



UNITED NATIONS  
Office for Outer Space Affairs

# 1<sup>st</sup> space4water Stakeholder Meeting

27-28 October 2022

@ the Vienna International Centre

## AGENDA AND PARTICIPANT INFORMATION

As of 25 October 2022

The 1<sup>st</sup> Space4Water Stakeholder Meeting will take place in person on 27-28 October 2022 at the Vienna International Centre, at Conference Room 7.

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## OBJECTIVES

At this 1<sup>st</sup> Stakeholder Meeting, the Space4Water community has an opportunity to meet in person and get to know each other to discuss respective activities and expectations towards the project. The workshop aims to

- Identify shared objectives for the Space4Water initiative and the community;
- better understand how members of the community are assessing user needs within the water-related sectors towards the space sector and what approach(es) the Space4Water community could adopt;
- identify effective approaches to facilitate matchmaking between stakeholders, professionals and young professionals; and
- identify effective ways to address water-related challenges with space-based solutions;
- determine the next steps to achieve the objectives above.

The stakeholder meeting is foreseen to be highly interactive, so that members of the community learn from each other's experience, discuss their respective expectations and define future activities collaboratively.

## AGENDA

### Day 1, Thursday, 27 October 2022 – 9:00 – 17:30

|               |   |
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| 09:00 – 09:30 | Registration  |
|               | <ul style="list-style-type: none"> <li>• Please pick up your access badge for the Vienna International Centre at Gate 1. Don't forget to bring your passport.</li> <li>• Registration for the stakeholders meeting takes place at the registration desk in Conference Room 7 (CR-7), on the seventh floor of the C-building.</li> </ul>   |
| 09:30 – 10:00 | Opening   |
|               | <ul style="list-style-type: none"> <li>• <b>Opening remarks</b> - Luc St-Pierre, Chief, Space Applications Section, United Nations Office for Outer Space Affairs</li> <li>• <b>Opening remarks</b> - Abdulmalek Al Al-Shaikh, General Secretary, Prince Sultan Bin Abdulaziz International Prize for Water</li> <li>• <b>The Space4Water Project</b> - Nina Kickingger, United Nations Office for Outer Space Affairs</li> </ul> |

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| 10:00 - 11:00 | <b>Introductions of participants with presentations by Space4Water Professionals and Young Professionals</b>  |
|               | <p>Presentations give an overview of the research interests and current activities by Space4Water <a href="#">Professionals</a> and <a href="#">Young Professionals</a> to encourage networking between participants.</p>   |
|               | <ul style="list-style-type: none"> <li>• <i>Large-scale spatio-temporal variability of the Congo Basin surface hydrologic components from space</i> - <a href="#">Benjamin Kitambo</a>, PhD Candidate, French spatial agency (CNES) (10 min)</li> <li>• <i>Hierarchical Data Format for Water-related Big Geodata (HDF4Water)</i> - <a href="#">Stephanie Tumampos</a>, Doctoral Student, Technical University of Munich (10 min)</li> <li>• <i>Assessing compounding of hydrological extremes over Eastern Africa –</i>, <a href="#">Mastawesha Misganaw Engdaw</a>, Researcher, Wegener Center for Climate and Global Change (10 min)</li> <li>• <i>Nature-based solutions for sustainable water management in watersheds through forest conservation</i> – <a href="#">Padmi Ranasinghe</a>, PhD Student, University of Texas at Arlington (10 min)</li> </ul> |
| 11:00 - 11:20 | <b>Break</b>  |
| 11:20 - 12:30 | <b>Introductions of Stakeholders</b>  |
|               | <p>Stakeholder presentations introduce their work related to space and water, the resources available on request or already shared with the community, as well as their expectations for Stakeholder Meetings. Stakeholders are also invited to provide an overview and optionally detail one topic of preference to encourage cooperation with other interested parties.</p>   |
|               | <p><b>Government</b></p> <ul style="list-style-type: none"> <li>• <i>Water initiatives by <a href="#">Zimbabwe National Geospatial and Space Agency</a></i> Victor Mukungunugwa, Senior Scientist (10 min)</li> <li>• <i>Water initiatives by <a href="#">Kenya Space Agency</a></i> - Faith Wanjiru Maina, Environmental Officer (10 min)</li> <li>• <i>The interplay of data sciences and earth observations addressing water related issues</i> - <a href="#">Hesham El-Askary</a> Vice President, <a href="#">Egyptian Space Agency</a> (10 min)</li> <li>• <i>Leveraging Space Technology for Water Harvesting in Meghalaya</i> – Vishal Saraogi, Project Manager, <a href="#">Soil and Water Conservation Department, Government of Meghalaya, India</a> (10 min)</li> </ul>  |

|                      |   |
|----------------------|---|
|                      | <p><b>Private Sector and Industry</b></p> <ul style="list-style-type: none"> <li>• <i>Arctic Lakes</i>, Helena Bergstedt, Senior Researcher, <a href="#">b.geos</a> (10 min)</li> <li>• <b>Information Systems for Water Resources Management - Mariana Damova</b>, <a href="#">Mozaika</a> (10 min)</li> </ul>   |
| <p>12:30 - 13:45</p> | <p>Lunch</p>  |
| <p>13:45 – 14:45</p> | <p>Introductions of stakeholders (continued)</p>  |
|                      | <p><b>Academia</b></p> <ul style="list-style-type: none"> <li>• <i>Introduction of the work of IHE Delft</i> – Ionana Popescu, Associate professor of Hydroinformatics, <a href="#">IHE Delft Institute for Water Education</a> (4 min)</li> <li>• <i>The Global Gravity-based Groundwater Product</i>, Adam Jozef Pasik, Project Assistant in Climate and Environmental Remote Sensing <a href="#">Department of Geodesy and Geoinformation, Vienna Technical University</a> (10 min)</li> <li>• <i>Introduction of activities and thematic focus of University of Zimbabwe: Department of Construction and Civil Engineering</i> - Webster Gumindoga (10 min)</li> <li>• <i>Introduction of activities and thematic focus of Environmental Systems Laboratory at the Central European University</i> – Victor Lagutov, Professor (CEU), Head (CEU's Syslab) (4 min)</li> <li>• <i>Water and Soil Resource Assessment by Geospatial Techniques at Watershed Scale in the Uttarakhand Himalayan Region</i>, Pankaj Kumar, <a href="#">Govind Ballabh Pant University of Agriculture and Technology</a>, Pantnagar, Uttarakhand, India (10 min)</li> </ul> <p><b>Intergovernmental Organisation</b></p> <ul style="list-style-type: none"> <li>• IICAs FabLab end user centred approach to water challenges in Central Americas rural areas - Luis Monge Solano, <a href="#">Inter-American Institute for Cooperation on Agriculture (IICA)</a> (10min)</li> </ul> |
| <p>14:45 – 15:15</p> | <p>Water-related challenges</p>   |
|                      | <p>How can we identify challenges within the water-related sectors that can be addressed by using space-based technology and data? Examples questions include, but are not limited to:</p> <ul style="list-style-type: none"> <li>– How can we reach people on a local level to share data and ensure that this data is trustworthy?</li> <li>– What does the description of a water-related challenge need to include for those developing space-based solutions to be able to understand it and act upon it?</li> </ul>   |

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|---------------|--|
|               | <ul style="list-style-type: none"> <li>• Short introduction of Space4Water initiatives (Nina Kickinger, UNOOSA) <ul style="list-style-type: none"> <li>○ <i>Local Perspectives</i> and <i>Case Studies</i>;</li> <li>○ Gaps identified and submitted by Stakeholders;</li> <li>○ Other ideas;</li> </ul> </li> <li>• Open discussion concrete cases and lessons learnt in the identification of water-related challenges on the local, regional, and international level.</li> </ul>   |
| 15:15 – 15:30 | <b>From water-related challenges to space-based solutions – Exploratory approach towards a serious game on space technology for water challenges (Introduction)</b>  |
|               | <p>We will pick a few water-related challenges discussed previously for the participants in the room to explore the challenge. The purpose of the session is to develop a problem definition, determine success criteria, translate the need into requirements for services, discuss what potential space-based technology and data could be used to address the challenge as well as assess which Space4Water stakeholders, professionals and resources could be used to address the challenge.</p> <p>The purpose of this game prototype is to enable participants to better know each other while going through the process of defining needs and identifying what Space4Water stakeholders could contribute.</p> |
| 15:30 - 16:00 | <b>Break</b>   |
| 16:00 - 17:30 | <b>From water-related challenges to space-based solutions – Exploratory approach towards a serious game on space technology for water challenges (Interactive)</b>   |

## Day 2, Friday, 28 October 2022 – 9:30 – 16:00

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|---------------|--|
| 09:30 – 10:00 | Introduction to Day 2 - The Space4Water Community, Nina Kicking (UNOOSA)   |
| 10:00 – 11:00 | Approaches to water-related user needs towards the space sector (Interactive)  |
|               | <ul style="list-style-type: none"> <li>• <i>Short introduction (UNOOSA)</i></li> <li>• <i>The <a href="#">Water-ForCE project</a>, A roadmap approach for Future Copernicus Explorations for Water, Ionana Popescu, Associate Professor of Hydroinformatics, <a href="#">IHE Delft Institute for Water Education</a> (10 min)</i></li> <li>• <i>Interactive session and discussion</i><br/>– please feel free to share how your own organisation collects user needs</li> <li>• <i>Group decision on approach to collect user needs</i></li> </ul> |
| 11:00 – 11:30 | Break  |
| 11:30 – 12:30 | Approaches to matchmaking in the Space4Water Community (Interactive)   |
|               | <p>After a short introduction on Space4Water features, the purpose of the discussion is to discuss lessons learnt from various matchmaking options and identify what approach(es) the Space4Water community could like to adopt – please bring your own inputs.</p> <ul style="list-style-type: none"> <li>• Space4Water Features in development</li> <li>• Discussion on approaches to matchmaking</li> <li>• Next steps</li> </ul>   |
| 12:30 - 13:45 | Lunch  |
| 13:45 – 15:45 | Defining shared community objectives (Interactive)   |
|               | <ul style="list-style-type: none"> <li>• <i>Water Knowledge: Role of Science Communication in our Water Future, <a href="#">Stephanie Tumampos</a>, Doctoral Student, Technical University of Munich (10 min)</i></li> <li>• <i>Interactive Session</i></li> <li>• <i>Next steps</i></li> </ul>  |
| 15:45 - 16:00 | Closing session  |

## VENUE AND ARRIVAL

The 1<sup>st</sup> Space4Water Stakeholder Meeting is hosted at the Vienna International Centre in Conference Room 7 (Abbreviated in “CR-7”). You will find directions to the VIC [here](#). Please proceed to Gate 1 of the Vienna International Centre and use the visitor entrance on the right-hand side. Once you pass through the security screening, please go to the Pass Office to receive your access badge; as registered attendee, you will have been pre-registered to obtain the badge. Please do plan sufficient time for security screening and to retrieve your badge, at least 20 minutes, as there could be a long queue depending on the number of other events in the building. Exiting the Gate 1 building, the entrance to the C-building is on the opposite side of the large round fountain. Once you enter the ground floor of the C-building (a big round hall - See Figure 1), please take any elevator close to the branches leading to the other buildings (See blue cross on Figure 1) and proceed to the seventh floor.

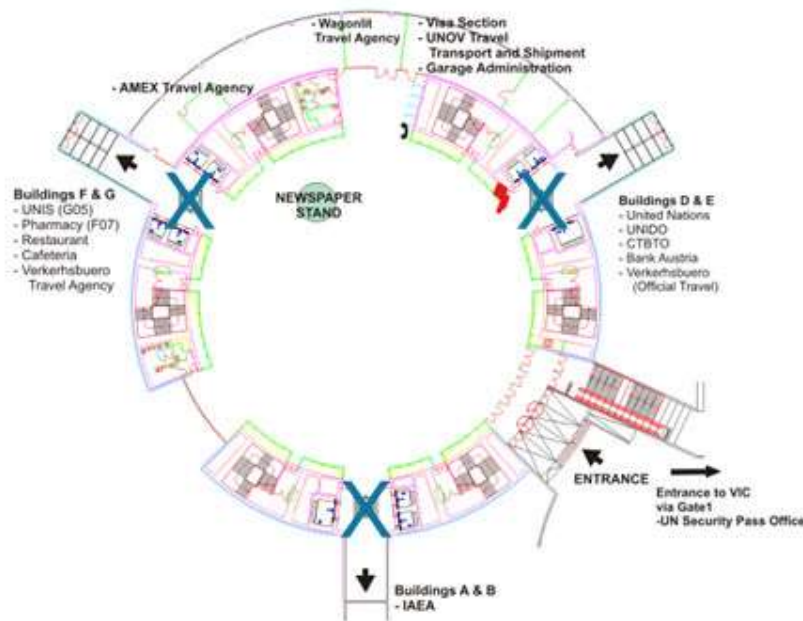


Figure 1: C-building, ground floor