



INFORMATION NOTE

United Nations/ESA/Zambia Regional Workshop on the Applications of Global Navigation Satellite System Technologies in Sub-Saharan Africa

Hosted by the Ministry of Health on behalf of the Government of Republic of Zambia

Lusaka, Zambia, 26–30 June 2006

1. Background

Global navigation satellite system technology is currently being used in a wide range of sectors including but not limited to: aviation, maritime and land transportation, mapping and surveying, monitoring of the environment, agriculture and natural resources management, and disaster warning and emergency response. Particularly for developing countries, global navigation satellite systems (GNSS) are an enabling technology that can make a major contribution to economic growth and social betterment.

The Plan of Action, contained in document A/59/174 entitled “Review of the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space” and endorsed by the General Assembly in its resolution 59/2, presented findings and proposed specific actions in the areas that are important for strengthening and further developing the well-being and the future of all nations. These actions include, among others, maximizing the benefits of the use and applications of global navigation satellite systems to support sustainable development, improving medical and public health services through the use of space technologies, developing a comprehensive, worldwide environmental monitoring strategy as well as improving the management of the Earth’s natural resources.

Since 2001, the Office for Outer Space Affairs of the United Nations has organized a series of regional workshops and international meetings to promote the use of GNSS. These workshops and meetings presented the status of existing and near-term GNSS systems and their augmentations and also presented examples of GNSS applications that support sustainable development and protect the environment.

The participants of the United Nations/United States of America International Meeting on the Use and Applications of Global Navigation Satellite Systems, which was held in Vienna in December 2004 as a meeting of GNSS experts, summarized the follow-up projects and initiatives being implemented since December 2003 and put forward a number of recognitions and recommendations in the areas of: capacity development and knowledge building; enhancing awareness; and applications of GNSS technologies, while increasing their use to support sustainable development, particularly in the developing countries.

Information on the series of GNSS workshops and meetings carried out by the Office can be obtained on the following website: <http://www.ooa.unvienna.org/SAP/gnss/index.html>

This Regional Workshop will be held in Lusaka, Zambia. It will address, *inter alia*, the space technology applications such as: remote sensing, precision agriculture, aviation, transport and communications, e-learning, tele-health and landscape epidemiology. The workshop will aim at initiating projects that benefit the Sub-Saharan African countries and strengthening the networking in the region. This workshop will also address the areas of natural resources management and environmental monitoring by applying GNSS technologies to thematic mapping, forest management, water resources management, and habitat restoration.

In the area of agriculture, the decision-making process could be significantly improved with the use of geospatial technologies, which allow for timely tactical or strategic decision-making at various levels. The use of GNSS could benefit various areas of the agricultural sector, ranging from basic rural cadastre and surveying to advanced precision agriculture. Agro-climatic and ecologic-economical zonings, and crop inventory, monitoring and forecasting are only a few examples of agricultural activities where positioning is of paramount importance.

In the area of transport domain, a number of studies have already shown that civil aviation will significantly benefit from the use of GNSS. These benefits include: improved navigation coverage in areas currently lacking in conventional aids, accurate and reliable information about aircraft positions and routes enables safe and efficient management of air traffic, and thereby safety on airport approaches. Road transport applications can automatically revise a route to account for traffic congestion, changes in weather or road works. Similarly, at sea GNSS technologies can provide efficient route planning, collision avoidance and increased efficiency in search and rescue situations. For rail transport, GNSS offers enhanced cargo monitoring and assists track surveying.

In the area of tele-health and landscape epidemiology, the Workshop will address satellite-based applications such as: through satellite communications and computer processing to deliver health care to the remote areas; through remote sensing, global positioning and geographic information systems to integrate ecological, environmental and other data to develop predictive models that can be used in disease surveillance and control activities. Landscape epidemiology involves the characterization of eco-geographical areas where diseases develop under the assumption that the biological dynamics of both host and vector population are driven by landscape elements such as temperature and vegetation. It can be understood as part of a second-generation application of remotely sensed data where the target cannot be seen directly with satellite images.

2. Objectives and expected outcomes

The objectives of this Regional Workshop are: (a) to increase the awareness among managers, policymakers and decision makers about the potential benefits of applying GNSS technology to the areas of remote sensing, precision agriculture, aviation, transport and communications, e-learning, tele-health and landscape epidemiology; (b) to strengthen regional information and data exchange networks on the use of GNSS technology; and (c) to develop regional/national pilot projects that use GNSS technology in the above areas for improving the social and economic growth.

3. Preliminary programme of the Workshop

The programme of the Workshop will include, but not be limited to, the following topics:

- State-of-the-art use of GNSS technologies;
- Regional/national experiences and lessons learned on GNSS application in areas such as: remote sensing, precision agriculture, aviation, transport and communications, e-learning, tele-health and landscape epidemiology;
- Group discussion session to exchange views and brainstorm ideas for pilot projects.

The latest version of the Workshop programme will be placed at the web site of the Office for Outer Space Affairs: <http://www.oosa.unvienna.org/SAP/gnss/index.html>

4. Sponsorship of the Workshop

The Office for Outer Space Affairs of the United Nations and the Government of the Republic of Zambia are responsible for organizing the Workshop. **Sponsorship of the Workshop is still open to interested entities.**

5. Expected participants

The Workshop is being planned for a total of 80 participants including policymakers, decision makers and senior experts from the following groups: international, regional, national and local institutions, research and academic institutions, multi-lateral and bi-lateral development agencies, non-governmental organizations, and also from industry.

6. Participation requirements

Participants should be in senior managerial or decision-making responsibility at governmental agencies, national and regional institutions, non-governmental organizations or industry. The selection priority will be given to the applicants who demonstrate that her/his work responsibilities are directly related to the objectives of this Workshop. **Equally qualified female applicants are particularly encouraged.**

7. Language of the Workshop

The working language of the Workshop is English.

8. Financial support

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

9. Deadline for Submission of Applications

The completed application form, properly endorsed by the applicant's Government/institution, should be mailed to the Office for Outer Space Affairs, United Nations Office at Vienna, Vienna International Centre, P.O. Box 500, A-1400, Vienna, Austria, **no later than Friday, 7 April 2006**. The applicant may also submit his/her application through the Office of the Resident Representative of the United Nations Development Programme in the applicant's respective country. In either case an advance copy of the application form should be faxed directly to the Office for Outer Space Affairs to Ms. Ayoni Oyenyin, Office for Outer Space Affairs, United Nations Office at Vienna, Fax: +43-1-26060-5830

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 accidents.

11. Points of contact

For information regarding the submission of nominations for attendance and funding, please contact **Ms. Ayoni Oyenyin**, United Nations Office for Outer Space Affairs, at the above address and fax number or at the following e-mail address: ayoni.oyenyin@unvienna.org

For information regarding the agenda and programme of the Workshop, please contact **Ms. Sharafat Gadimova**, United Nations Office for Outer Space Affairs at the above address and fax number or at the following e-mail address: sharafat.gadimova@unvienna.org

The focal point for Zambia will be **Ms. Beatrice Mwape**, the Central Board of Health, who can be contacted regarding local arrangements including the venue of the Workshop, arrival at Lusaka, hotel accommodation, transportation to and from the hotel and other logistical details, at the following e-mail and numbers: bmwape@cboh.org.zm or bmwape2002@yahoo.com