



UNITED NATIONS OFFICE AT VIENNA

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INFORMATION NOTE

Seventeenth UN/IAF Workshop on Space Technology for Sustainable Development: Towards Food Security

**To be held in Hyderabad, India, from 21 to 23 September 2007,
in conjunction with the 58th International Astronautical Congress**

Co-sponsored by European Space Agency (ESA)

1. Background

The United Nations (UN) and the International Astronautical Federation (IAF) have agreed to jointly organise a Workshop on the theme “Space Technology for Sustainable Development: Towards Food Security”, from 21 to 23 September 2007. The Workshop will be held in conjunction with the 58th International Astronautical Congress (IAC), which will take place from 24 to 28 September 2007 in Hyderabad, India. Workshop participants selected by the UN and IAF will also be invited to attend the IAC.

This Workshop is the seventeenth meeting jointly organised by the Office for Outer Space Affairs, under the United Nations Programme on Space Applications, and by the International Astronautical Federation. It builds on the recommendations and experience gained from previous workshops. The UN/IAF Workshop has been endorsed by the United Nations General Assembly as part of the 2007 activities of the United Nations Programme on Space Applications.

The UN/IAF Workshop and the 58th IAC provide an unique forum for discussions among space experts, policy and decision makers, representatives from academic community and private industry. Participants are encouraged to share their experiences and to examine opportunities for better cooperation. In the past, contacts established among participants have resulted in a number of initiatives and activities strengthening the role of space technology applications for improving the quality of life in developing countries.

The proceedings of the Workshop will be published online by the Office for Outer Space Affairs to increase the awareness of the capabilities and benefits of space technology applications. The report of the Workshop, including findings and recommendations formulated by the participants, will be presented to the United Nations Committee on the Peaceful Uses of Outer Space.

2. Objectives

At the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held from 19 to 30 July 1999 in Vienna, Austria, a fundamental requirement was agreed to assist States, especially developing countries, in applying the results of space research with a view to promoting the sustainable development of all people. The resolution entitled “Space Millennium: Vienna Declaration for Space and Human Development” adopted by UNISPACE III, contains a strategy for enhancing the use of space science and technology to contribute to the solutions of major global issues, including food security.

Effective use of information from existing Earth observation satellite systems, such as Landsat, SPOT, IRS, ENVISAT and Radarsat, provides tools that enhance the collection, storage, analysis and dissemination of food security information. Remote sensing data, in combination with data gathered in the field, are essential for carrying out comprehensive studies on food security and vulnerability.

Monitoring agricultural crop development from space can help to predict an area’s agricultural output well in advance. This information is often crucial in helping authorities to anticipate food shortage and famine, giving them enough lead time to take preventive action. Monitoring and forecasting weather by satellites is of crucial importance to farmers. Satellites are an important complement to the ground-based weather stations for predicting storms, flooding and frost. Rainfall assessments from satellites help farmers plan the timing and amount of irrigation for their crops. Such assessments can also contribute to improving food security.

Available high-resolution Earth observation data combined with GNSS data contribute into development of precision farming techniques that allow monitoring crops on individual farms. These techniques help to identify precisely areas under stress due to lack of water, in need of fertilizer or affected by disease. Accurate targeting of such areas helps to optimize distribution of water and fertilizers, and in this way not only to improve crop yields but also to save money and to reduce the environmental impact of agricultural activities.

However, while the potential benefits of space science and technology and its applications for developing countries are generally recognised, experience has shown that successful implementation and operational use of this technology is subject to the resolution of some major issues, including the continuous development of human resources at all levels, training of end-users, development of appropriate infrastructure and policy regulations, allocation of necessary budgetary resources.

The Workshop will address these issues, and will discuss how space technology can contribute in sustainable development programmes in developing countries, with the following primary objectives:

- To increase awareness among decision makers and academic community about the use of space technology applications for sustainable development programmes supporting food security in developing countries;
- To examine low-cost space-related technologies and information resources

available for addressing food security needs in developing countries;

- To strengthen capacity building in the area of food security and space technology;
- To strengthen international and regional cooperation in the subjects.

3. Programme

The Workshop 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 Workshop may include, but is not limited to, the following topics:

- Applications of space technology for food security:
 - Resources monitoring
 - Rain-fed and irrigated farming
 - Watershed development
 - Land degradation
 - Land management
 - Precision agriculture
 - Wasteland development
 - Agriculture drought
 - Cropping systems analysis
 - Crop protection & crop insurance
 - Agro advisory services
 - Case studies and success stories from the participating countries
- Capacity building, education and training in these areas
- International, regional and national initiatives and cooperation

Participants of the Workshop are encouraged to make presentations on the topics suggested above, as well as participating actively in the discussions of the Working Groups.

The latest version of the programme will be made available on the web site of the UN Office for Outer Space Affairs (<http://www.unoosa.org>).

4. Date and location of Workshop

The Workshop will be held from 21 to 23 September 2007 at the premises of Indian National Remote Sensing Agency (NRSA) in Hyderabad, as part of the 58th IAC. Participants who are selected and funded by the co-sponsors will be able also to attend the IAC, which will take place from 24 to 28 September 2007 in Hyderabad, India.

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

5. Language of the Workshop and presentation by participants

Applicants must have a good ability of English, which will be the **only** working language of the Workshop.

Selected participants who are funded by the cosponsors of the Workshop will be required to prepare a presentation of approximately 10 to 20 minutes on topics relevant to the Workshop objectives and the programme. Presentations on actual on-going projects will be of particular interest to organizers of the Workshop.

6. Participation requirements

Applicants must have a university degree and well-established professional working experience in a field related to the theme of the Workshop. Applicants should be working in relevant government organizations, international or national space agencies, non-governmental organizations, research or academic institutions. It is preferred that the applicants are currently involved in programmes, projects or enterprises involved in the application of space science and technology to food security, or potentially could be benefited from using space technology in their future projects.

Special consideration will be given to the applicants:

- who are policy- and decision- makers;
- who have papers accepted by the IAF Congress Program Committee;
- who have experience in leading or performing project(s) in the topic area, or who have sound ideas and good potential of realizing the ideas to real projects.

The co-sponsors of the Workshop will jointly select participants on a competitive basis. Selected participants will be notified by 15 July 2007.

7. Financial arrangements

Within the limited financial resources available to the co-sponsors, a number of selected participants from developing countries will be offered financial support to attend the Workshop and IAC. Funded participants will be provided with round trip air tickets between the international airport of their home countries and the International Airport at Hyderabad, India. The funded participants will also be provided with daily subsistence allowance to cover board and lodging for the duration of the Workshop and IAC. Any en-route expenses or any changes made to the tickets will be at the participant's own expense.

Due to limited availability of financial support, not all participants can be funded. In this respect, applicants and their nominating organizations are strongly encouraged to find additional sources of sponsorship to allow them to attend the Workshop.

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

8. Deadline for Submission of Applications

A copy of the completed application form, properly endorsed by applicant's government/ institution, should be directly submitted to:

Office for Outer Space Affairs
United Nations Office at Vienna
Vienna International Centre
P.O. BOX 500
A-1400 Vienna, AUSTRIA
Fax: (+43-1) 26060-5830
Phone: (+43-1) 26060- 4948
E-mail: oosa@unvienna.org

to reach the Office **no later than 15 June 2007**. The original of the completed application form should be submitted through the Office of the Resident Representative of the United Nations Development Programme in the applicant's country.

Applications received later than the deadline will be considered, but not eligible for financial support.

9. Life and Health Insurance

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

10. Additional Information

For up-to-date information on this activity please refer to the Office for Outer Space Affairs website at <http://www.unoosa.org>.