



## Minutes of CLIVAR/GEWEX Monsoons Panel Meeting

### MEETING INFORMATION

Meeting Number	2024-1	Meeting Title	CLIVAR/GEWEX Monsoons Panel Meeting
Objective/Purpose	Discuss on the Agenda Items and progress on action items		
Time & Date	23 January 2024 07-08:30 UTC	Venue	Microsoft Teams Video Conference

### MEETING DETAILS

Chairperson(s)	Leila Carvalho & Suryachandra Rao Anguluri (MP Co-Chairs)	Rapporteur(s)	E.N. Rajagopal
Attendees	<b>MP:</b> Leila Carvalho, Annalisa Cherchi, Gill Martin, Thea Turkington, Rondrotiana Barimalala, Hiroshi Takahashi, Hui Su, Ajaya Mohan Ravindran, <b>WCRP Secretariat:</b> Wushan Ying <b>IMPO:</b> E.N. Rajagopal, Rupakumar Kolli, Somnath Mahapatra		
Apologies	<b>MP:</b> Suryachandra Rao Anguluri, Mary Kilavi, Pankaj Kumar, Ruth Cerezo-Mota, Shabehul Hassan, Salvatore Pascale <b>WCRP Secretariat:</b> Hindumathi Palanisamy <b>IMPO:</b> Sushmitha 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
31 January 2024	IMPO to prepare the proposal for 2024 membership updates of the CLIVAR/GEWEX Monsoons Panel for submission for SSG approvals	MP & IMPO
29 February 2024	Finalize and communicate the list of volunteers for the cross-panel activities with the Pacific Region Panel and OMDP for improving model ENSO teleconnections	MP & IMPO

Deadline	Action	Responsible
29 February 2024	Finalize and communicate the list of volunteers for the cross-panel activity in the "SynObs Project" on the evaluation of the Ocean Observing System	MP & IMPO
February & March 2024	Organisation aspects of the joint WCRP/WWRP MP Webinars on African Monsoons and American Monsoons	WG-AFM, WG-AMM, IMPO & WCRP Sectt.
20 March 2024	Send doodle poll for the next online meeting of MP, preferably in the first week of April 2024	IMPO
15 July 2024	Active participation in GEWEX OSC-2024 through active participation in the monsoon sessions.	MP members, WG-AAM & IMPO

## AGENDA AND KEY OUTCOMES

Sl. No.	Description
1	<p><b>Opening Remarks (Leila):</b></p> <ul style="list-style-type: none"> <li>Leila (Co-Chair) welcomed all the MP members, WCRP Secretariat members and IMPO members present in the meeting. A screenshot of the in-progress online meeting showing the participants can be found in Appendix-I.</li> </ul>
2	<p><b>Updates from the Regional Working Groups:</b>  <b>(A) 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>This subgroup activity has stalled somewhat but members have volunteered to join the cross-panel activity on tropical ocean basin interactions with the Pacific Region Panel and OMDP (Ocean Model Development Panel) (see below).</li> </ul> </li> <li>SG2: R2O for monsoon seasons in SE Asia: <ul style="list-style-type: none"> <li>This active subgroup continues to develop their method for defining monsoon seasons in SE Asia. Thea presented progress which includes extending to a more objective method for identifying the peak monsoon whenever it occurs, rather than searching for the max wind in a fixed direction or season. For some locations there are clear peaks but not for others. They are finding that persistence of wind direction may be more robust than "directional power". The more objective method could be applied to other regions</li> </ul> </li> <li>SG3: High impact weather events: <ul style="list-style-type: none"> <li>Continuing to gather examples for an article on what makes a useful weather warning, including forecast quality, how and what is communicated and to whom, stakeholder and public "preparedness" to receive, understand and act on forecasts. Considering a range of extreme event types e.g., heavy rain, hot/cold/dry spells, lightning, fog, etc. The sub-group wants to engage with Tim Cowan following his excellent webinar talk.</li> </ul> </li> </ul> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>WG-AAM hosted the Second Joint WCRP/WWRP CLIVAR/GEWEX-Monsoons Panel's Webinar on Asian-Australian Monsoon on 30th November 2023 (see <a href="https://www.wcrp-climate.org/monsoons-webinars/2-asian-australian-monsoon">https://www.wcrp-climate.org/monsoons-webinars/2-asian-australian-monsoon</a>). The webinar featured talks by Prof. B.N. Goswami on "Impact of Climate Change on Indian Monsoon" and Dr. Tim Cowan on "Australian Monsoon: Development and Implementation of Operational Services" and was co-chaired by Thea and Gill. There were 120 attendees and 165 have viewed the recording.</li> </ul>

- Update on paper on monsoons of 2022 and 2023
  - Current plan is to write an article on the unusual features of these two monsoon years for GEWEX Quarterly, aiming for August issue (deadline 12 June). Ajaya Mohan has agreed to coordinate this, and Thea, Shiromani and Hiroshi also expressed interested in contributing, along with Joseph, Raghu, Anna and Gill who started the process for monsoon 2022 last year.
- Special issue on global monsoons for Advances in Atmospheric Sciences
  - Annalisa Cherchi is coordinating this with co-editors from all of the regional WGs. Tieh Yong has started a spreadsheet to collect names and topics from the WG-AAM to be invited to contribute, other articles s will be gathered via open advertisement.
- Cross-panel activities
  - Members of the subgroup on Monsoon Processes and Teleconnections have expressed interest in joining with cross-panel activity on tropical ocean basin interactions with the Pacific Region Panel and OMDP (Ocean Model Development Panel). Joining these activities will provide an additional focus for this subgroup.
- Discussion of current monsoon conditions
  - Shiromani commented that OND rainfall in Sri Lanka has been more than normal in all 3 months, matching the SASCOF outlook. Reservoirs ~90-100% full, floods and landslides widespread. Related to strong easterly wind anomalies over the Indian Ocean, related to EL Nino. Although forecast was good, the fact that it had been very dry right up to October meant that agriculture tried to plant a lot to take advantage of the forecast rainfall and to control the reservoirs. Will continue to try to conserve water for the summer.
  - Wei Ting commented that Taiwan was relatively dry with near normal temperatures, whereas would expect warm/dry conditions with El Nino. Rainfall mainly came from mid-latitudes rather than cyclones.
  - Joseph commented that SON 2023 had the lowest TC genesis in the W Pacific since 1979 and that this may be related to unusual SST patterns with warm anomalies over the Philippines. Unique in that the expected ENSO Atmospheric Bridge did not manifest.
  - The group discussed how links between ENSO and IOD are analysed, particularly relating to how El Nino/La Nina are measured in light of ongoing warming. May be a topic for future discussion.
- GEWEX Open Science Conference
  - Hiroshi advertised that the GEWEX OSC will be in Sapporo, Japan 7-12 July 2024, and are currently accepting presentations, so encouraged members to attend (<https://www.gewexevents.org/meetings/gewex-osc2024/>). The WG-AAM may participate in a joint meeting with the MP during this week, although current proposed date is a Saturday (13<sup>th</sup> July) which may not be practicable.

**Comments from members:**

- Rajagopal: How many members from WG-AAM are likely to attend the GEWEX OSC?
- Thea: Not sure at this point of time, how many will be attending.
- Rajagopal: Find out how many people would like to attend. We actually have got some funding from CLIVAR for the in-person meeting between MP & WG-AAM and we hope we will get similar funding from GEWEX too. So, we will go ahead and commit that we want to hold this proposed in-person meeting. Request interested members to submit an abstract to 2 sessions on Monsoons convened by MP, so that their participation in the whole conference is justifiable. There is an abstract submission fee of \$60, which is non-refundable. The GEWEX OSC session details can be found at <https://www.gewexevents.org/meetings/gewex-osc2024/program/themes-and-sessions/>
- Rajagopal: As 13<sup>th</sup> July (after GEWEX OSC) is not very convenient, shall explore if the in-person meeting can be held in the evenings of OSC with IGPO.
- Leila: Who are the Conveners of the 2 sessions from MP side?
- Rajagopal: Surya and Hiroshi are the conveners of the session “Monsoon – Atmospheric-Land and Atmospheric-Ocean Interactions” which will also have

conveners from ACAM and IMD as this session is also a Special Celebratory Session of 150 Years of the IMD. Hui Su and Paola Arias (Co-chair, GEWEX/GHP) are the conveners of “Monsoon Process and Society” session.

## **(B) WG on African Monsoons [WG-AFM]: - (Rondro)**

### **1) Activity Highlights:**

- The last meeting of WGs was the one in Kigali and what came out of that meeting was really a better understanding to the group members on what is their role and how should we move for progress from now?
- There was a follow up meeting with the WCRP Lighthouse on Explaining and Predicting Earth System Change (EPESC). During the OSC in Kigali, they mentioned that they wanted to have an African case study to understand the predictability of the rainfall over Africa. So, we had a meeting with them in December to really know what the plan is. So, a working group has been formed in that meeting and WG-AFM are a part of it.
  - The main goal for WG is to assess how the state-of-art climate models are representing the circulation over Africa, over different parts of Africa, and how do they represent the future change and also to analyse the predictability in interannual to decadal time scale.
  - This WG is led by Linda Hirons of University of Reading, and Caroline Wainwright, of WG-AFM.
- Regarding the Joint WCRP/WWRP MP webinar on African Monsoons, the Co-chairs of WG-AFM will be having a meeting this afternoon to talk about who are to be invited? We had sent an invitation sometimes last year and we did not really get any reply. Now after Kigali conference, we have some new names, those names will be discussed.
- We will have a meeting soon to discuss on our plans for this year 2024 and the updates on that will be given in the next MP meeting.
- There will be an African monsoon session in the AMS meeting next week, which is convened by Ross Dixon of the WG.

### **Comments from members:**

- Annalisa: East African long-range forecasts could a topic for the webinar.
- Rondro: We discussed about if we want to focus on a particular area like the East Africa or West Africa. As there is a link between the southeast and the West (from the wind circulation), so we decided to not focus on the East African only, but in the Pan Africa area.

## **(C) WG on American Monsoons [WG-AMM]: - (Ruth - Absent)**

- There is no update in the [Monsoons Panel Notebook](#). Ruth will be requested again to update the Notebook.

### **Comments from members:**

- *Leila*: The WG has some problems in connecting among Co chairs.
  - One update is that Alice Grimm is trying again to have a workshop on the American monsoons in Mexico. She has been working on this workshop, which would include educational part.
  - On the Joint WCRP/WWRP MP webinar on American Monsoons, they have been discussing a possible people to invite for the webinar.
  - We have not been very successful in having more meetings of the WG. We need to discuss how we can move forward with this WG and help them to become more active. We need to have at least one of the Co-chairs in these MP meetings.
- *Rajagopal*: If required the MP can identify another Co chair for the WG-AMM. Discussions must take place between the Co-chairs and even with the Members. This WG has not met even once since 2022.

## Updates from IMPO (Rajagopal):

### 1) Activity Highlights:

- Played a key role in the successful organization of the second Joint WCRP/ WWRP Webinar Series on Asian-Australian Monsoon held on 30<sup>th</sup> November 2023, which featured talks by eminent scientists, Prof. B N Goswami and Dr. Tim Cowan. Drs. Gill Martin (Co-Chair WG-AAM) and Thea Turkington co-chaired the webinar.
  - Out of the 228 registered attendees, 120 attended the webinar. There are
  - Played a key role in advertising the webinar in IMPO Events Page, WCRP Academy Catalog and through the various group e-mails.
  - Video recording of the second webinar on Asian-Australian Monsoon was made available in IITM YouTube channel for wider reach & publicity, which already has 165 views.
- Finalized the MoM of the Fifth Session of Monsoons Panel held on 27<sup>th</sup> October 2023 at Kigali, Rwanda and circulated it on 6<sup>th</sup> Dec.
- Drafted and finalized the MP Annual Report 2023 for CLIVAR and submitted to ICPO on 12<sup>th</sup> Dec 2023. - CLIVAR has approved 5K CHF for the MP & WG-AAM in-person meeting at GEWEX OSC at Sapporo, Japan (~13<sup>th</sup> July 2024)
- Drafted the MP Annual Report 2023 for GEWEX and submitted to MP Co-chairs last week for their suggestions/approval.
- Prepared a document on MP's Cross-panel activities/opportunities for seeking volunteers from MP & WGs and the same was shared with MP & WG members.
- Prepared a [document on MP's Cross-panel activities/opportunities](#) for seeking volunteers from MP & WGs and the same was shared with MP & WG members.
- IMPO played a key role in bringing IWM-8 to India, which will be now organized by IMD, IITM and IMPO in Feb-Mar 2025. The experts from MP for IWM-8 has been finalized and forwarded to the organizers.
- Participated in the online meeting "Monsoon-2023 Discussion" of WG-AAM on 8<sup>th</sup> November 2023 and the regular WG-AAM meeting on 15<sup>th</sup> January 2024.
- Drafting of MP Membership 2024 recommendation proposal – ongoing. Received 3 nominations from CLIVAR and 2 from GEWEX
- Played a key role in:
  - Planning of the International workshop on Stratosphere-Troposphere Interactions and Prediction of Monsoon weather EXtremes ([STIPMEX](#)) to held during 2-7 June 2024 at IITM which has WCRP/SPARC, WWRP and MoES Travel support.
  - Preparation of workshop logo, workshop flier, workshop website, etc.
  - Advertising the workshop in IMPO Events Page, WCRP Academy Catalog and through the various group e-mails.

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### 2) Future Activities:

- Finalization of the MP Annual Report 2023 for GEWEX.
- Finalization of MP Membership 2024 recommendation
- Organization of the Joint WCRP/WWRP MP Webinars on African and American Monsoons in Feb-Mar 2024.

### Comments from Members:

- *Leila*: What is the status of the Concept Paper on Global and Regional Monsoons?
- *Rajagopal*: I have reminded Surya about it and he has started working on it.
- *Wushan*: In the CP for the African monsoons, we just have the two authors. Is it enough or we need to have more authors to contribute?
- *Rondro*: We have invited Paul-Arthur Monerie (Member, WG-AFM) to join as he is an expert on the West African monsoon, and he has agreed to work on it.

## Discussion on identification of members for cross-panel activities following the 5<sup>th</sup> Session of MP at Kigali (Lead: Rajagopal):

- The shared [document on MP's Cross-panel activities/opportunities](#) for seeking volunteers from MP & WGs has both the ongoing and new opportunities mentioned in it.
  - Cross-panel activity on tropical ocean basin interactions: This activity requires improving the teleconnections in models, as ENSO is the strongest modulator of monsoons throughout the globe. The Pacific Region Panel and OMDP (Ocean Model Development Panel) wants to work with MP on this prediction challenge. We have 7 volunteers from MP & WGs (*Surya, Caio, Ajaya, Annalisa, Hiroshi, Joseph, Hatsuki*)
  - Another cross-panel opportunity is involvement in the "[SynObs Project](#)" on the evaluation of the Ocean Observing System which is supported by CLIVAR and CLIVAR SSG wants MP to be part of it. Already ECMWF and NCEP are participating in the project. Both have hindcast datasets from various OSE simulations. MP can analyse the hindcasts and identify observations that have most impact on the hindcasts. *Volunteers: Surya, Ajaya*
  - Safe Landing Climates LHA has contacted WG-AFM to get involved in some sensitivity modelling experiments over Africa. *Volunteers: Ismaila*
  - CLIVAR SSG wants WG-AFM to get involved with RfS as they are very much interested to work with the working group. *Volunteers: Ismaila, Izidine Pinto*
  - MP and WGs to provide ideas/activities for GPEX LHA which will be useful for the monsoon community. The monsoon community can come up with the big wish list for GPEX, some of them may get addressed. *Volunteers: Michelle, Ajaya, Annalisa, Hiroshi, Hui, Hatsuki*
  - MP & WGs to build links with the other disciplines like agriculture, agronomy, hydrology, health, etc. (suggested by Jan Polcher in the Kigali In-person meeting) *Volunteers: Michelle, Caio, Annalisa, Hui*

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### Comments from Members:

- *Annalisa:* For GPEX, we could start with a shared document with some ideas. Now GPEX is waiting to have an SSG, but we can start sharing ideas and I can then report to GPEX (as I am still in the interim SSG until a new one is identified)
- *Leila:* We have Members from many working groups interested in joining this cross-panel activities. But is there a plan for meetings or what is the plan for this actually?
- *Rajagopal:* Once you join the cross-panel activity, then you are in that loop, so the meetings which they arrange you will get involved. That is the way it will work, and they will have some targets or objectives which must be met, so one can check the targets/objectives and see what one can contribute.
- *Thea:* Members can come with some ideas for GPEX and then discuss on it in the WG and subsequently, it can be sent to MP to get feedback from everyone before submitting to GPEX.
- *Rondro:* The Safe Landing Climates (SLC) LHA want to connect WG-AFM, but it is still not very clear on what exactly they want to collaborate. So, it would be better to get *clear* description on what do they plan to do and how do they want to work with WG-AFM. This would be useful to explain to the WG-AFM members, what is expected from this cross-panel activity. Details on SLC LHA's modelling experiments for Africa are required before the members can volunteer.
- *Rondro:* A clear statement of opportunity is required for all cross-panel activities from the panel's that have shown interest in collaborating with MP.
- *Leila:* Have a more practical question on how this will be organized? What are next steps, once we found the volunteers, after people went and worked together. How is this going to happen?
- *Rondro:* For the GPEX there is the concept paper, and everyone could examine it and decide to volunteer. It is much clear to the members. In the case of other cross-panel activities it is no clear.

	<ul style="list-style-type: none"> <li>○ <i>Rajagopal</i>: We could have some correspondences with the respective panels interested in collaborating with MP to learn more about their expectations. We could also examine the CLIVAR/GEWEX SSG meeting summaries to understand what they had proposed. We can align our cross-panel collaborations accordingly.</li> <li>○ <i>Hui Su</i>: MP can discuss the priorities and set the strategic directions, however, to get our suggestions implemented, we probably will have to influence the funding agencies locally. So, if we can create some programs then we can have more scientists in each region, to apply the program in their region which will result in some actual work. The role of panel should be to gather all the suggestions and influence some funding agencies to fund the actual work.</li> <li>○ <i>Hui Su</i>: Panel members cannot do all the actual work, but if we can gather a critical mass, then we can make some influence in our local respective funding agencies and then leveraging on these GPEX and CLIVAR large platforms, they can set up some large international collaborative program in which scientists can apply to, which can move things forward.</li> </ul>
5	<p><b>Discussions on Monsoon Session and In-person meeting in GEWEX OSC-2024 (Lead: Rajagopal):</b></p> <ul style="list-style-type: none"> <li>• There are 2 sessions on Monsoons: <ul style="list-style-type: none"> <li>○ “Monsoon – Atmospheric-Land and Atmospheric-Ocean Interactions” (MP Conveners: Surya and Hiroshi) which will also have conveners from ACAM and IMD as this session is also a Special Celebratory Session of 150 Years of the IMD.</li> <li>○ “Monsoon Process and Society” - Hui Su and Paola Arias (Co-chair, GEWEX/GHP) are the conveners.</li> <li>○ Members are requested to submit abstracts before the deadline.</li> </ul> </li> <li>• The In-person meeting can happen on 13<sup>th</sup> July 2024. May be 2-hour meeting may be sufficient for us. Will also explore the feasibility of holding the meeting in one of the evenings during the conference week.</li> <li>• 10000 CHF is available now for 4-5 members. With the approval of Co-chairs, the names/their requirements will be forwarded to CLIVAR and GEWEX for their approval.</li> </ul>
6	<p><b>Discussions on upcoming CLIVAR SSG and GEWEX SSG meetings (Lead: Rajagopal):</b></p> <ul style="list-style-type: none"> <li>• The 29<sup>th</sup> Session of CLIVAR SSG is online during the last week of February. Leila has registered to attend and present MP’s AR of 2023</li> <li>• 36<sup>th</sup> GEWEX SSG will be held in-person in Budapest, Hungary during 22-26 April 2024. Surya will attend the meeting subject to obtaining GEWEX travel support.</li> </ul>
7	<p><b>Discussions on MP 2024 membership (Lead: Rajagopal)</b></p> <ul style="list-style-type: none"> <li>• 6 members have completed their term in December 2023. Have received 3 nominations from CLIVAR and 2 from GEWEX. So, like last time we will have to recommend 2-3 newcomers and so we can propose extension for all outgoing members. Gill Martin wants to step down and so she has not requested for extension of her tenure.</li> <li>• The draft MP’s recommendation proposal has been put up to Co-chairs for their suggestions.</li> </ul>

<b>8</b>	<p><b>Open Discussion on the ongoing MP &amp; WG activities (All)</b></p> <ul style="list-style-type: none"> <li>• <i>Rajagopal:</i> Non-activity of WG-AMM is a big concern. The whole group has not met even once during last 2 years.</li> <li>• <i>Leila:</i> We need the Co-chairs to be more active. Ruth after accepting Co-chair position was active initially and now, she is not attending MP meetings and also not responding to emails. We need to check if she is interested in continuing as Co-chair. It would be better if we can make a more active member as her replacement.</li> <li>• <i>Leila:</i> I am not got any invitation from the group to attend any meetings. The MP Co-chairs &amp; Rajagopal had a special meeting with Ruth and Alice in February end year. They were positive to our suggestions, but unfortunately nothing has materialized.</li> <li>• <i>Rajagopal:</i> Basically, we cannot leave it to the two Co-chairs as they are not talking with each other now. It is an issue which we cannot keep on ignoring or wait till 2024 when the whole term gets expired.</li> <li>• <i>Rajagopal:</i> We can convene a meeting of MP and WG-AMM next month at a convenient time for American continent. This time would be very inconvenient to members from Asian continent, but still IMPO will attend.</li> <li>• <i>Thea:</i> I am not sure when the webinar series comes to the Americas. There is a polling feature in zoom, so one could also take that opportunity to seek feedback from a larger community about the kind of things they want to see WG-AMM does. However, one must very careful how you draft the questions, but it could be a way to seek feedback from a larger community which would help to inspire members.</li> <li>• <i>Leila:</i> Alice mentioned last time that Caio is interested in getting more involved in WG-AMM. We can check if he is interested to be a Co-chair.</li> <li>• <i>Wushan:</i> Early career community is big; they are our next generation for monsoon research. In the joint WCRP/WWRP webinars lots of ECR have actively participated and we need tap their enthusiasm.</li> </ul>
<b>9</b>	<p><b>Any other business</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul>
<b>10</b>	<p><b>Date/time of next meeting (Lead: Leila)</b></p> <ul style="list-style-type: none"> <li>• The next meeting can be in the first week of April 2024 at a convenient time for members from the American continents.</li> <li>• Leila thanked all for their participation in the meeting.</li> </ul>

## NEXT MEETING

<b>Meeting Number</b>	<b>2024-2</b>	<b>Meeting Time &amp; Date</b>	First week of April 2024. IMPO to initiate a Doodle poll in the later part of March 2024
<b>Location</b>	Video conference, details of the meeting will be sent out by IMPO		





A screenshot of the in-progress online MP meeting held on 23<sup>rd</sup> January 2024