AGENDA AND PARTICIPANT INFORMATION

As of 10 May 2023

The Second Space4Water Stakeholder Meeting organised by the United Nations Office for Outer Space (UNOOSA) Affairs in partnership with the Prince Sultan Bin Abdulaziz International Prize for Water (PSIPW) will take place online on 11-12 May 2023 in CEST/GMT+2 time zone. Participation is invitation-based and exclusive to the Space4Water Community members including stakeholders, professionals, young professionals, and representatives of Indigenous communities. Connection were shared with participants via Email and are available under *How To Connect* at the end of this document.

While it is important to UNOOSA to host in-person meetings regularly, the participants of the 1st Space4Water Stakeholder Meeting have expressed the wish to meet more regularly, and hence, this 2nd meeting takes place online.

Safe the date: The Third Space4Water Stakeholder Meeting takes place 24-25 October 2023 at the Vienna International Centre, Austria. Registration will open in June.

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OBJECTIVES

At this Second Stakeholder Meeting, the Space4Water community has an opportunity to meet online to further strengthen the community, get to know each other's focus areas of work, to learn from each other's experiences and to discuss activities and expectations towards the project. The online meeting aims to objectives include:

- Technical presentations by stakeholders, professionals and young professionals to demonstrate their activities and thematic areas of their work;
- Fostering knowledge exchange between the Space4Water stakeholders, professionals, young professionals, and Indigenous voices;
- Matching water-related challenges and space-based solutions;
- Identifying topics, structure and publication modalities for good practices to be developed by the community;
- Identifying ways to assess user needs in the water-related sectors;
- Discussing and identifying requirements of in-situ data collection, capacity building and coordination mechanisms to this end;

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 - 11 May 2023 – 9:30 – 18:00

9:30 – 10:00	Opening
10:00 – 11:30	Introduction of Participants
11:30 – 11:45	Break
11:45 – 12:30	Space technology to monitor water quality / pollution
12:30 – 13:45	Lunch
13:45 – 15:00	Space technology for water resource management and hydrology
15:00 – 15:15	Break
15:15 – 16:30	Data structures and portals in support of water resources management and hydrology
16:30 – 16:45	Break
16:45 – 18:00	From water-related challenges to space-based solutions

Day 2 – 12 May 2023 – 9:30 – 16:00

9:30 – 11:30	Introduction to Day 2 - The Space4Water Community – Developing space-based solutions to address water challenges
11:30 – 11:45	Break
11:45 – 12:45	Capacity building needs
12:45 – 13:45	Lunch
13:45 – 16:00	Space4Water Community objectives (interactive) and closing

Day 1, Thursday, 11 May 2023 – 9:30 – 18:00

09:30 – 10:00	Opening
	• ***Opening remarks*** - Luc St-Pierre, Chief, Space Applications Section, United Nations Office for Outer Space Affairs • ***Opening remarks*** - Abdulmalek Al Al-Shaikh, General Secretary, Prince Sultan Bin Abdulaziz International Prize for Water • ***The Space4Water Project*** - Nina Kickinger, United Nations Office for Outer Space Affairs
10:00 - 11:30	Introductions of participants (2 minutes each) & group photo
	All participants will be given a chance to introduce themselves. **Space4Water Professionals and young Professionals** • Malek ABUALFAILAT • Samuel Olumide AKANDE • Natalia CARDENAS • Benjamin Wullobayi DEKONGMEN • Mastawesha Misganaw ENGDAW • Farid FARHAT • Benjamin KITAMBO • Padmi RANASINGHE • Avid ROMAN GONZALEZ **Indigenous Voices:** • Cadence KAUMOANA • Lilian NGURACHA BALANGA • Nokubonga Mazibuko **Space4Water Stakeholders** **Academia:** • Chouaib Doukkali University and African Association of Remote Sensing of the Environment (AARSE tbc) • Deutsches Geodätisches Forschungsinstitut der Technischen Universität München • Environmental Systems Laboratory | Central European University (CEU) • G.B. Pant University of Agriculture and Technology, sPantnagar Uttarakhand • Remote Sensing, GIS and Climatic Research Lab (National Center of GIS and Space Applications), University of the Punjab, Lahore, Pakistan • Tribhuvan University, Institute of Forestry, Pokhara Campus • Department of Geodesy and Geoinformation, Technical University Vienna • University of Energy and Natural Resources

	• Department of Construction and Civil Engineering, University of Zimbabwe **Government** • National Water and Sanitation Agency of Brazil • National Mission for Clean Ganga, Ministry of Jal Shakti • Nigeria National Space Research and Development Agency • Bahrain National Space Science Agency • Kenya Space Agency • Zimbabwe National Geospatial and Space Agency **Intergovernmental Organisations** • Inter-American Institute for Cooperation in Agriculture • United Nations World Food Programme **Private Sector and Industry** • b.geos GmbH • constellr GmbH • Deltares • Globhe • RSS-Hydro • VITO – Flemish Institute for Technological Research-Remote Sensing
11:30 – 11:45	Break
11:45 - 12:30	Space technology to monitor water quality / pollution
	• *Zimbabwe Wetlands and water quality assessment - Zimbabwe National Geospatial and Space Agency* Victor Mukungunugwa, Senior Scientist (10 min) Zimbabwe is in pursuant of achieving SDG6 using various technologies for remote sensing within the Zimbabwe National Geospatial and Space Agency. Over the years there has been numerous water related disasters and human activities impacting water quality. Zimbabwe has since launched a water quality assessment satellite code named ZIMSAT-1 and is in the process of developing ZIMSAT-2 to complement ZIMSAT-1. Furthermore, Zimbabwe through has also enhanced drone technology for remote sensing. This paper highlights the survey results for the water related remote sensing missions conducted to date. • *Oil Spill Detection System in the Arabian Gulf Region: An Azure Machine-Learning Approach - Bahrain National Space Science Agency,* Shaima Almeer, Senior Space Data Analyst (10min) Locating oil spills is a crucial portion of an effective marine contamination administration. In this paper, we address the issue of oil spillage location exposure within the Arabian Gulf region, by leveraging a Machine-Learning (ML) workflow on a cloud-based computing platform: Microsoft Azure Machine-

	Learning Service (Custom Vision). Our workflow comprises of virtual machine, database, and four modules (Information Collection Module, Discovery Show, Application Module, and a Choice Module). The adequacy of the proposed workflow is assessed on Synthetic Aperture Radar (SAR) imagery of the targeted region. Qualitative and quantitative analysis show that the purposed algorithm can detect oil spill occurrence with an accuracy of 90.5%. • *Application of Geospatial Technology in Ganga Rejuvenation* – Peeyush Gupta, Bhuva Ganga, National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti, India (10min) To be confirmed by presenter *Q&A, Discussion*
12:30 - 13:45	Lunch
13:45 – 15:00	Space technology for water resource management and hydrology
	• *Geospatial Indices as a measure of Influential and managing priority situation of groundwater storage anomaly* - Khalid Mahmood, Remote Sensing, GIS and Climatic Research Lab of the University of the Punjab (10min) The model presented aims to quantify influence of different hydro-climatic, biophysical and demographic factors on groundwater and ranking them across different managing units. For demonstration, the developed method has been applied across major South Asian countries. Among the utilized statistical regression techniques, geographical temporal weighted regression performed optimally, and has been selected for analysing the controlling factors. The output has been used to develop a model to rank importance of individual parameter, rate of influence change over time and managing ability of individual countries. The results show that a major part of the study area experienced loss of groundwater, and the spatial pattern of the loss showed significance of transboundary water flow management. Precipitation is the most influential factor; countries managing this factor well have a better score of an overall managing ability towards groundwater sustainability i.e., India and Bangladesh and vice versa. Runoff and evapotranspiration are disclosed to be the next two important determinants. By incorporating the concept of local heterogeneity, the model ranks countrywide importance of individual parameter and the rate at which these are being managed. The resultant groundwater management index model also highlights poorly managed important factors for a better future of local groundwater. The scaling and ranking can help framing future line of action for groundwater sustainability by presenting optimal method for the modeling and assisting relevant stakeholders to understand the situation and plan better resource allocation keeping in view related significant controlling factors.

- *Modelling the impacts of Climate Change and LULC dynamics on Ecosystem Services : A case study of Pindar Watershed in India Himalaya,* Pankaj Kumar, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, India (10min)

Water security, a key policy objective for sustainable development, is under stress as a result of land use and climate change, especially in the Himalayan region of Uttarakhand. Land use change alters surface runoff and affects basin-wide hydrological processes and water consumption, while climate change modifies precipitation and temperature patterns and consequently evapotranspiration and water supply. In this study, various water-related ecosystem services are accessed in the Pindar River watershed, situated in the upper Ganga basin in India's Himalayan region. The study area covers an area of 1903.78 km2 and lies geographically within latitudes 30° 18′ N to 29° 54′ N and longitudes 80° 3′ E to 79° 8′ E. The topographical elevation of the Pindar watershed ranges from 763 m to 6851 m above mean sea level. The novelty of this study is found in the combined modelling of the impacts of climate and land use change scenarios on water security, translating these results into a water availability indicator, and assessment of the associated economic valuation. Digital image processing (e.g., image enhancement, spectral rationing, and automatic classification) and supervised LULC classification in a GIS environment were done using Landsat data for each land use and land cover for the years 2000, 2010, and 2020. The LULC dynamics for the region were assessed and future LULC data for the year 2030 was predicted using the Terrset LCM tool. The results showed a substantial spatial variation in the water supply and future water security across the watershed. The economic valuation on the watershed scale allows for informing policy and decision-makers about future strategies in climate adaptation and mitigation on the regional scale.

- *Flood Analysis in Peru using Satellite Image* by Avid Roman Gonzales, Universidad Nacional Tecnológica de Lima Sur, Peru (10min)

At the beginning of the year 2017, different regions of Peru suffered from heavy rains mainly due to the 'El Niño' and 'La Niña' phenomena. As a result of these massive storms, several cities were affected by overflows and landslides. Chosica and Piura were the most affected cities. On the other hand, the satellite images have many applications, one of them is the aid for the better management of the natural disasters (post-disaster management). In this sense, the present work proposes the use of radar satellite images from Sentinel constellation to make an analysis of the most-affected areas by floods in the cities of Chosica and Piura. The applied methodology is to analyse and compare two images (one before and one after the disaster) to identify the affected areas based on differences between both images. The analysing process includes radiometric calibration, speckle filtering, terrain correction, histogram plotting, and image binarization. The results show maps of the analysed cities and identify a significant number of areas flooded according to satellite images from March 2017. Using the resulting maps, authorities can make better decisions. The satellite images used were from the Sentinel 1 satellite belonging to the European Union.

- *Revolutionizing Flood Risk Mapping and Search & Rescue: Insights from Cyclone Freddy in Malawi* – Alexander Denzel Clarence Mtambo, GLOBHE (10min)

The presentation will explore the challenges faced by emergency responders during natural disasters and how GLOBHE's innovative technologies and data-driven strategies have transformed flood risk mapping and search & rescue (SAR) operations. The technical presentation will focus on GLOBHE's experience during Cyclone Freddy and highlight how their solutions have helped to save lives and minimize damage.

- Monitoring hydrological changes, can we extend and complement in situ data with satellite data? Case of an African Basin - Benjamin Kitambo, Centre national de la recherche scientifique (CNRS) (10min)

The Global Data Runoff Centre portal that displays hydrological information related to in-situ river discharge stations worldwide from different national hydrological services points out a dramatic decrease of contemporary observations over Africa and Asia. This critical state of the lack of in situ data limits our understanding of the major factors controlling freshwater dynamics at the adequate space and time scales and prevents the development of appropriate and sustainable strategies to manage water resources in several basin. Despite the efforts made to set up and maintain the in-situ network of hydrometeorological stations, water resource managers face various issues. In this context, satellite data offer a unique opportunity to enrich water resources monitoring. These data have the advantage of covering the whole world, including territories that are difficult to access, in regular time steps. Several projects have contributed to assess and enhance the use of satellite data for water resources management at the scale of a catchment or a territory with the objective of delivering hydrological indicators from the combination of hydrological models, in-situ data, and satellite data.

- *Nature-based solutions for sustainable water management: Reservoir cascade systems* - Padmi Ranasinghe, University of Texas Arlington (10min)

Nature-based solutions (NbS) are the most cost-effective, sustainable, and multipurpose strategy for water management and reducing climate change risks. For example, an ancient hydrologic and engineered system in Sri Lanka, known as the Cascade System, consists of interconnected irrigation tanks within a micro (or meso) watershed that collect rainwater and surface runoff and store it for later use. The cascade system consists of water storage tanks, connecting streams, forests, natural sedimentation/buffer systems, wetlands, agricultural areas, and communities. Therefore, water is available year-round in the dry zone (where rainfall is less than 1,750 millimetres yearly with a distinct dry season) and flood mitigation during the rainy season. The cascade system has been known for sustainable water management and climate change adaptation mechanisms in the Dry Zone of Sri Lanka for more than 1000s years, and the system was recently recognized as a Globally Important Agricultural Heritage

	System (GIAHS) by the Food and Agriculture Organization of the United Nations (FAO). Tanks and associated channels experience several problems that result in reduced discharge from the system. Sedimentation and siltation, degradation of stone channels, and encroachment on drainage channels all cause tank water to spread, which adversely impacts its performance. Therefore, predicting how much water is available in a tank cascade system is important to improve water efficiency through rehabilitation and maintenance of cascade systems. Calculating size and volume of the waterbodies, identifying different land use/land covers, including Forest, Agricultural and Non-agricultural lands, barren land, and settlements is also important. EO data and space-based technology is excellent tools for calculation and analysis of many of the above-mentioned concerns. Sri Lanka's cascade system illustrates how NbS engages with nature and addresses societal challenges. The cascading system directly support achieving SDGs 1,2,3,6,13, and 15, with the potential to support other SDGs as well. The success of this project serves as a model for other countries and communities in implementing drought resilience, flood resilience, and climate adaptation and mitigation. Q&A, Discussion
15:00 – 15:15	Break
15:15 – 16:30	Data structures and portals in support of water resources management and hydrology
	• *DAHITI - Satellite-derived Hydrological Products for Monitoring the Global Water Cycle* – Christian Schwatke, Deutsches Geodätisches Forschungsinstitut (DGFI - TUM), Technische Universität München (10min) The main product of DAHITI is the water level: Today, satellite altimetry time series are available for more than 10,000 inland water bodies. In addition, surface time series and water surface masks derived from optical imagery are available for nearly 200 lakes and reservoirs. The combination of water levels and surface areas allows the derivation of other products such as time series of volume changes for lakes and reservoirs and discharge time series for rivers. In addition to time series, bathymetry and hypsometry models for lakes and rivers are also available. All products presented are freely available on DAHITI after a short registration process. • *Using Digital Twins for training rural communities to mitigate water resources impact due to extreme weather events* - Luis Monge Solano, Inter-American Institute for Cooperation on Agriculture (IICA) (10min) Digital twins are virtual models that replicate the behaviour and characteristics of a real physical system. In the case of water management, it can provide a

simulation of the behaviour of a water distribution system based on real data to prevent emergency situations. By simulating complex situations such as extreme weather events, people in charge of water management can be trained in data-based decision making in a safe controlled environment.

IICAs digital fabrication laboratory for agriculture (FabLab) has collaborated in training initiatives for persons involved in in local water management associations in rural communities (ASADAS) all over Central America, trough initiatives such as Women's Geospatial Technology Rally. A "digital twin" of an ASADA is being implemented at IICAs main campus, taking advantage of campus features such as the forest located at it named "Americas Forest". The campus forest serves a simulation of a basin where the small creek located at it, simulates a river, and standard features of a rural aqueduct such as pipes, storage tank, pressure regulation tanks, and end user are simulated trough QR codes strategically located trough out the campus. The women being trained can practice data collection on the field using Global Positioning System tools and then analyse the data using geospatial tools and practice disaster response scenarios based on the digitally constructed ASADA features location and vulnerabilities detected.

- *Earth observation satellite data in support of hydrological research: an introduction to the Terrascope and Explore VN platform* – Ils Irenen Reusen, vito / Flemish Institute for Technological Research Remote Sensing (10min)

Copernicus, the European Union's Earth observation programme, is unique due to its diversity in sensors, the number of satellites, its long-term planning but most importantly as all data are open and free. Different satellites and constellations have been launched throughout the past years: Sentinel-1 provides 10m radar imagery with a revisit time of 1 to 3 days over Europe, Sentinel-2 provides multispectral imagery with a resolution of 10-60 m and a revisit time of 5 days at the equator and Sentinel-3 provides daily 100 m multispectral imagery, and also carries an altimeter.

This huge amount of data is made publicly available in order to boost the development of Earth observation-based applications supporting a sustainable transition. However, data accessibility has proven to be an important bottleneck for application development in the past. Terrascope, the Belgian Copernicus collaborative ground segment, is a cloud-based data platform developed to overcome this bottleneck by providing easily accessible, analysis-ready data. It provides a broad range of satellite and satellite-derived products accessible via the Terrascope viewer. Moreover, users can also request a virtual machine or use the openEO API in order to do more in-depth analyses without having to download the data. Similarly, the Explore VN platform is currently being setup in Vietnam and training is provided.

In this presentation, we will introduce Terrascope, the different data layers it provides and its functionalities. We will focus particularly on data types and use cases relevant for hydrological research and applications: water quality products (Chlorophyll-a, Turbidity, Suspended Particulate Matter) derived from Sentinel-2 multispectral imagery and water surface / flood maps derived from Sentinel-1

radar imagery. In addition, user-dedicated viewers for Flanders (Northern part of Belgium) and Vietnam will be presented.

- *Global Water Monitoring for a growing planet* – Lina Hollender, constellr (10min)

constellr is a European new space data and services company delivering daily, global land surface temperature data for a more resilient, sustainable agri-food industry. constellr provides the fundamental global data for smart crop, irrigation and yield monitoring, identifying changes in crop health days to weeks before current systems and enabling food producers and farmers to react to and mitigate potential crop losses earlier than ever before. Smart farming customers can use the data to better manage scarce water resources more effectively and boost agricultural production without harming the environment.

- *Spring water sources of Pokhara Valley, Nepal; Importance for planning and scientific monitoring – Rajan Subedi, Tribhuvan University* (10min)

Springs are a primary source of water for domestic, livestock and agricultural activities in the mountain regions of Nepal. And also, equally important resources to maintain land productivity, ecosystem health and wetland biodiversity. There is an increasing trend of drying spring sources due to unplanned infrastructure and land conversion without consideration of the hydrological system and extreme global climate change phenomena making mountain ecosystems and communities more vulnerable. Effective management and efficient use of the resources is crucial to face future water challenges. Monitoring spring sources, managing database and their use in planning and decision making at government level is still lacking.

This paper focused on the assessment of springs in watersheds of Lake Cluster of Pokhara valley, comprising of nine lakes, registered as one of the largest Ramsar site in Nepal. Springs in the upstream area are the major source of lake water. The study emphasized on springs mapping and prioritization for conservation work. A total perennial spring survey and their distribution mapping with respect to different spatial layers altitude, slope, aspect, land use, soil, and geology are prepared. Multi-criteria-based spring sensitivity analysis was performed to evaluate the springs status and categorized into different critical class. Local topographical features, land use, water availability and use practices are considered for multi-criteria decision-making tool in order to prioritize the spring sources for conservation action and planning.

A total of 765 perennial springs were investigated from the region where average dry season discharge is 0.44 lps. Based on the sensitivity analysis; 40 % springs are categorized as highly sensitive, 47 % moderately sensitive and 13 % are in less sensitive. Local people are using springs for multiple purposes; drinking and cooking, domestic, irrigation and livestock feeding. 38 % springs are still on onsite use for drinking and domestic use, 31% diverted for community water supply. The use of a database in development planning and its update through periodical monitoring is essential for sustainable water resource management.

	Q&A, Discussion
16:30 – 16:45	Break
16:45 – 18:00	From water-related challenges to space-based solutions
	After a short introduction into new Space4Water features aimed at matching water-related challenges with co-developed space-based solutions, a few of the currently featured water-related challenges will be introduced. An open discussion on lessons learnt in the identification of water-related challenges on the local, regional, and international level is hosted. Potential modes of collaboration to find space-based solutions are discussed. Interactive exercise: Meet and greet

Day 2, Friday, 12 May 2023 – 9:30 – 16:00

09:30 – 11:30	Introduction to Day 2 - The Space4Water Community – Developing space-based solutions to address water challenges
	After an introduction into the activities of day two, specific water-related challenges will be presented. Input by participants is used to draft outlines to address the presented challenges. Stakeholders and professionals are forming groups (based on thematic preferences, relevant background knowledge and number of participants) and will be working on the challenges in more depth before presenting the results and way ahead in the plenary. The purpose of the discussion is to agree on lessons learnt from the experience and identifying what approach(es) the Space4Water community would like to adopt for future development of space-based solutions. Your input is welcome.
11:30 – 11:45	Break

11:45 – 12:45	User and capacity building needs
	• *Short introduction (UNOOSA)* • ***Capacity Gaps for Hydrology Data Exchange*** *- Washington Otieno, World Meteorological Organisation* One of the challenges in sharing hydrological data is low implementation of data exchange standards and appropriate tools. WMO is promoting open data policy through new Unified Data Policy approved in extraordinary Congress 2021. WHOS (World Hydrological Observing System) is a service-oriented System of Systems linking hydrological data providers and users by enabling harmonized and real time discovery and access functionalities at global, regional, and national scale. There are different institutions that collect hydrological data in different formats, standards, making it difficult for users to access the data in the format that can be useful to them (WIGOS Metadata Standard, WaterML2.0). WHOS aims to build the capacity of various data providers in order to increase increase the usage and better management of water resources, The WHOS has been successfully implemented in La Plata Basin in South America (WHOS-Plata) with Argentina, Bolivia, Brazil, Paraguay and Uruguay. During these pilots, a lot of gaps in good practices for international and inter-institution data exchange were identified and addressed through engagement with the various users and providers of hydrological data and proposed need to develop training materials to support such topics. The presentation will introduce the key concepts of WHOS, identified gaps and the capacity building initiatives • ***Space Technology and Water Professionals: For Water Resource Management*** – Funmilola Adebisi Oluwafemi, Nigeria National Space Research and Development Agency, (10 min) As freshwater becomes an increasingly scarce resource, all opportunities to better manage water use must be taken. One of the major challenges is to find solutions to improve the way problems related to water mismanagements or water dis-quality are solved. An important challenge of water resources is on how to utilize timely, objective and accurate information. To meet future demands (as a result of growing population) for food, health and environment with an increasingly scarce water supply, the water resources must be managed better. The main challenge confronting water management is to improve water use efficiency and its sustainability. Therefore, to better understand water management and quality, all opportunities to better manage water use must be taken. The measurement of water, wherever it occurs, continues and will continue to be a research area where advances in science and technology will have a great impact. An important water research area is water management and protection which covers the use, management and protection of water resources. This makes the impact of water professionals to be very important. Water resource experts are problem-oriented researchers in the knowledge of water resources. The water sector involves all the economic, political, social and

	environmental systems that consumes or uses water or have a say in its management or influence its abundance. The water sector is critical to areas such as: water supply and sanitation; agriculture and food security; hydropower; industrial production; sub-urban development; climate change; and health. Seeing the great importance of the water sector, therefore, water professionals or water management experts are paramount to this sector. Aside having a sufficient number of these experts in the water sector, capacity development and training of the water professionals is key to achieving success in water resource management, especially for the under-developed and developing nations. The mechanism to achieve water resource management could be through the following approaches: "catching-them-young approach"; "informal and friendly education"; "forging partnerships"; "Pre-PhD, PhD and Post-Doctoral programs"; "training of the trainers method "development of new software"; "data-sharing"; and "data-partnership". Of importance to water resource management is the use of space technology. The challenges to the water-sector need the application of space-based technology (Geographic Information-System (GIS) and remote-sensing) that'll make it possible to view from far above water-trends of a Nation/region addressing on a global-scale. This article therefore gives a comprehensive discussions on the solution to water resource management for the water sector using the space technology through inclusion of water resource managers. The challenges to the use of space technology by the water resource experts are enumerated and step-by-step solutions are deduced. • *Need for Capacities for Emerging Earth Observation Uptake in our Universities,* – Amos Kabo-Bah, University of Energy and Natural Resources, Sunyani, Ghana (10 min) Earth Observation technologies, and emerging internet technologies would continue to evolve. However, traditional research institutions curricula especially in Ghana and some parts of Africa do not reflect these changing trends. Hence, there is an urgent need for the uptake of EO technologies to provide answers to water resources management, to consider the inclusion of new curricula courses such as Programming Languages, IoT, cloud computing, etc., to enable the next generation of professionals to become acquaint with these new technologies. It is strongly believed that it is by so doing, that we can have the needed sustained capacity to utilize, modify and adapt these new tools on EO technologies to local conditions for solving local problems of flooding, drought etc. and providing the needed impacts locally. My presentation shall provide some strategic recommendations on this subject, and hopes to spark up discussions with UNOOSA, on onward provision of a draft policy guidelines to member countries. • *Interactive session and discussion* Feel free to provide input on • How does your organisation identify capacity building needs, which needs have been identified; • Input on how in-situ data collection can be boosted by building capacities; and

	• What the Space4Water community can do. To get the discussion started, please send additional questions related to user and capacity building needs as well as on their assessment office@space4water.org
12:45 - 13:45	Lunch
13:45 – 16:00	Space4Water community objectives / review (interactive) and Closing of the meeting
	• *Interactive Session* • *Next steps* • *Closing remarks*