

## Minutes of CLIVAR/GEWEX Monsoons Panel Meeting

### MEETING INFORMATION

|                   |  |               |                                     |
|-------------------|--|---------------|-------------------------------------|
| Meeting Number    | 2025-1   | Meeting Title | CLIVAR/GEWEX Monsoons Panel Meeting |
| Objective/Purpose | Discuss on the Agenda Items and progress on action items |               |                                     |
| Time & Date       | 22 January 2025<br>14:00-15:30 UTC                       | Venue         | Microsoft Teams<br>Video Conference |

### MEETING DETAILS

|                |   |            |                |
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| Chairperson(s) | Leila Carvalho and Suryachandra Rao A. (MP Co-Chairs)   | Rapporteur | E.N. Rajagopal |
| Attendees      | <b>MP:</b> Leila Carvalho, Suryachandra Rao A., Annalisa Cherchi, Satyaban Ratna, Hui Su, Hiroshi Takahashi, Samson Hagos, Thea Turkington, Jhan-Carlo Espinoza, Vasubandhu Misra, Hanh Nguyen, Fengfei Song, Luis Brito-Castillo<br><b>IMPO:</b> E.N. Rajagopal, Rupakumar Kolli |            |                |
| Absentees      | <b>MP:</b> Rondrotiana Barimalala,<br><b>IMPO:</b> Susmitha Joseph  |            |                |

### ACTIONS

| Deadline                   | Action   | Responsible                     |
|----------------------------|--|---------------------------------|
| 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          |
| 28 February 2025           | Reconstitution of WG-AFM after consultations with various stakeholders   | WG-AFM new Co-chairs, MP & IMPO |
| 30 April 2025              | Reconstitution of WG-AMM after consultations with various stakeholders   | WG-AMM new Co-chairs, MP & IMPO |
| As and when required by MP | WGs to provide PPT slides of their scientific results for projecting in MP's presentations in CLIVAR/GEWEX SSG and WCRP JSC meetings     | WGs, MP Co-chairs & IMPO        |
| 28 February 2025           | MP and WGs to submit proposals to make use of the higher CLIVAR funds available in 2026 to organize workshops and training schools       | MP, WGs and IMPO                |

| Deadline        | Action  | Responsible   |
|-----------------|---|---------------|
| Next MP meeting | Members to present their views on the proposed MP's new Observational cum Modelling project planned to be submitted to CLIVAR/GEWEX/WCRP for approval/funding | MP members    |
| 15 March 2025   | Volunteers from MP and WG-AAM for being Instructors and Coordinators for Sixth International Workshop and Training School on ACAM                             | MP and WG-AMM |

## AGENDA AND KEY OUTCOMES

| Agenda Point | Description  |
|--------------|--|
| 1            | <p><b>Opening Remarks (Leila):</b></p> <ul style="list-style-type: none"> <li>Leila and Surya (Co-Chairs) welcomed all the new members to the Panel and sought their active contributions to the Panel's activities.</li> <li>Surya added that all new members can provide a plan of their expected contributions and project the same in the next MP meeting.</li> <li>Thereafter all old and new members introduced themselves for the benefit of each other. Brief details of the new MP members are updated in <a href="#">IMPO Monsoons Panel Members</a></li> <li>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>Activity Highlights:</b></p> <ul style="list-style-type: none"> <li>Lin Wang has taken over from Gill Martin this month (Jan 2025), as co-chair with Tieh Yong Koh.</li> <li>Other new members will be formally introduced during the next meeting.</li> <li>WG met on 21<sup>st</sup> November to review the 2023/2024 monsoons – very active discussion took place! Potential for a short paper although whether members can commit is uncertain and may be easier to have a short report. To discuss at the next meeting.</li> <li>IWM-8: Two AAM WG members (the third has stepped down from AAM) are in the ISC. Abstract acceptance has been emailed out (including to a number of AAM WG members). At least 7 abstracts submitted from AAM WG members</li> <li>The next regular AAM WG meeting will take place on 5<sup>th</sup> February 2025.</li> <li>For the benefit of new members- WG-AAM's article on the comparison of Monsoons of 2022 and 2023 was published (<i>Ajayamohan et al. 2024: "Asian Summer Monsoon Variability during 2022–2023: Beyond Canonical Teleconnection Patterns", <a href="#">GEWEX Quarterly, Vol. 34, No. 3 Quarter 3, 2024.</a></i>)</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>Surya: Scientific results (Figures) should be presented and shared with MP for using them in its presentations in SSG meetings/other meetings.</li> </ul> |

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|   | <p>❖ <b>WG on African Monsoons [WG-AFM] (Samson):</b></p> <p><b>Activity Highlights:</b></p> <ul style="list-style-type: none"> <li>WG-AFM's comprehensive review paper on "Modeling of Precipitation over Africa: Progress, Challenges, and Prospects", <i>Advances in Atmospheric Sciences</i> has been published (<a href="#">Akinsanola, A. A., and Coauthors, 2025</a>)</li> <li>Samson is contributing to the First Joint Conference of African Meteorological Society and WMO (<a href="#">AfMS-WMO</a>) is being held in Addis Ababa, Ethiopia during 27-30 April 2025. The last date for Abstract submission is 15<sup>th</sup> February 2025.</li> <li>The new Co-chairs (Masilin Gudoshava and Paul-Arthur Monerie) are working on the reconstitution of the WG with an <a href="#">Open call for Membership</a>.</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li><i>Surya:</i> We should congratulate the WG for finally coming up with this review paper on modelling of Precipitation over Africa, which was pending for long.</li> </ul> <p>❖ <b>WG on American Monsoons [WG-AMM]: - (Leila)</b></p> <p><b>Activity Highlights:</b></p> <ul style="list-style-type: none"> <li>Alice Grimm is putting together the special edition for the journal "Advances in Atmospheric Sciences" on the South American monsoon. The current status of the same is not known.</li> <li>Leila alone is writing up a review paper on South American Monsoon focussing on Climate Change, which will be published in Oxford Encyclopedia</li> </ul>  |
| 3 | <p><b>Updates from IMPO (Rajagopal):</b></p> <p><b>1) Activity Highlights:</b></p> <ul style="list-style-type: none"> <li>IMPO played a key role in the finalization of 2025 Membership revision proposal of CLIVAR/GEWEX Monsoons Panel and in submission of the same to CLIVAR/GEWEX SSG for their approval. The same has been approved by CLIVAR and GEWEX. <ul style="list-style-type: none"> <li>Subsequently, formal appointment letters were issued to 4 new members (Hanh Nguyen [BoM, Australia], Vasubandhu Misra [FSU, SA], Fengfei Song [OUC, China], Luis Brito-Castillo [CIBNOR, Mexico] and 2 continuing members (Annalisa Cherchi and Thea Turkington)</li> <li>The 4 outgoing members (Ruth Cerezo-Mota, Ajayamohan, Salvatore Pascale, Shabehul Hasson) were issued thanking letters.</li> <li><a href="#">MP webpage</a> on IMPO website was updated with the 2025 membership revisions.</li> <li><a href="#">WG-AAM webpage</a> on IMPO website was also updated with their 2025 Membership revisions.</li> </ul> </li> <li>IMPO played a key role in the compilation of the 2024 Annual Report of the Monsoons Panel for CLIVAR SSG. CLIVAR SSG was happy with the exhaustive MP Report</li> <li>On request from the incoming Co-chairs of WG-AFM, IMPO advertised an <a href="#">Open Call for new Members</a> to the CLIVAR/GEWEX Monsoons Panel's Working Group on African Monsoons in IMPO webpages and circulated the advertisement to other networks.</li> <li>IMPO participated in the WCRP's International Project Offices (IPOs) &amp; WCRP Secretariat Group meeting held on 17<sup>th</sup> December 2024 and presented an update on the IMPO's recent activities.</li> <li>IMPO played a key role in the drafting of the minutes of the CLIVAR/GEWEX Monsoons Panel (MP) meeting held on 12<sup>th</sup> November 2024 and circulation of the</li> </ul> |

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|   | <p>same after approval of MP Co-chairs. IMPO is actively involved in the organization of the first online meeting of MP in 2025 (22<sup>nd</sup> January)</p> <ul style="list-style-type: none"> <li>• IMPO played a key role in the organization of the WG-AAM online meeting on 21<sup>st</sup> November 2024 .</li> <li>• IMPO participated in the online meeting of the Working Group on African Monsoons (WG-AFM) on 26<sup>th</sup> November.</li> <li>• IMPO was involved in STIPMEX Meeting Report, which has been published in BAMS November 2024 issue <a href="https://doi.org/10.1175/BAMS-D-24-0210.1">https://doi.org/10.1175/BAMS-D-24-0210.1</a></li> <li>• IMPO is playing a key role in the organization of the Eighth WMO International Workshop on Monsoons (IWM-8) at IITM Pune, during 17-21 March 2025: <ul style="list-style-type: none"> <li>◦ Worked with the Co-chairs of ISC in drafting the programme of IWM-8 based on the decisions of the accepted abstracts</li> <li>◦ The meeting of the Local Organization Committee of IWM-8 were convened on 4<sup>th</sup> December and 10<sup>th</sup> January, and subsequently, the minutes of the meeting (MoM) were circulated.</li> <li>◦ Finalized the allocation of GEWEX travel support (\$7000) for participation in IWM-8 to 4 MP/WG members and the same has been accepted by GEWEX.</li> <li>◦ CLIVAR's allocation of \$5000 came late and it can now be used for the <a href="#">Pan-CLIVAR meeting in September 2025</a> at Bali, Indonesia</li> </ul> </li> </ul> <p><b>2) Future Activities:</b></p> <ul style="list-style-type: none"> <li>• MPO will continue to provide key support in the organization of IWM-8 at IITM, Pune.</li> <li>• IMPO will be working on reconstituting WG-AFM and WG-AMM</li> <li>• IMPO will work on finalizing the MP's 2024 Annual Report to GEWEX SSG before the deadline of 30th January 2025.</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>• <i>Surya:</i> There is an observation from CLIVAR SSG that we are missing African representation in the Panel and this needs to be rectified in the 2026 membership revisions.</li> <li>• <i>Surya:</i> It is possible to get higher funds in 2026 from CLIVAR for organizing workshops (\$10000) and training schools (\$15000). MP and WGs members should try to make use of this opportunity and organize a programme in 2026.</li> <li>• <i>Rajagopal:</i> The last date for submitting funding proposal to CLIVAR for the above-mentioned workshop/training school activity is 28<sup>th</sup> February 2025</li> </ul> |
| 4 | <p><b>Discussions on the upcoming GEWEX SSG meetings (Leila)</b></p> <ul style="list-style-type: none"> <li>• The GEWEX SSG meeting is being held at Wellington, New Zealand during 10-14 February 2025 which will be attended in-person by Leila. <ul style="list-style-type: none"> <li>◦ Discussions will be mainly on the activities mentioned in MP's 2024 Annual Report submitted to GEWEX SSG.</li> <li>◦ There will be opportunities for interactions with other GEWEX panels.</li> </ul> </li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>• <i>Surya:</i> One of the important aspects is that is always missing is the working groups' contributions to the MP's presentations. For example, the WG-AFM is showing very good results now and they should prepare at least 2-3 slides and share with Rajagopal so that he can add that to MP's PPT. The results from the work already carried out by the WGs will make GEWEX's other panels to get interested in the study and can help in starting new cross-panel activities. GEWEX SSG is more interested in scientific activities of their panels and discusses a lot on it after the presentations.</li> <li>• <i>Surya:</i> GEWEX SSG wants MP to come up with its own big project. Like GPEX and AsiaPEX, MP should try to come up with a new project which also has a focussed</li> </ul>  |

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|   | <p>observational campaign in it and try to convince GEWEX, CLIVAR and WCRP. How to include all the monsoons of the world in the proposed project needs to be discussed. In the next MP meeting this proposed project can be a key point for discussion. Every member can contribute to the discussion by sending few slides or each member can make some 2 to 3 minutes presentation on their ideas for this monsoon project.</p> <ul style="list-style-type: none"> <li>• <i>Hui Su:</i> The Working Group 2 of GPEX (Hui Su is the Co-chair) has plans to look at the contribution to precipitation from different types of storms (Atmospheric rivers, Tropical Cyclones, Mesoscale convective systems, etc.). There were not many discussions on monsoons in the WG-2 meeting. MP can think about how it can contribute to GPEX. There may be some MP members who are interested in the observational aspects of precipitation related to monsoon.</li> <li>• <i>Surya:</i> GEWEX is looking for MP to come up with its own independent program. So, all members can start thinking in that direction.</li> <li>• <i>Samson:</i> It seems logical and advantageous to contribute to monsoon related activities of GPEX, instead of having an independent program of MP. Working together is better than having a separate activity. The working group 1 of GPEX on coordinated field campaigns (Samson is the Co-chair of this WG) is hoping to accomplish from GPEX is to have field campaign in Africa in 2028 and then also support the activities of Asia Pacific. So, if there is a field campaign in the works, for example in India that is in the time frame of 2028 it would be good to integrate it with GPEX and see for the whole of Eastern Asia, South Asia and Africa. The integration with GPEX might be the better way to go forward.</li> <li>• <i>Surya:</i> MP can integrate with several other projects but should have its own project.</li> <li>• <i>Annalisa:</i> <i>A complete understanding of precipitation and other related processes just with observations will not suffice, modelling component will also be required. The GPEX WGs are not filled with members yet- it is still evolving.</i></li> <li>• <i>Annalisa:</i> <i>MP can think of a specific activity and get in touch with GPEX to check if they are interested. Ready to liaison between MP and GPEX</i></li> <li>• <i>Leila:</i> What will be the overarching question that we as a panel would like to answer by this new program of MP? Some of the possible questions are source of moisture, the influence of the oceans, etc. that we could try to understand as an overarching question. Would like to hear more what you think about this.</li> <li>• <i>Surya:</i> Let us discuss these in the next MP Meeting in a detailed manner. Each member can give their views on this idea of MP having its own program. GEWEX Is looking for a program which has both modelling and observational aspects.</li> </ul> |
| 5 | <p><b>Discussions on the reconstitution of WG-AMM (Rajagopal)</b></p> <ul style="list-style-type: none"> <li>• The plan was to rotate off all members when their tenure ended on 31<sup>st</sup> December 2024 as the WG is not performing satisfactorily and start afresh after identifying 2 new Co-chairs to lead the reconstituted working group. So, all members can be intimated about the ending of their tenure. We need to identify 2 new Co-chairs and with their support identify new energetic members for the WG-AMM</li> <li>• In the case of WG-AFM, the 2 new Co-chairs also wanted to make an Open Call for Membership through IMPO, which has been done with a Deadline of 30th January 2025. Similar method could also be adopted for WG-AMM.</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>• <i>Rupakumar:</i> Let us first identify 2 new Co-chairs who are enthusiastic and who also understands the issues of WG-AMM. Caio Coelho has shown interest to become a Co-chair.</li> </ul>   |

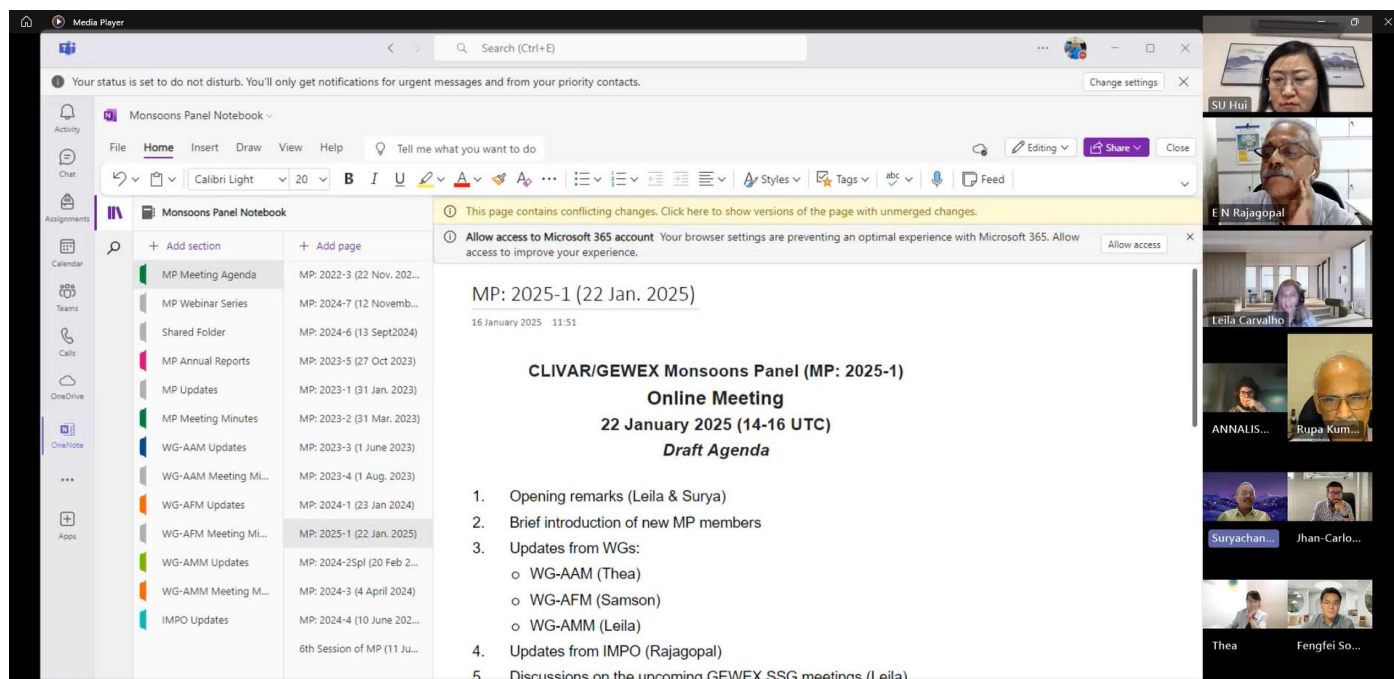
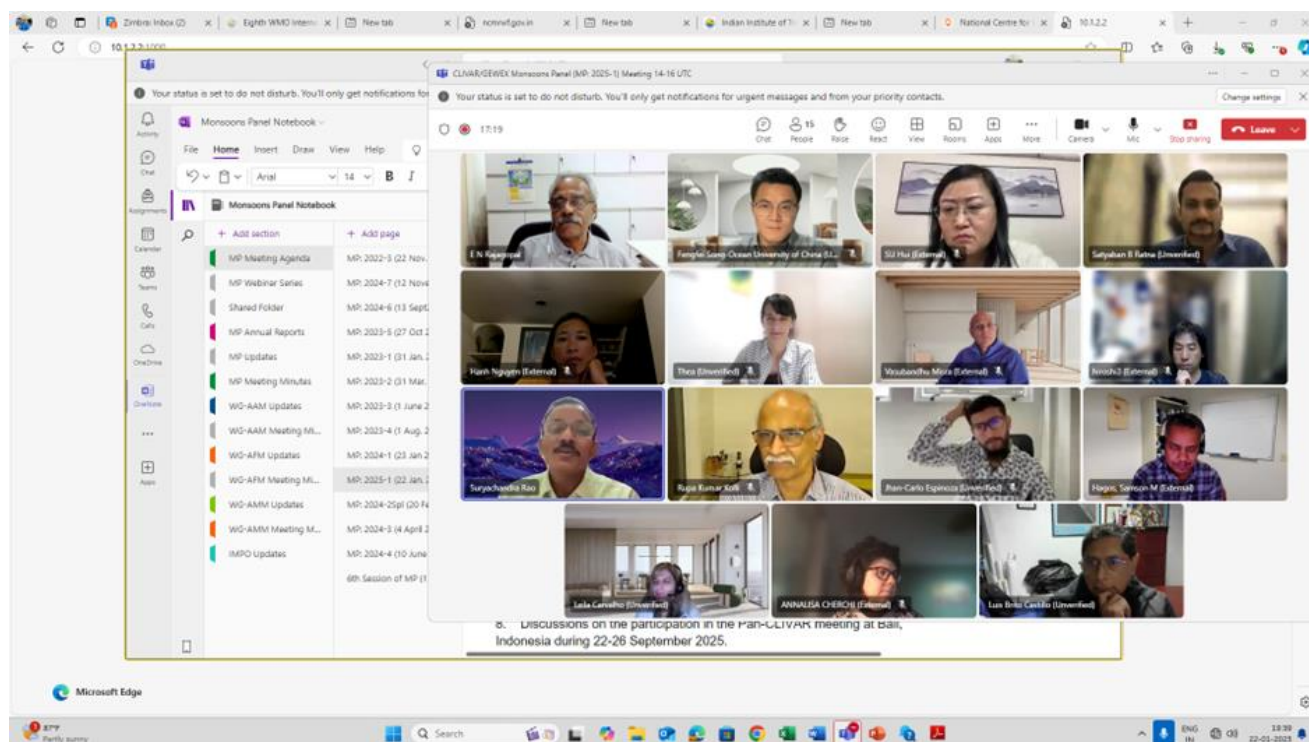


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|   | <ul style="list-style-type: none"> <li>• <i>Liela</i>: We must look for Mid-Career scientists to be members in the WG and not seniors as it is currently. Michelle Simões Reboita will be good candidate for the second Co-chair.</li> <li>• <i>Surya</i>: As all members agreed to reconstitute the WG-AMM, IMPO can intimate all the members and thank them for their service till 2024. IMPO can also sent out invitations to Caio and Michelle to become the Co-chairs of the WG-AMM.</li> </ul>   |
| 6 | <p><b>Discussions on the MP's contributions to the <u>Sixth International Workshop and Training School on ACAM</u> (Rajagopal)</b></p> <ul style="list-style-type: none"> <li>• This workshop cum Training School is being organized in Bali, Indonesia during 9-13 June 2025 by APARC's ACAM. Lin Wang of WG-AAM had attended the APARC SSG meeting in Julich, Germany in October 2024. ACAM Co-leads are looking forward to MP's contribution as instructors and coordinators for this training school and the workshop. This involvement will be ideally suited for WG-AAM; however, others also can contribute.</li> </ul> <p><b>Comments from members:</b></p> <ul style="list-style-type: none"> <li>○ <i>Surya</i>: If anyone has any ideas on how to conduct such a hands-on training on data handling, monsoon diagnostics, whatever related to the aerosols and chemistry can volunteer and MP after discussions can forward the names to ACAM Co-leads. ACAM may be able to support travel.</li> <li>○ <i>Surya</i>: We can also invite ACAM Co-leads to our next MP meeting to discuss further on this.</li> </ul>   |
| 7 | <p><b>Discussions on the participation in the Pan-CLIVAR meeting at Bali, Indonesia during 22-26 September 2025 (Rajagopal)</b></p> <ul style="list-style-type: none"> <li>• As per the mails from ICPO, CLIVAR expects all their panels including MP to have their next in-person meeting alongside this Pan-CLIVAR meeting and try to identify some cross-panel with other relevant CLIVAR panels through in-person interactions.</li> <li>• CLIVAR may allocate 10000 USD for each Panel for travel.</li> <li>• CLIVAR's allocation of 5000 USD for MP participation in IWM-8 is unspent, so there will 15000 USD from CLIVAR.</li> <li>• We may try to get another 5000 USD from GEWEX for this meeting. So, with 20K USD, at least 8-10 MP Members should be able to attend this Pan-CLIVAR meeting.</li> <li>• Request all members to block the dates in their calendar and ensure their participation.</li> <li>• The aims of the next Pan-CLIVAR meeting are: <ul style="list-style-type: none"> <li>○ to develop ideas and input for the next CLIVAR science and implementation plan.</li> <li>○ to foster interactions across panels, WCRP core projects, and partners.</li> <li>○ to evaluate progress, formulate future priorities, and enhance members cohesion.</li> <li>○ to establish new research foci; and</li> <li>○ to engage scientists and stakeholders in southeast Asia.</li> </ul> </li> <li>• Pan-CLIVAR 2025 will be held in hybrid mode, consisting of individual panels and Research Foci meetings, SSG sessions, cross-panel meetings, breakout sessions, plenaries, and a Symposium. Details on the symposium are awaited.</li> </ul> |
| 8 | <p><b>Any other business:</b></p> <ul style="list-style-type: none"> <li>• <i>Satyaban</i>: Are the MP Annual Reports reviewed?</li> <li>• <i>Rajagopal</i>: SSGs of CLIVAR and GEWEX review and give their feedback. The feedbacks are available in the "MP Annual Reports" section of <a href="#">Monsoons Panel Notebook</a>. The highlights of the Annual Report are also usually presented in the following SSG meetings by one of the MP Co-chairs</li> <li>• <i>Surya</i>: All new members are welcome to join in the meetings of any working group of their interest. The meeting links will be shared by IMPO</li> </ul>  |

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|   | <ul style="list-style-type: none"> <li>• <i>Hui Su</i>: Scientists in China are thinking of an observational campaign related with monsoon onset, would like to involve more countries in it. MP could contribute to it. Shall share more information on this activity with MP members soon.</li> <li>• <i>Surya</i>: There are many observational campaigns going on for monsoons. Some of them are already mentioned in the GPEX's white paper and Science plan in which Annalisa was involved.</li> </ul> |
| 9 | <p><b><i>Date/time of next meeting:</i></b></p> <p>The next meeting will be in the first half of March 2025 at a time convenient to Asian and Australian Continents</p>  |

#### NEXT MEETING

|                       |                         |                                |   |
|-----------------------|-------------------------|--------------------------------|---|
| <b>Meeting Number</b> | 2025-2                  | <b>Meeting Time &amp; Date</b> | 06-08 UTC in the first half of March 2025 |
| <b>Location</b>       | MS Teams Online Meeting |                                |   |

Screenshots of the in-progress online MP meeting held on 22<sup>nd</sup> January 2025