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Report of the CEOS WSSD Follow-up Programme

The first year of the CEOS WSSD Follow-up Programme (CEOS-WSSD) focused on the solidification of the Follow-up Programme. **This report describes the main accomplishments of the CEOS WSSD efforts this year, and outlines a proposal for decision by CEOS Agencies to accept CEOS WSSD Module 1 Capacity Building Principles developed in Stellenbosch, South Africa.** The proposed mechanisms developed this year to implement these Principles will also be discussed in this report.

Other key outcomes included in this report include the launching of the TIGER initiative as a contribution to CEOS WSSD Module 2 focusing on water resource management.

Background of the CEOS WSSD Follow-up Programme:

The Johannesburg Declaration on Sustainable Development, adopted by Heads of States and Governments, gave a major political impulse to the implementation of Agenda 21 agreed at the UN Conference on Environment and Development held in Rio in 1992. In Johannesburg, Heads of States and Governments committed to the *Plan of Implementation* for Agenda 21, integrating the three pillars of sustainable development - economic development, social development and environmental protection - at local, national, regional and global level. The *Plan of Implementation* was the result of an unprecedented consultation effort, under the coordination of the United Nations, of a wide range of stakeholders committed to sustainable development, including national governments, intergovernmental and non-governmental organisations (IGOs and NGOs) and the major groups identified in Agenda 21.

In order to offer common visibility of the actions undertaken by CEOS Members and Associates in implementing certain elements of the World Summit's commitments, CEOS developed a WSSD Follow-up Programme. This programme includes new initiatives as well as significant extensions of existing activities, which deal with issues related to the use of space technology for sustainable development. The CEOS WSSD Follow-up Programme is modular in structure, thus allowing evolution in time and geography. The programme is based on voluntary contributions

of CEOS Members and Associates, who subscribe to undertake responsibility (and commitments) for certain modules or elements of it.

The modular structure includes:

- Module 1 – Education, Training and Capacity Building
- Module 2 – Water Resources Management
- Module 3 – Disaster Management and Conflicts
- Module 4 – Climate Change
- Module 5 – Global Mapping, Land-use Monitoring and GIS

Modules 1 and 5 are of horizontal nature while Areas 2-4 are predominantly vertical. There are, however, overlaps among some of them.

To begin small and sustainably, CEOS fully engaged itself in only 2 specific Modules the first year as a starting point, focusing on the launching of the other Modules the following year. These Modules developed this year were:

- Module 1 – Education, training and capacity building
- Module 2 – Water Resources Management

Status of the CEOS WSSD Follow-up Programme Modules

Module 1: Education, Training and Capacity Building (led by NOAA)

The goals of Module 1 include

- 1) *Produce CEOS Principles for capacity building activities in developing countries*
- 2) *Provide capacity building support*
- 3) *Supply of data*

To assist Modules 2-5 in their education, training and capacity building components, Module 1 worked with African representatives at a CEOS workshop held in Stellenbosch, South Africa, 2-3 October 2003, to develop a set of eight Capacity Building Principles that reflect the key goals of both the WSSD Plan of Implementation and the CEOS WSSD Follow-up Program Plan.

Additionally, 13 recommendations were developed at this workshop for the specific implementation of these Principles in an African context. Finally, in order to help with the implementation of these Recommendations and bridge communications between African users and CEOS Module 1 Members, an Africa Advisory Group was established at this workshop.

Throughout the year, Module 1 has also worked closely with the CEOS Ad Hoc Working Group on Education and Training (WGEdu), and has provided input on key decisions and outputs of the Working Group. Furthermore, Module 1 has worked closely with the WGEdu on providing relevant education and training input to the Group on Earth Observations Subgroup on Capacity Building, and in some instances, has played a coordinating role for the Subgroup.

Next Steps:

If CEOS Agencies approve the proposed Capacity Building Principles and the proposed WGEdu Data Principles at the 17th Plenary, these Principles will serve as a framework for facilitating other Modules with their capacity building related activities. Module 1 will work closely with the CEOS WGEdu to provide and facilitate the supply of satellite data for education and training purposes, especially when such purposes are linked with sustainable development activities.

Module 1 also plans to develop concrete collaborations to existing CEOS Agency projects and programs, such as EUMETSAT's PUMA Project, various UNOOSA Workshops, and UNESCO's Space Education programs.

Module 2: Water Resource Management (co-led by ESA and JAXA)

The core activities of Module 2 this year were the ESA TIGER initiative, and JAXA's continued support of IFNet, GPM and CEOP activities. Agencies that also contributed to ESA's TIGER effort included CSA, UNESCO, CSIR, UNOOSA, and others.

One goal of the TIGER Initiative is to be a concrete step towards the implementation of the WSSD Plan of Implementation, especially in areas focusing on *space, water* and *Africa*. Priority areas for TIGER this year include wetland monitoring, ground water resource management, and food security, and other priorities may follow in the years to come.

TIGER is developed around a dual-priority track. On one hand, TIGER is developing demonstration projects on the ground such as: AQUIFER (ESA), GLOBWETLAND (ESA), GMFS (ESA), TBD (UNESCO), WAMIS (CSIR/SAC), TBD (CRTS), TBD (CSA), and OTHERS. On the other hand, TIGER is focusing on the political process to ensure support is provided at high levels for these initiatives. For Africa, this focus includes: AMCOW, NEPAD, SADC, UMA, ECOWAS, IGAD, CEMAC (TBC), World Bank, AFDB, EC and others.

To specifically address the political process, TIGER has held meetings and workshops in order to raise awareness and support of the demonstrator projects, and the overall goals of TIGER. These meetings and workshops include:

- Paris meeting, May, ESA HQ, 40 participants, 20 Africans
- Rabat Workshop, Oct, CRTS, 120 participants, 85 Africans

At this workshop, a specific plan of action for TIGER was adopted and agreed to be begin implementation by early November 2003. A call for TIGER Project proposals was issued for the development of future demonstrator projects, and plans were announced by S-Africa to host a TIGER-2 in Oct 2004, inviting Ministers in the Water (and Science) domain.

- SHIP Agreement with UNESCO
- Meetings with World Bank

Next Steps for Module 2 TIGER:

Oct 2003	TIGER-1 Workshop in Rabat, Morocco
Oct 2003	TIGER Plan of Implementation ready
Nov 03/04/05	Presentation to CEOS Plenary
End 2003	SHIP agreement with UNESCO
End 2003	Setup of TIGER Secretariat, Steering Committee
2003/04	TIGER Partnership proposals
2004/05	Regional TIGER Workshops, SADC, W-Africa, others
Sep 2004	UNOOSA Workshop in Graz
Oct 2004	TIGER-2, South Africa
Mid 2005	“Donors” Conference, “Space for Water” Summit TBC
end 2005	End of Phase 1, decision on Phase 2

The aim is to establish open-ended (sustainable) long-term Programme/s where space technology is used for water resource management – driven by Africa

Module 3: Disaster Management and Conflicts (co-led by NASA and China)

Module 3 is under considerable development and will focus the next year on developing and implementing a strategy the focus on the following priorities:

- Making linkages to the guidance and recommendations being provided by Modules 1 and 2
- Assist in the *establishment* of infrastructure in support of disaster management and conflicts
- Work closely with the CEOS Chair from China to support their priority focus on disaster management for 2004

The goals of Module 3 include:

- Consolidate relevant recommendations for disaster management and conflicts in developing countries, drawing significantly on the previous work of the CEOS Disaster Management and Support Group (DMSG), a number of outputs from UNOOSA Regional Workshops, and feedback from members of the International Disaster Charter
- Define the components of disaster management and conflict, including the educational component
- Increase awareness in the applications and utilization of Earth observation data in developing countries for disaster management and conflicts, and draw upon the CEOS Utilization Report to communicate the importance of satellite technology in addressing disaster related issues
- Work closely within the **Earth Observation Summit**, as well as other internationally recognized initiatives, guidelines and implementation plans to be consistent with the international community.

Module 4: Climate Change

There has been no activity with this module this year. Currently, no leadership or membership exists for this Module.

Module 5: Global Mapping, Land-use Monitoring and GIS (Co-led by CCRS and USGS)

Module 5 is under considerable development and will focus the next year on developing and implementing a strategy the focus on the following priorities:

- Promote the development and wider use of earth observation technologies, including satellite remote sensing, global mapping and GIS, to collect quality data on environmental impacts, land use and land-use changes.
- Strengthen cooperation and coordination among global observing systems ... take into account the need for building capacity and the sharing of data.
- Encourage initiatives and partnerships for global mapping, especially in Africa
- Support countries, particularly developing countries in their national efforts to use satellite and remote sensing technologies for data collection.

The goals for Module 5 include:

- Study two current capacity building activities also having a geo-spatial importance and focused on sustainable development. These studies will focus on demonstrating application benefits of both small and medium scale projects, and will lend themselves to communicating these benefits to policy and decision makers
 - Examples of projects could include Africover, Famine Early Warning System Network, Global Observation of Forest Cover, Global Forest Watch, Global Spatial Data Infrastructure, Global Map, Land Cover/Land Use Trends in the Sahel, etc.
- Take into account GEO Subgroup documentation to better understand user requirements, data utilization, international cooperation, and capacity building issues related to the use of geo-spatial data.

CEOS WSSD Calendar:

2003

- April 30: CEOS WSSD Module 1 Meeting in Munich, Germany
- May 7: CEOS WSSD Panel Discussion at UN CSD Partnership Fair, New York
- May 19-20: CEOS WSSD Module 2 Meeting, Paris
- June 6: WSSD Team Meeting, Paris
- September 8-11, UNOOSA WSSD Pillars Workshop, Graz, Austria
- September 16: CEOS WGEdu and WSSD Planning Meeting, Rome
- September 16: Joint Capacity Building Meeting, Rome
- September 25-27: Education and Capacity Building in Space Technology for the Benefit of Developing Countries”, Bremen, Germany
- September 28, Action Team 17 Capacity Building Meeting, Bremen, Germany
- October 2-3: CEOS WSSD Module 1 Workshop in Cape Town, South Africa

- October 6-7: CEOS WSSD Module 2 Workshop in Rabat, Morocco
- November 4-8: GIS Africa Workshop (focus on Capacity Building on Nov 4), Dakar, Senegal
- November 13: CEOS WSSD Panel at ISRSE Conference
- November 18: CEOS WSSD and WGEdu Special Education and Training Event
- November 19-20: CEOS Plenary in Colorado Springs, Colorado

2004*

- February: CEOS support of the GEO Capacity Building Support Group at the Meeting of GEO Co-Chairs, South Africa
- March/April (TBD): participation in the CEOS WGEdu Team Meeting, Paris
- March/April (TBD): WSSD Team Meeting (all Modules), Paris
- October, 18th CEOS Plenary
- TBD: Joint Module 2 & 1 Workshop

* many events are still being planned for the 2004 time period