

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

Professor Graciela Metternicht, Chair of the ICA Commission on Mapping from Satellite Imagery assisted to the UN/ESA workshop hosted by the Ministry of Health of Zambia, in Lusaka from the 26<sup>th</sup> to the 30<sup>th</sup> June 2006. This commission activity took place as result of the MOU signed between the ICA and the United Nations Office for Outer Space Affairs in 2005, which aims to increase the awareness of the use and applications of GNSS and other space technologies to support sustainable development in all its aspects: economical, environmental, social, technological, cultural and ethical.

This regional workshop addressed, inter alia, the space technology applications such as remote sensing, precision agriculture, aviation, transport and communications, e-learning, telehealth and landscape epidemiology. Professor Metternicht's presentation on behalf of the ICA and this Commission were on "Use of remote sensing and GNSS in precision agriculture" and "Current developments of remote sensing for mapping and monitoring land degradation at regional scale".

Since 2001, the Office of Outer Space Affairs of the United Nations has organised 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 UN/ESA/Zambia workshop was attended by 80 participants from 23 countries, with presentations focused on GNSS-based application areas, policies and strategies for promoting sustainable development, international initiatives and experiences on GNSS implementation and uses in agriculture and management of the environment, tele-health, landscape epidemiology, civil aviation and land transportation; and education and training. Most of the presentations related to agriculture and natural resource management dealt with the use of integrated space technologies (e.g. remote sensing and GNSS) assisted by GIS for surveying, mapping and monitoring aimed at improved decision making. A session on applications of GNSS included meteorology, application of satellite information in disaster management and emergency response in Malawi; uses and applications of GNSS technology in environmental and resources management in the Niger Delta; GPS applications for GIS purposes in Swaziland; applications of GNSS and remote sensing for environmental sustainability, and GNSS applications for mineral exploration in Zambia.

A special session to identify regional cooperation in applying GNSS technologies to the areas of agriculture management of environment, tele-health and landscape epidemiology, and civil aviation and land transportation was held on Wednesday afternoon. Issues and concerns of application, requirements of implementation, possibilities of success, mechanisms and resources for implementation were discussed. The session concluded with the identification of 4 main projects, namely on:

1. International cooperation and networking: legal framework, policy and strategy for the GNSS applications
2. Mapping, data access and sharing
3. Capacity building and education for: authorities/experts. Knowledge transfer to users and other and users (users: small scale farmers, etc).
4. Space technology application for tele health.

More information about this workshop can be found at:

<http://www.unoosa.org/oosa/en/SAP/gnss/index.html>