

**Speaking Notes for Mazlan Othman
OOSA Director**

**Thematic Discussions “Inter-linkages and all cross-cutting issues”
Commission on Sustainable Development (CSD-16)**

Friday, 9 May 2008, 3:00pm – 6:00 pm, Conference Room 2

Distinguished delegates,

It is my great pleasure to engage in a dialogue with you on how space technology and its applications are directly linked to achieving sustainable development.

The document entitled “*Contribution of the Committee on the Peaceful Uses of Outer Space to the work of the Commission on Sustainable Development for the thematic cluster 2008-2009*” (A/AC.105/892), also issued as Background Paper No.2 to CSD-16 (DESA/DSD/2008/2), which you have before you, provides the background to my presentation.

In that document, prepared by the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), you are given examples of the role that space science and technology and their applications play in contributing to one of the main issues under consideration: namely food security.

The thematic areas under the present CSD cluster are closely inter-related and for instance natural disasters, which are often weather and climate related, affect all other areas under considerations. The report by COPUOS aims to raise awareness that space-based technologies and their applications, such as Earth observation systems, meteorological satellites, communication satellites and global navigation satellite systems, are frequently used to support the monitoring and assessment of the environment, managing the use of natural resources, supporting early warning systems and disaster management activities and contributing to providing education and health services in rural and remote areas.

In this context I would also like to draw your attention to paragraphs 48 and 49 in the Report of the Secretary-General on drought (document E/CN.17/2008/6). These examples given are of course not only directed to drought, but relevant to all the thematic areas. But still, against the assessment that the general situation in many drought-prone regions remains far from satisfactory, and that significantly more efforts are needed, the role of space-based technologies and their applications are

becoming increasingly important in developing viable systems with both terrestrial and spatial components.

Before getting into specific details, let me say a few words about the role of COPUOS, which is the only policy making intergovernmental body of the UN dealing with international cooperation in space activities.

The space age began more than 50 year ago on 4 October 1957 with the launch of the first artificial Earth orbiting satellite, Sputnik-I. The usefulness of space-based assets that offer unique advantages, compared to ground-based solutions was soon recognized.

Already in 1958, the General Assembly established COPUOS, now comprising 69 member States and 21 international intergovernmental and non-governmental organizations with observer status. COPUOS operates with two subsidiary bodies: the Scientific and Technical Subcommittee and the Legal Subcommittee (which was the intergovernmental forum for the establishment of the legal regime on outer space).

COPUOS and its subsidiary bodies, through their regular agendas, deal with many issues related to sustainable development and the implementation of the Millennium Development Goals. At present, COPUOS addresses, for example, the use of space technology applications in water management, and international cooperation in promoting the use of space-derived geospatial data for sustainable development.

The UN Office for Outer Space Affairs (OOSA), which I direct, is the Secretariat of COPUOS and its Subcommittees. The Office, under the United Nations Programme on Space Applications, also promotes regional and interregional cooperation and coordination to increase access to space-based technologies and their applications for the benefit of developing countries.

The Office has been tasked to drive the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held in 1999, and which resulted in the establishment of the UN Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) (resolution 61/110) and the International Committee on Global Navigation Satellite Systems (ICG) (resolution 61/111), both coordinated by OOSA.

The new UN-SPIDER programme aims at providing all countries and all relevant international and regional organizations with universal access to all types of space based information and services relevant to disaster management in order to support the full disaster management cycle by serving as a gateway to space information for disaster management support, as a bridge to connect the disaster management and space communities and as a facilitator of capacity-building and institution-strengthening, in particular for developing countries.



The International Committee on Global Navigation Satellite Systems (ICG) was established on a voluntary basis as an informal body to promote cooperation on matters related to civil satellite-based positioning, navigation, timing and value-added services, as well as the compatibility and interoperability of global navigation satellite systems (GNSS), while increasing their use to support sustainable development, particularly in developing countries.

Since 2003, the Office has been a Cooperating Body to the International Charter Space and Major Disasters - an international agreement among space agencies to support with space-based data and information relief efforts in emergencies caused by major disasters. The UN system can access the services of the Charter through OOSA, which has so far made 46 Charter activations, more recently for example floods in Bangladesh and Mozambique, earthquakes in Indonesia and Solomon Islands, and the current Nargis cyclone in Myanmar.

The UN Inter-agency Meeting on Outer Space Activities, made up of more than 25 UN entities, is the primary mechanism within the UN system to achieve better coordination, improved cooperation, and more synergy in space-related activities of the United Nations. OOSA serves as Secretariat for the IAM. The publication “Space Solutions – for the world’s problems”, [that you will find in the back of the room] is made in cooperation with several UN entities through the inter agency mechanism, and provides an overview of the role of the UN family in using space technology to achieve development goals.

I will now give you a few examples of space-related coordination efforts among UN entities, in particular, in addressing the thematic clusters.

[Agriculture]

Satellites provide timely global information at various spatial resolutions for applications such as the monitoring of land cover, agricultural crop development, weather and precision farming in support of food security. Remote sensing and navigation satellites also provide valuable information for risk reduction of farming.

Thus, WFP has supported the development and installation of an operational system, Satellite Agro Meteorological Information System (SAMIS), to provide high-quality, accurate and timely agro-meteorological information to institutions involved in food security monitoring activities. SAMIS is a modular set of software that processes satellite and meteorological ground station data into a set of user defined products (such as rainfall amounts, crop and vegetation indices, etc.).

FAO uses satellite systems and provides through its Advanced Real-Time Environmental Monitoring Information System (ARTEMIS) a number of products to identify potential locust breeding areas and for monitoring crop and rainfall.



The Agriculture Meteorology Programme of WMO supports food and agricultural production and activities and provides meteorological and related services to the agricultural community to help develop sustainable and economically viable agricultural systems, improve production and quality, reduce losses and risks, decrease costs, increase efficiency in the use of water, labour and energy, conserve natural resources and decrease pollution by agricultural chemicals or other agents that contribute to the degradation of the environment.

[Land use and rural development]

Nearly half of the world's population lives in rural and remote areas of developing countries. Land-use and land cover maps are essential tools for decision makers to develop rural areas. Satellite communications provide efficient means for communications without the need for costly ground-base infrastructures. They can also be used for improving child and adult literacy rates in remote areas that are far from main education centres.

The Global Land Cover Network (GLCN) jointly initiated by FAO and UNEP is an example of joint efforts in developing reliable and comparable baseline land-cover data accessible at the local, national and international levels, especially for the user community in developing countries.

[Drought and desertification]

Remote sensing data are an essential source of information on environmental indicators, which are used to map the risk of desertification, soil erosion and soil oversalinization and acidification. Drought forecasting and early detection also relies on satellite imaging systems and enables decisions to be taken to prevent and mitigate its effects.

Images obtained from Earth observation satellites offer a wealth of information to policy makers, scientists and the general public about the planet's changing environment.

Thus, the World Water Assessment Programme and other UN programmes are using space technology to map water distribution and availability, measure the impact of droughts and floods, and collect information on how water is used in areas such as forestry and agriculture.

[Sustainable Development in Africa]

A number of UN entities, members of the Inter-Agency Meeting, implement various programmes and initiatives for the use of space technology and its applications in support of sustainable development in Africa.

The UN family is, for example, involved in the AFRICOVER project, covering 10 African countries (Burundi, the Democratic Republic of the Congo,

Egypt, Eritrea, Kenya, Rwanda, Somalia, Sudan, United Republic of Tanzania and Uganda) that aims to establish a digital geo-referenced database on land cover and a geographic referential (a type of reference map which includes place names, roads and water distribution).

The Africa Environmental Information Network (AEIN) is a multi-stakeholder capacity building process that seeks to harness and enhance access to information and knowledge to support the management of Africa's environmental resources as assets for sustainable development.

I would also like to note that at the last Inter-agency Meeting, in January 2008, OOSA stressed the need to reach out to the African Leadership Conference on Space Science and Technology and assist it in its efforts to build partnerships by raising awareness of the benefits of space technology and its applications to achieving sustainable development in Africa. OOSA is now preparing a report, in cooperation with ECA, and in consultation with other UN entities, to highlight the use of space technology for sustainable development in Africa, to be presented to the third African Leadership Conference to be held in Algiers in 2009.

[Conclusion]

Distinguished delegates,

I have outlined that space technology and its applications, coupled with advances made in other fields of science and technology, offer a wide range of tools and solution for overcoming obstacles to sustainable development. I have also addressed the crucial, and in many cases essential, role of international cooperation, at the global and regional level, in enhancing capacity-building and promoting coherence.

Today a large number of global and regional mechanisms and initiatives exist to support Member States in implementing the use of space tools and solutions. There still remains work to be done to overcome duplication of efforts and to bring different stakeholders together – decision-makers, science community and user community.

As mandated by the General Assembly, most recently by GA resolution 62/217 of 21 December 2007, the Committee on the Peaceful Uses of Outer Space will continue to examine the contributions that can be made by space technology applications to the thematic clusters of the Commission on Sustainable Development and will continue providing inputs for consideration by the Commission.

I thank you for your kind attention.