# Summary of PRPPWG Video-Conference Call

# 8 March 2022

Participants: Gina ABDELSALAM, Bob BARI (invited), Brian BOYER, Lap CHENG, Ben CIPITI, Giacomo COJAZZI (invited), Kevin HESKETH, Katherine HOLT, Anagha LYENGAR, Frederic NGUYEN, Guido RENDA, Tomooki SHIBA, Bryan VAN DER ENDE

Excused absences: Chris HOLMES, Alexander CHEBESKOV

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1. **Roll call**

See list above.

Lap introduced Bob BARI to the group, noting that Bob was a long-lasting PRPPWG co-chair, one of the first contributors to the PR&PP evaluation methodology and to the PRPP white papers. Brian BOYER joined the meeting during the second hour.

1. **Approval of minutes of February 8, 2022 Video/teleconference (Summary sent on February 28, 2022)**

Lap opened the floor for comments on the 8 February draft summary record which was circulated on 28 February. Gina indicated that she received minor comments from some of the PRPPWG members that she already incorporated to the summary.

Lap informed the group that in order to facilitate the tracking of the PRPPWG action list, the work plan that was discussed during the 32nd PRPPWG Annual Meeting has been incorporated at the end of the summary record.

No other comments were raised by the PRPPWG and the summary record was considered approved.

1. **PRPPWG Annual Meeting, November 15, 17 and December 6, 2021**

Lap reminded the group that the Summary and Slides Booklet of the 32nd PRPPWG Annual Meeting were sent to the PRPPWG on February 7 and opened the floor for comments and feedback.

Gina informed the group that she received a few minor comments on the summary from some of the PRPPWG members and indicated that all changes have already been incorporated. She added that the summary was also circulated to Tanju SOFU and Luca AMMIRABILE from the Risk and Safety Working Group: their feedback has also been incorporated to the latest version of the summary.

Lap called an action on Gina to finalize and post both the summary record and the Slides Booklet on the password-restricted area of the GIF website, requesting that the [link](https://www.gen-4.org/gif/jcms/c_197043/32nd-annual-meeting-agenda-summary-records) be shared with the PRPPWG.

1. **Proposal to rotate hosting of monthly call by different member – special topics; future emphasis of the WG, etc.**

Lap and Guido shared with the PRPPWG a new proposal going forward that consists in rotating the host of the monthly calls by a different PRPPWG member. They indicated that as the group is currently wrapping up the remaining white papers, the idea is to give the opportunity to each member to raise new topics that could be of particular interest to them (or their country). This new proposal would increase the transparency of the operation of the working group and also encourage more active participation from the members to the ongoing activities of the PRPPWG.

Guido and Lap opened the floor for comments and reactions. Bryan VAN DER ENDE added that the proposal is a very good idea and that he is willing to contribute as a host for one of the upcoming PRPPWG monthly teleconference calls. In practice this will imply active participation in the core group meetings in preparation of the monthly calls agenda and the provision of topics for discussion. The new format will be jointly worked out for the future monthly calls.

Giacomo suggested that the core group meetings that are usually held prior to each monthly call be open to all the interested PRPPWG members, not as a formal commitment but as a way to brainstorm and elaborate on a few specific topics. Lap remarked that this is the case and encouraged the interested PRPPWG members to communicate their interest and availability.

1. **GIF Staffing changes**

Lap informed the group that unfortunately Gina will no longer provide Technical Secretariat services to the PRPPWG, as of 14 March 2022:

* Gina is replacing Sunyoung CHANG as Technical Secretary for the VHTR SSC, Materials PMB, Hydrogen Production PMB and CMVB (Computational Methods & Validation Benchmark) PMB.
* Ms. Seoyeong JEONG, on loan from Korea to NEA, will take over as Technical Secretary for the PRPPWG.

The group thanked Gina for her collaboration with the PRPPWG, noting that she provided excellent support to all the ongoing activities, ensuring business continuity and allowing the co-chairs and all the PRPPWG members to concentrate on their duties and responsibilities in a very efficient way. Gina thanked the group for the kind words they expressed, noting that it was a pleasure to work with all the PRPPWG members. Gina also expressed her availability to support the transition.

Lap called an action on Gina to schedule a core group call with Seoyeong JEONG the week of March 14.

1. **SSCs/White Paper Status**
	* 1. **SFR & SCWR, Status of final review and approval by the PRPPWG**

Lap informed the group that the GFR and SCWR white papers have been distributed on February 9 to all the PRPPWG members to request the formal written approval for public release. He requested an update from Gina who indicated that the following countries have provided their approval: Canada, the US, Japan, South Africa, EURATOM and France. Kevin HESKETH informed the group that Chris HOLMES is on leave and added that the UK will have no objection vis à vis the public release of the white papers: Gina kindly asked that he send her a confirmation by email.

Lap called an action on Gina to send a reminder to the remaining 3 countries that have not yet provided their feedback (namely China, Korea and Russia), requesting a response by the end of the week.

Giacomo enquired about the status of the EG review. Gina indicated that the two white papers had been sent to Bob Hill for an EG review on February 9, noting that she did not receive any feedback so far. Giacomo suggested that the papers might not have yet been distributed to the EG members and consequently, the co-chairs called an action on Gina to double-check the status of the EG review with Sylvia.

* + 1. **MSR, VHTR, Status, way forward**

**VHTR**: Tomo gave an update on the VHTR white paper. He informed the group that he shared the latest draft of the white paper with Gerhard STRYDOM, the VHTR SSC chair. He added that Gerhard saw no issues with the changes made, noting however that the two SSC members that had objections before (Michael FUETTERER and Eric ABONNEAU) indicated they did not change their positions even though they will discuss the issue again with their PG representatives. Ben added that no additional modification would appease the members.

Lap informed the group that the VHTR white paper has been put into the usual template. Giacomo recalled that the abstract is still missing. As a result, the co-chairs called an action on Tomo to provide an abstract for the white paper, noting that he can take example on the abstract for the GFR white paper that Gina already done in the report (the first paragraph is similar for all white papers, only the second one needs adaptation).

Lap called an action on Gina to wait for Tomo’s feedback and distribute the consolidated version of the paper with the abstract to all the PRPPWG members, for review and comments by the end of March.

**MSR:** Lap informed the group that the MSR pSSC have completed their internal review of the MSR white paper. As such, he informed the group that their feedback would be incorporated in the coming weeks.He added that Prof. Elsa MERLE has committed to update the information related to the MSFR section, noting that she will have only a short delay to provide her input. Prof. MERLE as well as other members from her team will therefore be added as co-authors to the paper.

The co-chairs ended the discussion on the white paper updates by stating that the PRPPWG seems to be on target to have all the white papers released or in the process of being released by the May EG/PG meeting.

1. **Crosscutting topics**

Ben informed the group that a dedicated meeting will be scheduled to discuss the crosscutting report, on Thursday 17 March (as opposed to Tuesday 15 March as initially planned): a calendar invite will soon be sent in this regard.

He reminded the group that he recently shared the latest draft of the report and thanked all the contributors for their edits. He urged the participants that may not have the chance to go through the previous version to use the latest draft that was circulated for any future comment. However, he indicated that if need be, he can also merge comments from previous versions.

1. **Bibliography Update**

Guido informed the group that he received contributions from a few PRPPWG members. He added that he will consolidate all the input in the coming weeks and urged the remaining PRPPWG members that may still have additional input to provide to share them by March 18.

Finally, he reminded the group that the target for publication is the end of March, noting that the PRPPWG is well on track to reach such an objective.

1. **Upcoming Meetings**
* **GIF EG-47/PG-53 (confirmed) May 16-20, 2022**

Gina informed the group that the upcoming GIF EG/PG meetings will take place as an in-person meeting in Sydney, Australia, during the week of 16 – 20 May. Lap and Guido shared some concerns with regards to obtaining travel approvals, noting that they will not be able to attend the meeting in-person in Australia. They invited potential PRPPWG members who may have already planned to travel to Australia to come forward to deliver the PRPPWG presentation on their behalf, but no one had planned to travel. Guido made an observation on the need to prepare some potential messages that the PRPPWG would like to raise to the PG.

As for the EG/PG Meetings in October, Gina indicated that the meeting will be held in Toronto, Canada, following the GIF Industry Forum.

* **2022 GIF Industry Forum collocated with G4SR-4, 3 – 6 October, 2022, Toronto, Canada**

Lap reminded the group that the GIF Industry Forum will take place in Toronto from 3 – 7 October 2022 and will be co-located with the conference G4SR (Generation IV Small Reactors).

* **IAEA Symposium on International Safeguards: Reflecting on the Past and Anticipating the Future, 31 October to 4 November 2022**

No particular update was shared on this Conference. The core group submitted an abstract focused on the white papers update and on the crosscutting report. Upon its acceptance, the PRPPWG members will be informed.

* **FR22 19-22 April 2022, Vienna, Austria**

Lap reminded the group that FR21 Conference had been postponed to 2022 and will now take place in Vienna (as a physical meeting at the IAEA) instead of China from 19 – 22 April.

Giacomo proposed that the group prepare some communications material for this conference: he suggested to recycle some of the material that was used at the World Nuclear Exhibition (WNE) in 2021 and asked Gina to share her thoughts. Gina reminded the group that the marketing and communications material that was prepared for WNE was about the overall GIF initiative and not dedicated to the PRPPWG but indicated that it would be quite straight-forward to retrieve the QR codes and Cover pages from the posters to create a small flyer dedicated to the PRPPWG. However, she advised the group to first investigate if there may be any constraints in terms of sustainability that would prevent the use of paper material during the Conference.

1. **A.O.B**
* **Election of a third co-chair of the working group**

Lap reminded the PRPPWG members of the need to elect a third co-chair of the working group. He proposed that the election process be launched when the new Technical Secretary arrives, following the same process as last year’s.

The co-chairs invited everyone to give some considerations about nominating a potential candidate to serve the position of co-chair, noting that self-nominations are also welcome. Guido added that it would be great to have the third co-chair elected before the upcoming EG/PG Meetings in May: Gina confirmed the feasibility of the election within the allocated timeframe, reminding him that the former process took less than a month and a half.

* **IAEA INPRO PR, (BB)**

Guido informed the group that the draft PR Manual has been assembled by the agency by the second half of February, noting that another consultancy meeting is scheduled at the end of March to discuss the report.

Lap enquired some information regarding any potential discussion about demonstrating its application using one of the Gen IV systems. Guido shared his opinion that such demonstration may be discussed during the next consultancy meeting as it needs to be assessed and negotiated in depth before materializing.

* **Other relevant recent events/documents:**

**Discussion on how is the PRPPWG methodology applicable to today’s situation**

Lap opened the discussion by stating that the PR&PP methodology, does not recognize explicitly the military threat as a potential threat to the safety and security of nuclear plants. He raised the issue of the recent military evens in Ukraine and Russia that brought the PP threat to nuclear plants beyond the scenarios considered in the PRPP methodology. He added that it would be interesting to discuss and recognize this new threat scenario and consider what could be done.

Guido recalled that DG Grossi recently stated that in order to ensure a safe and secure operation of nuclear facilities, 7 key areas going beyond the nuclear site itself need to be assured. The Seven Pillars mentioned by DG Grossi are:

* 1. The physical integrity of the facilities – whether it is the reactors, fuel ponds, or radioactive waste stores – must be maintained;
	2. All safety and security systems and equipment must be fully functional at all times;
	3. The operating staff must be able to fulfil their safety and security duties and have the capacity to make decisions free of undue pressure;
	4. There must be secure off-site power supply from the grid for all nuclear sites;
	5. There must be uninterrupted logistical supply chains and transportation to and from the sites;
	6. There must be effective on-site and off-site radiation monitoring systems and emergency preparedness and response measures; and
	7. There must be reliable communications with the regulator and others"

Bob Bari, who was invited to contribute to the call, discussed his views and suggestions on this topic, not with the goal of drawing conclusions, but to build on the reflection initiated by Lap. In particular, he stated that the PR&PP methodology covers very well the site itself but not necessarily the infrastructures around, which may soon turn out to become more and more important in the very near future.

Brian shared some information regarding the situation of nuclear facilities in Ukraine. He informed the group that the IAEA has not been able to keep contact with the operators, and that safeguards inspections are suspended at present.

Lap ended the discussing on the topic by stating that in the upcoming monthly calls, the PRPPWG will take a closer look at assessing the robustness of Gen IV systems in general, including against military threats.

* **Date for the next monthly call**

The whole group decided to hold the next PRPPWG monthly call on 5 April. Bryan VAN DER ENDE will be the host.

**PRPPWG MAIN UPCOMING EVENTS LIST 2022-2023**

1. GIF EG-47/PG-53, May 2022; majority preference of the PG is to hold an in-person EG/PG meeting on Monday, 16 May, to Friday, 20 May, in Sydney, Australia
2. GIF 2022 Forum (G4SR-4, October 3-6, 2022, Toronto, Ontario, Canada)
3. GIF EG/PG meeting in October 2022
4. IAEA Symposium on International Safeguards: Reflecting on the Past and Anticipating the Future, 31 October to 4 November 2022
5. FR22 19-22 April 2022, Vienna, Austria

**PRPPWG ACTION LIST 2021-2022**

(As drafted at the 32nd PRPPWG Meeting)

1. ~~Post presentations of the 32nd meeting by 17 December 2021.~~
2. ~~Issue the draft summary report and book of presentations from the 32nd meeting by February 2022.~~
3. Update PRPPWG internal website, continuing.
4. ~~Contribute to GIF 2022 Annual Report by mid-January 2022.~~
5. Issue Bibliography update by end of March 2022.
6. Elect third co-chair of the PRPPWG in first quarter of 2022.
7. GFR and SCWR white papers
* ~~Submit to EG for review by end of December 2021.~~
* Seek approval from PRPPWG member countries to publish the white papers on the GIF public website by January 2022.
* Publish the two white papers by February 2022.
1. VHTR White paper
* Technical review of the white paper by the PRPPWG in January 2022.
* Obtain concurrence from the SSC by February 2022.
* Submit to EG for review by February 2022
* Seek approval from PRPPWG member countries by March 2022.
* Publish the white paper by April 2022.
1. MSR White paper
* Complete drafting of the MSR white paper by March 2022.
* Technical review of the white paper by the PRPPWG in April 2022.
* Obtain concurrence from the SSC by April 2022.
* Submit to EG for review by April 2022.
* Seek approval from PRPPWG member countries by May 2022.
* Publish the white paper by June 2022.
1. Crosscut Report
* Complete drafting of the report by February 2022.
* Technical review of report by PRPPWG in February 2022.
* Submit to EG for review by March 2022.
* Seek approval from PRPPWG member countries by April 2022.
* Publish the report by May 2022.
1. Solicit feedback from the SSC on the usefulness of the white paper and room for improvement to benefit the designers – May 2022.
2. Provide input to the GIF/IAEA Interface meeting, to be held in 2022 (Spring/Summer).
3. Collaboration with IAEA and RSWG. Continuing
4. Engage with EMWG to explore areas of potential collaboration. Continuing
5. Report to PG/EG at their next meetings, in May 2022 and Fall 2022.
6. Organize
7. tutorial/refresher on the PRPP methodology for all members – TBD
8. workshop for members to share their experience in performing PR&PP evaluations and explore potential update to the PR&PP methodology – TBD
9. Fix date and place of the 33rd meeting and/or workshop, by September 2022
10. Participate in GIF 2022 Forum (aka GIF Symposium)
11. Contribute paper to the Fall 2022 IAEA Safeguards Symposium that will be held in Vienna.