





Minutes of CLIVAR/GEWEX Monsoons Panel Meeting

MEETING INFORMATION

Meeting Number	2023-4	Meeting Title	CLIVAR/GEWEX Monsoons Panel Meeting
Objective/Purpose	Discuss on the Agenda I	tems and progress o	on action items
Time & Date	1 August 2023 15-16:30 UTC	Venue	Microsoft Teams Video Conference

MEETING DETAILS

Chairperson(s)	Leila Carvalho & Suryachandra Rao Anguluri (MP Co-Chairs)	Rapporteur(s)	E.N. Rajagopal & Somnath Mahapatra
Attendees	MP: Leila Carvalho, Suryachandra Rao Anguluri, Thea Turkington, Rondrotiana Barimalala, Hiroshi Takahashi, Hui Su, Ajay Mohan Ravindran, Pankaj Kumar WCRP Secretariat: Wushan Ying IMPO: E.N. Rajagopal, Rupakumar Kolli, Somnath Mahapatra		
Apologies	MP: Annalisa Cherchi, Gill Martin, Mary Kilavi, Ruth Cerezo-Mota, Shabehul Hassan, Salvatore Pascale WCRP Secretariat: Hindumathi Palanisamy IMPO: 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
15 August 2023	Forwarding the identified 5 MP & WG-AFM members' travel support requirements to CLIVAR/GEWEX IPOs	IMPO
15 August 2023	Identifying members for interaction with SPARC in ACAM project and communicating the names to Co-chairs of SPARC SSG	MP Co-chairs, IMPO
15 August 2023	Identifying members for interaction with CliC on understanding the connections between the Himalayan cryosphere and Asian monsoons & Impacts of reduced Arctic sea-ice on Asian monsoons and communicating the names to Co-chairs of CliC SSG	MP Co-chairs, IMPO

Deadline	Action	Responsible
21 August 2023	To contact GHP Co-chairs on MP's interest in a Monsoon session in GEWEX OSC-2024	MP Co-chairs, IMPO
31 August 2023	IMPO to write polite letters on the behalf of MP to Co-chairs of WG- AMM regarding replacement of Co-chairs	MP Co-chairs, IMPO
31 August 2023	IMPO to write on the behalf of MP to Co-chairs of WG-AMM regarding membership of Robin Chadwick of Met Office in WG-AMM	MP Co-chairs, IMPO
31 August 2023	Constitution of a Task Team to analyse the existing situation in WG-AMM and suggest corrective measures to make the group vibrant.	MP Co-chairs
13 September 2023	Organisation aspects of the first WCRP MP Webinar Series	MP Co-chairs, IMPO & WCRP
15 September 2023	Send doodle poll for the next online meeting of MP, preferably in the first week of October 2023	IMPO
31 October 2023	Active participation in OSC-2023 through active participation in the monsoon session, poster clusters and in drafting WCRP OSC's Concept Note on Monsoons	MP members & IMPO

AGENDA AND KEY OUTCOMES

SI. No.	Description
1	 Opening Remarks (Leila & Surya): Leila (Co-Chair) welcomed all the MP members, WCRP Secretariat members and IMPO members present in the fourth meeting of the Monsoons Panel in 2023 (MP 2023-4). A screenshot of the in-progress online meeting showing the participants can be found in Appendix-I.
2	 Updates from the Regional Working Groups: (A) WG on Asian-Australian Monsoons [WG-AAM]: - (Thea) 1) Activity Highlights of the Monsoon Processes & Teleconnections (MPT) subgroup: Stalled a little due to various personal circumstances. Now have new members (Hui Su, Hiroshi and Joseph) and Hui Su is co-leading with Lin Wang. 2) Activity Highlights of the R2O for monsoon seasons in SE Asia (R2O) sub-group: R2O group meets quasi-monthly. Working on a revised approach to identifying reference monsoon winds in SE Asia. This approach will be tested in the next month or so by our members, pending results at our next meeting (which is scheduled just before the next AAM-WG meeting in September). Work was discussed at ASEANCOF and a poster will be presented at the WCRP-OSC. 3) Activity Highlights of the High impact weather events (HIW) sub-group: Working towards a white paper on how meteorological agencies across South Asia, Southeast Asia, and East Asia communicate weather warning forecasts to the public. The initial task is to gather and compare sample images from these agencies. Shiromani provided an in-depth report on the winter monsoon events of 2022/23 and seasonal forecasts for this period issued by the Sri Lankan Meteorological Department. She will contribute this work to the white

4)	Meetings and other activities:
-,	 As part of our aim to include some detailed science discussions in full WG meetings, at the June meeting Shiromani gave an excellent in-depth report on the winter monsoon events of 2022/23 and seasonal forecasts for this period issued by the Sri Lankan Meteorological Department. See minutes of <u>15 June 2023</u> meeting. Overall, the forecasts tended to underestimate the intensity of precipitation in the winter extreme events. Several WG members provided monsoon outlooks 2023 from the various COFs. These outlooks are clearly affected by the developing El Nino conditions. Some WG members attended WWRP/WCRP S2S Summit, in Reading, UK during 3-7 July 2023, with Susmitha representing IMPO and she chaired the session on "Predictability and Processes: Precipitation and Tropical Waves". A subset of members met to discuss the proposed "Monsoons 2022" paper. Progress on this has stalled but there is still enthusiasm for taking this forward. An outline structure was agreed whereby the emphasis will be on the unusual large-scale characteristics of the Asian Summer Monsoon 2022 (including displaced monsoon trough and associated larger scale circulation variations affecting dynamical indices and path/frequency of monsoon lows and tropical depressions crossing India, Pakistan, East Asia, and low-level flow transporting moisture to Sri Lanka and Indonesian Islands, Maritime Continent etc.) and how this relates to the extreme events experienced in various regional monsoons. We hope to make some progress over the next few months. WCRP Monsoons Webinar Series – have not heard any more about this. Suggestion from Hui for this to alternate between focusing on academia and the public.
Con	 Surya: First, let us welcome new members to Asian Australian Monsoon Working group. Hui has replaced me as the Co-lead of MPT. What I have done personally based on the recommendations of MP, is that we have investigated the different CMIP models to see their skill in South Asian monsoon rainfall prediction. Now we must extend that work to other monsoon regions. The study results were already shared with everyone in group's google drive, for continuity I will share again. In 2022 we have also discussed in the Working Group that we should write something on the observed spatial pattern of rainfall, particularly as the Indo-Gangetic plains had drought like conditions. It was Annamalai who started the work on spatial patterns of rainfall when he was a member of the MP. Subsequently, we have taken it further and wrote up a paper, which I will share with members.
(B) W(G on African Monsoons [WG-AFM]: - (Rondro)
1)	Activity Highlights:
,	• Mapping of the members' projects and ongoing activities are continuing, which is meant to make sure that what they do aligns somehow with the working group's activities.
	• The West Africa subgroup called for a guidance on how to proceed with the planned training activity on data analysis. A main contact/ organizer is needed from the whole group to move this forward. There was a meeting with WCRP SPARC members as they plan to have similar activity. Nothing has been decided but there is a potential collaboration with them.
	 The West Africa group continues to analyse the representation of the Mesoscale Convective Systems (MCS) over West Africa from the DYAMOND data. A session on "African climate variability and change" has been approved for
	AMS2024 – led by Ross Dixon
	• Some of the East and Central Africa teams are involved in a "taskforce for understanding the eastern African MAM rainfall". There is a discussion on writing a

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	 white paper about the critical need for observational data/ field campaign in the area. The goal is to somehow push the international community and funders to pay attention to the issue. This will be co-led by the WG-AFM ECR with other senior scientists who have experience from the AMMA program. This can also be included in the GPEX lighthouse activity. The revision of the "African rainfall" paper is still on going Participation to OSC: most members who applied for funding got positive response and will be attending in person.
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Con	 <i>Leila:</i> Now there is a lot of energy behind what is going to happen, and I think it is important to see a couple of things I want to point out that it is the right time to have an observational campaign. This is about time to have a field campaign in East and Central Africa to understand the monsoons. I do not recall any big field campaign in the region. It is a very important initiative that the working group is involved with it. <i>Rajagopal:</i> We have identified 2 members from WG-AFM for their travel funding to OSC and the same will be communicated to CLIVAR/GEWEX in the coming weeks. Request for sending the names of WG-AFM members who are attending OSC for organizing the logistics for the In-person meeting of MP & WG-AFM. <i>Surya:</i> A big congratulations to the group. Initially there were some glitches in starting activities, but now they are really showing progress in various activities. We are particularly interested in the connection between East Africa & Central African MAM rainfall. We have worked on SON rainfall earlier because there is a direct tele-connection with the IOD. What is the interannual mode that drives the MAM rainfall over the region? Is it ENSO? <i>Rodro:</i> No. It is still a challenge. A lot of research has been done on it. There is no clear impact of ENSO. There is no clear impact of the West Pacific warming that drives drought in the area. But that is still ongoing. One of the main challenges is that there is a lot of pressure from the governments in the area on the forecast. So, based on the research output on West Pacific warming affecting the area, the Climate Prediction Centre over Eastern Africa used it as a predictor for the last March, April, May season, and the forecast failed. They had predicted a drought, but it rained a lot – a big question for the community. <i>Leila:</i> I do not know if you know about the climate Hazard Centre at UC Santa Barbara. They provide forecasts for the regions based on SSTs in the West Pacific and they have been
	 Lena. I think having a few campaigns for understanding a little better the processes at the boundary layer level is extremely important. So, congratulations also important that you are fostering more meetings in the AMS, more specific meetings.
(C) W(G on American Monsoons [WG-AMM]: - (Ruth - Absent) There is no update in the <u>Monsoons Panel Notebook</u>. Ruth will be requested to update the Notebook.
Con	Aments from members: Leila: We can use this use this time to discuss what is going on and how we can as a panel, help the American Monsoons working group. The co-chairs have not contacted me as a member of the working group for any meeting of the group. There was a meeting between Alice, Ruth, Rajagopal and me on 28 th February 2023. <i>Rajagopal:</i> We wanted them to organize an online meeting of the group at the earliest, which has not happened. Nothing has been happening in the group, except that we have recently appointed Caio Coelho as a member. Another person (Robin Chadwick)

who wanted to become member of WG-AMM contacted the Co-chairs and they have not responded to his mail yet. I do not know how to go about with this issue of people not responding to mails as it is becoming more difficult. <i>Leila:</i> We need to put some energy and interest in this group. How? <i>Surya:</i> I think we should have somebody from the panel to be Co-chairing the group. This is the third time that we are without any update from the group. <i>Rajagopal:</i> Ruth is a Co-chair and also a MP member. This meeting was arranged at her convenient date/time and still she did not attend. <i>Leila:</i> What if we have somebody else representing the American monsoon in the monsoons panel, who is more interested? I would say Caio, who is already very enthusiastic about being member of the American Monsoon Working Group. <i>Rajagopal:</i> We cannot do this until the MP membership renewal of 2024 comes up. <i>Surya:</i> The MP has the liberty to invite members from WGs to attend MP meetings even if they are not members of MP. So, they can be invited as special invitees, <i>Rupakumar:</i> We need to find a way to engage the working group separately to
understand what is the issue that is preventing them from interacting with each other and also contributing to the panel. This must be done as a special exercise by the MP, particularly the Co-chairs. This is important as no formal meeting of the group has been convened since the WG was formed in 2022. They may be having some discussions informally, but a formal working group meeting like the ones of the WG-
AAM and WG-AFM has not happened yet <i>Rupakumar:</i> In fact, IMPO had offered to organise their meeting despite the time constraints, but there was never any enthusiasm in going on with a meeting. If it is the lack of time and willingness on the part of the existing Co-chairs to make this happen, we need to find ways to have a more enthusiastic and more committed leadership to the working group. Leila probably knows the intricacies. I think it is a complex region in terms of having a group work in a conducive way, but at the same time, I think we cannot just allow things to continue like this, so something must be done on urgent basis.
<i>Rupakumar:</i> I know of a similar thing which happened earlier, much before the monsoons panel came into existence. In fact, that time the CLIVAR itself stepped in, and then they created a small task team to analyse the existing situation and propose some corrective measures to make the group more active.
Leila: I think before things fade away as there are members in the working group and MP need to help them. Currently it looks there is too much in the hands of two Co- chairs, they are very busy and have their own issues. The current lack of communication in my view is the biggest issue. May be the Co-chairs do not want to play their role anymore. I am wondering if there are any ways to help the working group through IMPO intervention.
group through IMPO intervention. <i>Rupakumar:</i> If the MP agrees we can constitute a very small task team, maybe two or three members to take charge of the matters to see what is happening and what is the best way to go forward. This task team can help us to understand the situation. Because the working groups are reporting to the MP and MP is free to take any action to make the working group function in an expected manner. So, in that sense MP can even completely disband the working group and create a totally new working group, which we do not want to do in that way. Hence, it is good to have a small team who are available and who are willing to spend some time on this and propose a few
recommendations that MP can consider for taking action on the working group. <i>Rajagopal:</i> Communicating with Co-chairs is a big issue as both of them do not respond to emails easily. <i>Leila:</i> We even had Dr. Robin Chadwick approaching the co-chairs for membership in WG-AMM because he is interested in the working group activities. He has a very strong interest in American monsoons and would add a lot to the working group. But the Co-chairs have not responded to him yet. As there are some protocols that we must follow, MP is unable to invite him to join the group without the concurrence of the Co-chairs.

	<i>Surya:</i> I think it is the right time to write a polite letter to both Co-chairs from IMPO informing that since nothing is happening in the group as both of them are very busy, MP would like to look for new Co-chairs. We should inform them first and then MP should start the exercise to identify 2 enthusiastic members as Co-chairs. <i>Surya:</i> We should also think of rotate off the members who are not showing any interest in doing work and who are not even responding to the emails. Whatever I have seen so far is that wherever ECR are involved, things are working better. If the senior researchers are involved, then things are not moving very fast. If everybody agrees we can ask IMPO to write the letters to WG-AMM Co-chairs regarding replacement of Co-chairs.
	Updates from IMPO (Rajagopal):
3	 1) Activity Highlights: MP/WG-AMM Membership Changes: Dr. Caio Augusto dos Santos Coelho, CPTEC/INPE, Brazil has been appointed as a new member of WG-AMM till 31st December 2026. His brief details are available in IMPO's webpage at https://impo.tropmet.res.in/mpwq-amm-members.html Discussions to identify speakers and topics for the first MP Webinar on Global Monsoons were held between Co-chairs of MP, IMPO, Annalisa Cherchi, WCRP Secretariat (Hindumathi & Wushan) and IMPO. Prof. Bin Wang and Annalisa Cherchi were identified as the potential speakers for the webinar. The first webinar will be organized through the WMO Conference Services' online platform on 13th Sept 2023 at 7 UTC. Unfortunately, American people may not be able to attend. We will record and make it available on YouTube. The time was fixed as per Prof. Bin Wang's preference. Rajagopal attended the IPOs & WCRP Secretariat Group's online meeting held on 6th July 2023 and highlighted the activities of IMPO during April-June 2023. WCRP Carbon footprint https://www.wcrp-climate.org/wcrp-carbon-footprint A form created with Cranfield University will be shared across the IPOs 2023 will be the baseline year for the calculations minus OSC-2023 WCRP Code of conduct https://www.wcrp-climate.org/wcrp-code-of-conduct to be circulated to all Panel members for its compliance by all Core Project/Panels/WGs. Next JSC will discuss how it is working and if it is sufficient. Susmitha represented IMPO travel funds and chaired the session on "Predictability and Processes: Precipitation and Tropical Waves". 2) Future Activities: Organization of the first MP Webinar on Global Monsoons on 13th September 2023. Look forward to active involvement in WCRP OSC-2023 through the session on Global & Regional Monsoons and the two accepted Poster Clusters. <
	 Cooks forward to active involvement in the proposed in-person meeting of MP and WG AFM during OSC-2023 at Kigali (tentatively on 27th Oct. afternoon). Next In-person CLIVAR SSG meeting will be on 22 & 27 Oct 2023 at Kigali, which will be attended by Surya. Executive Head, IMPO has completed his first year of tenure and will continue for
	another year.
	 Comments from Members: Leila: Thank you, Rajagopal for attending/organizing all these meetings and doing an amazing job with the monsoon panel. MP is very appreciative of your work. I personally, owe you a lot.
6 Page	owe you a lot.

	 <i>Rupakumar:</i> One is the persistent request for cross panel and Pan WCRP activities related to the monsoons. I think this is something that the monsoons panel must take on priority basis and evolve into a major topic at the WCRP level. Right now, MP is supporting mostly CLIVAR and GEWEX activities. But there are also lots of other projects, including the lighthouse activities and other WCRP structures, who have a lot of interest in the monsoons. But we don't have a good liaison at the WCRP JSC level to support this type of cross-panel or pan WCRP activities on the monsoons. In this also probably can be extended to even WWRP activities on the monsoons. I think that this needs a better coordination, to raise the profile of monsoon research within WCRP. The other one is the Open Science Conference of GEWEX in July 2024 in Japan, we should work towards a monsoon session in the conference in consultation with IGPO and GEWEX SSG. <i>Surya:</i> I agree with Rupakumar's suggestions. Recently I had attended GEWEX SSG meeting, and they were showing a lot of interest in monsoon activities. In fact, they asked us to conduct a monsoon session in their OSC. Maybe we can prepare the proposal and submit to IGPO. <i>Surya:</i> I have been consistently telling in each meeting that the cross-panel activities is one of the weakest parts of this monsoons panel. The WCRP JSC summary prepared by CLIVAR SSG along with their recommendation on cross-panel activity was forwarded to all members and WGs, very few members have come forward to show interest. I agree that we are all volunteering to work for the MP, but at the same time, if we all are not doing enough then MP activities will not be visible to other panels. Whenever I make presentations about the MP activities, everybody is interested, they want to interact with us but as an individual, we cannot do so much, but as a panel we can do a lot. <i>Surya:</i> There are about 5-6 memberships ending this year. If we want to consider some
4	 Updates on Monsoons Session at OSC-2023 (Surya): Already updated in the last MP meeting. Most of the abstracts have got poster presentations including mine. CLIVAR SSG is planning to have their in-person meeting on 22nd and 27th October, which I must attend. So, the In-person meeting of MP & WG-AFM must be organized in a manner that it does not clash with CLIVAR SSG meeting of 27th afternoon. IMPO can coordinate with ICPO to know more about the CLIVAR SSG meeting and schedule the MP & WG-AFM meeting accordingly.
5	 Discussions on the In-person MP meeting at OSC-2023 and its Travel funding (Lead: Rajagopal) The meeting can happen on 27th October and the time can be fixed to avoid the clash with the CLIVAR SSG meeting, which Surya must attend in-person. The meeting will be in hybrid format so that online participation of members is possible. May be 1-hour meeting may be sufficient for us. From the available \$10000, Thea wants \$1000 as partial air travel support, which has been agreed to the MP Co-chairs. The remaining \$9000 is available now for 4 members. As per suggestions from Surya, this fund can be used to support 2 members each from MP and WG-AFM who have accepted abstracts for oral/poster presentations. IMPO has identified the members and sought their fund requirements. With the approval of Co-chairs, the names/their requirements will be forwarded to CLIVAR and GEWEX for their approval.

6	 Discussion on identification of members for cross-panel activities with SPARC and CliC projects as per CLIVAR SSG recommendation (Surya): IMPO has already circulated to all members about what are the activities that the different panels and different core projects are interested in working with the monsoons panel. CliC is interested in collaborating with MP in understanding the connections between the Himalayan cryosphere and Asian monsoons & Impacts of reduced Arctic sea-ice on Asian monsoons. Pankaj has shown interest Hui Su and Hiroshi have now shown their interest in Arctic Sea-ice and so there have 3 members for the CliC collaboration. Their names can be communicated to CliC SSG Co-chairs SPARC wants to connect with the MP, through its Atmospheric Composition and the Asian Summer Monsoon (ACAM) project. We are unable to identify people who can collaborate with SPARC on ACAM project since last 2-3 years. As none have come forward for the SPARC activity, IMPO to identify people from WG-AAM from their CVs with background in atmospheric composition and Stratosphere-Troposphere interactions. Since the WCs have the liberty to collaborate with NDPO will take it forward. Gender balance, regional balance etc. should be met while finalizing the names. Thea mentioned that she will raise this the next WG-AAM meeting in September. Safe Landing Climate (SLC) LHA interest in collaborating with WG-AFM: <i>Rondro</i>: We had this meeting with SPARC. They were talking about a training for the African, early career scientists. So, that is something that we consider as an activity. I think the only thing from that meeting was that there was no timeline because they want to have it as a regular training going on every year like an annual activity of a group. We in the MP/WG-AFM, cannot really promise anything because we have a limited tenure. But, if we could see something in next year before our tenure ends, that could be something t
	 interested to take on. <i>Rajagopal:</i> Izidine Pinto of WG-AFM is a member of "Understanding High-Risk Events" working group of SLC LHA.
7	 Open Discussion on the ongoing MP & WG activities (All) As there were extensive discussions on the ongoing activities (mentioned under 2 and 3, above), there was nothing more to discuss.
8	 WCRP Monsoons Webinar Series Discussions: (Lead: Wushan) We will have our first webinar on 13th September at 7:00 UTC and the two speakers will be Prof. Bin Wang and Dr. Annalisa Cherchi As Annalisa is a speaker now, who will chair the webinar? I am working with WMO/WCRP meeting platform people, they will provide the meeting link. 500 people can register and connect to webinar. The draft webinar flier has been circulated to Webinar Organising Committee members and the same is shared on screen now for members comments, if any.
	 <i>Comments from Members:</i> <i>Rajagopal:</i> We were planning to have Annalisa as the person to chair the webinar, but now she is a speaker, so we will need somebody to chair this event. <i>Surya agreed to chair the webinar.</i> <i>Thea:</i> Previously we discussed that the different working groups would then be doing the subsequent webinars.

	 <i>Rajagopal:</i> The 3 regional monsoons webinars will be held after the global one. Our initial plan was to complete the webinar series by December 2023. As the first one is now in September, we may be able to finish the webinars on regional monsoons by January or February 2023. <i>Surya:</i> Let the WGs first identify the speakers/topics and share with IMPO. So, one of the of the recommendations of this panel is that all working groups should work towards identifying topics & speakers for the webinar series. <i>Surya:</i> Wushan can again create a google doc for each of the regional monsoon webinars and IMPO can share them with WGs inviting their suggestions. <i>Hui Su:</i> Bill Lau whom I recommended previously for the Global Monsoon webinar could be a good choice of Asian monsoons.
9	 Any other business <i>Rajagopal:</i> Robin Chadwick of Met Office, who is very keen to join WG-AMM, the Cochairs of WG-AMM have not responded to his request yet. How to go forward in this matter? <i>Rupakumar:</i> I think you do not need the endorsement or agreement of the Co-chairs. IMPO can send an e-mail with a short deadline to the Co-chairs intimating MP's desire in giving membership to Robin, if they do not respond, it is taken as a yes. This is the strategy that we have adopted earlier. <i>MP Co-chairs agreed to this suggestion from Rupakumar. IMPO to send mail to the Co-chairs of WG-AMM.</i> <i>Rajagopal:</i> Monsoon session in GEWEX OSC-2024 was discussed by Surya earlier, other members suggestions are welcome. <i>Hiroshi:</i> The session topics of the conference is decided by the GEWEX SSG and may be MP can approach them for getting a session on monsoon added into the scientific programme. <i>Rupakumar:</i> One good way of getting the monsoon session proposal accepted is to team up with one of the GEWEX core panels and see if we can have a combined joint session with them. For example, the Regional Hydroclimate Project of GHP (GEWEX Hydro-climatology Panel) has close links with the monsoons, and they do have monsoon interest. Something of that type if we can work out, which has a greater chance of getting accepted.
10	 Date/time of next meeting (Lead: Leila) The next meeting can be in the first week of October 2023 at a convenient time for members from Europe & African continents. Time to be decided based on the inputs received from members in the google doc shared by Annalisa. Leila thanked all for their participation in the meeting.

NEXT MEETING

Meeting Number	2023-5	Meeting Time & Date	First week of Oct. 2023. IMPO to send out doodle poll
Location	Video conference, details of the meeting will be sent out by IMPO		

Appendix-I



A screenshot of the in-progress online MP meeting held on 1st August 2023