



UNITED NATIONS
Office for Outer Space Affairs

INFORMATION NOTE

United Nations / Pakistan

4th International Conference on the Use of Space Technology for Water Management

**co-organized with the
Prince Sultan Bin Abdulaziz International Prize for Water**

Islamabad, Pakistan, 26 February – 2 March 2018

Co-sponsored by the Inter-Islamic Network on Space Sciences and Technology

**Hosted by the Pakistan Space and Upper Atmosphere Research Commission
(SUPARCO) on behalf of the Government of Pakistan**

1. Introduction

The United Nations Office for Outer Space Affairs (UNOOSA), the Government of the Islamic Republic of Pakistan and the Prince Sultan Bin Abdulaziz International Prize for Water (PSIPW) are jointly organizing the above Conference to promote the use of space technology in water management to the benefit of developing countries.

The Conference will be held in Islamabad, Pakistan, from 26 February to 2 March 2018, hosted by the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) on behalf of the Government of Pakistan and co-sponsored by the Inter-Islamic Network on Space Science and Technology (ISNET).

The Conference is the fourth international event focusing on water-related aspects of space technology applications in the series of conferences organised in co-operation with, and with financial assistance of the Prince Sultan bin Abdulaziz International Prize for Water (PSIPW) and ISNET. The first such event, the United Nations/UNESCO/Saudi Arabia International Conference on the Use of Space Technology for Water Management, took place in Riyadh, Saudi Arabia, in April 2008, the second conference was organized in March 2011 in Buenos Aires, Argentina and the third one in Rabat, Morocco in April 2014.

2. Background and objectives

Space technologies, including satellite remote sensing technology in particular, have demonstrated proven capabilities in meeting challenges of water resource management, as rapid population growth and development pressures continue to impose additional stresses on scarce resources. Continuous Earth observations from space are crucial to manage water resources for the benefit of humankind and the environment, as well as to provide important forecasting services to prevent water-related disasters such as floods and droughts.

Remote sensing satellites provide data on several key water-related variables (for example, rainfall, precipitations, floods, droughts, water storage, soil moisture and evaporation) using spatial and temporal scales that are appropriate for reliable assessment. A satellite-based approach to assessment and management of water resources is especially important in countries and regions of the world where adequate hydrological networks do not exist.

Starting with its session in 2004, the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) began to consider matters related to the use of space-related technology in water resource management. The Committee noted that in response to the deepening water crisis, space technology could contribute to a better water resource management by providing data and information on the availability of water resources and water use. The Committee also noted that once converted into practical information, scientific data on water resources provided by satellites could be used to formulate policy and implement programmes at the national, regional and international levels, including those of the World Bank, the United Nations Development Programme and other entities of the United Nations system.

Furthermore, as the United Nations Office for Outer Space Affairs prepares for UNISPACE +50 (<http://www.unoosa.org/oosa/en/ourwork/unispaceplus50/index.html>) to take place in June 2018, and is working on defining a Space2030 vision in support of the 2030 Agenda for Sustainable Development with the related Sustainable Development Goals (SDGs), and of other international agreements, the importance of considering how space technologies and related applications can support the implementation of those SDGs and agreements becomes even higher.

The discussions, findings and recommendations of this Conference will also be important in implementing the priority roadmaps on health and resilient societies, towards Space2030.

The Conference will address above mentioned issues, identify gaps, and discuss how space technology can contribute to better management of water resources in general, as well as specific issues such as mountain region-specific water challenges, combating desertification, water storage, floods and drought monitoring, ensuring access to safe drinking water and managing water-related emergencies in developing countries. The following primary objectives were identified:

- To enhance capabilities of countries in the use of space-related technologies, applications, services and information for identifying, managing and monitoring water resources;
- To strengthen international and regional cooperation in this area;
- To raise awareness among decision-makers, research and academic communities on space technology applications in addressing water-related issues, primarily in developing countries;
- To promote educational and public awareness initiatives in the area of water resources management, as well as to contribute into any capacity building efforts in this area;
- To consider and review new or emerging technologies and approaches in this domain;
- To contribute to the Space2030 implementation roadmaps on health and resilient societies

3. Programme

The Conference will be composed of a series of technical presentations with sufficient time set aside for discussions. Technical sessions will be followed by open discussions, which will focus on specific topics of interest and will provide additional opportunities for participants to voice their opinions.

The programme of the Conference will include technical sessions addressing among others the following themes:

Opening Session: International Initiatives Integrating Space Technologies in Water Resource Management;

Session 1: Space Applications for Water Security and Risk Management;

Session 2: Using Space Technologies to Address Water Challenges in Mountain Regions;

Session 3: Geospatial Information in Water Resource Management;

Session 4: Capacity Building and Cooperation Initiatives;

Session 5: Case studies presentations.

Presentations at the above technical sessions may include, but are not limited to, the following topics:

- Applications of space technologies that provide cost-effective solutions and essential information for planning and implementation of programmes or projects to enhance management, protection and restoration of water resources.

- Use of space-related technologies in mitigating water-related emergencies, in addressing mountain region-specific challenges, water storage or in providing safe drinking water combating desertification as well as floods and droughts monitoring.
- Capacity building in water management, including development of human resources, establishing technical infrastructures and legal frameworks, and access to financial resources.
- Education and training required for various target groups on using space technologies for addressing water-related challenges, as well as public awareness initiatives in this area.
- International, regional and national initiatives and international and inter-regional cooperation.
- Case studies on successful applications of space technologies for enhancing water resources management in developing countries.

The Conference discussions will address ways of expanding the use of space technologies and information/data for better water resources management, as well as identify the priority areas where pilot projects could be launched, and will consider possible partnerships that could be established.

Participants of the Conference will be encouraged to make presentations on the topics suggested above, as well as to participate actively in all discussions.

4. Participation

The Conference is being planned for a total of 100-150 decision-makers, technical experts, researchers and educators drawn from the following groups: international, regional, national and local institutions, academic institutions, multi-lateral and bi-lateral development agencies, non-governmental organizations (NGOs) and also from private industry. Experts and professionals from both space-related and water management institutions will be invited, providing an opportunity to exchange experiences and strengthen networks and partnerships that will contribute to the increased use of space technology-based solutions for water resources management.

5. Participation requirements

Applicants must generally have a university degree and well-established professional working experience in a field related to the theme of the Conference. Applicants should be in managerial, decision-making, technical or academic positions within governmental agencies, international, regional and national institutions, universities, NGOs or private industry with responsibilities for carrying out programmes or projects in the areas related to the theme of the Conference.

Applicants who demonstrate that the Conference is central to their professional activities/responsibilities as well as qualified female applicants will be selected on a priority basis.

The co-sponsors of the Conference will jointly select participants, on a competitive basis. Selected participants will be notified **latest** by 15th January 2018.

6. Dates and location

The Conference will be held in Islamabad, Pakistan, at the Islamabad Serena Hotel, from 26 February to 2 March 2018.

All selected and invited participants will receive an information package with details on boarding, lodging and other local arrangements.

7. Language of the Conference and presentations by participants

The working language of the Conference will be English.

Selected participants to whom travel support will be offered by the co-sponsors of the Conference will be expected to contribute a presentation of approximately 15 to 20 minutes on topics relevant to the Conference objectives and the programme. Presentations on actual on-going projects will be of

particular interest to organizers of the Conference.

Selected participants are expected to submit their full papers/presentations to the organizers by 15 January 2018. In addition, all papers and presentations presented at the conference will be later published on the United Nations / PSIPW Space and Water Portal.

8. Financial support

Within the limited financial resources available, a number of selected participants will be offered financial support for travel expenses to attend the Conference. This financial support will defray the cost of travel (round trip air ticket – **most economic fare** – between the airport of international departure in their home country and Islamabad, Pakistan) and/or room and board expenses for the duration of the Conference.

Due to limited availability of financial support, not all applicants for travel support can be accommodated. In this respect, applicants and their nominating organizations are strongly encouraged to also identify additional sources of sponsorship to allow them to attend the Conference.

Sponsored participants will receive detailed information upon notification of their selection.

9. Deadline for submission of applications

The completed applications, properly endorsed by the applicant's government/institution, should be received by the United Nations Office for Outer Space Affairs **no later than 15th January 2018.** Applications received after the deadline might still be considered, but applicants will not be eligible for financial or visa support. The online application form can be accessed through the following internet link (URL):

<http://www.unoosa.org/oosa/en/ourwork/psa/schedule/2018/un-pakistan-water.html>

Only complete applications, with all the requested information and signatures, will be considered for financial support.

10. Life and health insurance

Life/major health insurance for each of the selected participants is necessary and is the responsibility of the candidate or his/her institution or government. The co-sponsors will not assume any responsibility for life and major health insurance, nor for expenses related to medical treatment or accidental events.

11. Points of contact

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