIVAR/GEWEX Monsoons Panel and the Joint Meeting between MP & WG-AAM held on 11<sup>th</sup> July 2024 at Sapporo (Lead: Surya).
5. Discussions on the Scientific/Technical/Cross-Panel Activities (Lead: Surya) – 20 min
6. Open Discussion on the ongoing MP & WG activities (All) – 15 min
7. Any other business - 5 min
8. Date/time of next meeting (Leila/Surya) - 3 min

Microsoft Teams Meeting  
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The right sidebar shows a list of participants: E N Rajagopal, ANNALISA CHERCHI, Hagos, Samson M, Thea, Leila Carvalho, hiroshi3, and Lian Xue.

The screenshot shows a Microsoft Teams meeting grid with participants: E N Rajagopal, ANNALISA CHERCHI, Thea, Hagos, Samson M, Leila Carvalho, hiroshi3, and Lian Xue. The right sidebar displays initials in circles: DP (Dr. Satyaban B Ratna IM...) and SH (SU Hui).

Screenshots of the in-progress online MP meeting held on 13<sup>th</sup> September 2024



## Discussions on the 2024 Asian Summer Monsoon

- *Leila*: How was the monsoon this year in Asia?
- *Thea*: Due to the typhoon activity over the region there was heavy rainfall in SE Asia and after that they had continuous rain afterwards. There was a bit of a strengthening of the southwest monsoon which led to parts of Hanoi getting flooded. Similarly, Philippines also faced extreme events. So, there has been a lot of extremes in Southeast Asia this season.
- *Satyaban*: So, far the southwest monsoon over India is 9% above normal, although though there was very deficient rainfall in June (which was around -10% deficient to the long-term climatology), India received very good amount of rainfall in July, August and September, with many extreme events. As several cyclonic depressions and deep depressions passed through central India, many parts of India received very extreme heavy rainfall which contributed to flooding events resulting in loss of life and damage to property.
- *Annalisa*: In a chat with Andy Turner, he was mentioning that there have been no breaks in monsoon this year. Is that correct? How was the IOD and the Indian Ocean?
- *Satyaban*: IOD is still in the neutral stage and La Niña has also not developed so far and this is the one of the typical years in which many climate models failed to predict the onset of La Niña as well. When our long-range forecast was issued in the month of April, we are betting on La Niña conditions to produce good rainfall this year as many of the climate models were indicating that La Niña will develop by the second half of the monsoon season in August. However so far, although the cold anomaly patterns are observed in the eastern Equatorial Pacific Ocean, the La Niña conditions has not yet reached.
- *Rupakumar*: The latest [WMO Update predicts 60% chance of La Niña](#)
- *Thea*: In our region we have been examining a lot more at the Relative Niño3.4 Index [Relative Oceanic Niño Index (RONI)] and that is more negative and more La Niña like. RONI is the same near 3.4, but it is removing the tropical mean SST anomaly, so in periods where you have it warm around the equator, you don't need to be quite so cold over Niño3.4 region and it is already approaching La Niña thresholds or has already approached that in August.
- *Thea*: On the IOD part, what was quite odd was not only at one point the models were predicting La Niña quite strongly, but they were also predicting a positive IOD, which was very odd, and they have backed away from that. More recently the models have started to be a little bit more positive IOD like in the SST patterns plus a little bit La Niña like which is very odd because from my understanding, we have not really seen. It is either under neutral IOD or negative IOD conditions that we normally have La Niña.