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# Needs for Capacity Building in the Water Sector in Africa

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LABORATOIRE DE  
TELEDETECTION  
APPLIQUEE

# WSSD and Capacity Building

## AGENDA 21

- In Johannesburg at the WSSD, Head of States and Governments committed to the Plan of Implementation of Agenda 21, integrating the 3 pillars of SD: economic development, social development and environment protection

## ROLE of EO in SD

- Statement by CEOS to WSSD  
“In developing countries EO plays a key role in support of the goal of SD, in particular in the provision of information to assist decision-making targeted at the alleviation and eradication of poverty, environment monitoring and preservation, and natural resource protection and management”

# WSSD and Capacity Building

## CB, a key issue for SD

- ✓ Capacity Building and transfer of technology have also been identified as key issues for SD

## EO applications Gap

- ✓ To bridge the gap between countries, international and regional cooperation for Education on EO applications must be encouraged and promoted for the benefit of developing countries

# CEOS's commitment to WSSD Follow-up Program

## **Module 1 – Education, Training and CB**

Stellenbosch (South Africa) Workshop, October 2-3, 2003

## **Module 2 – WR Management (TIGER)**

**Module 3** – Disaster Management and Conflicts

**Module 4** – Climate Change

**Module 5** – Global Mapping, Land-use Monitoring and GIS

# CEOS/WSSD Workshop on Module 1

Education, Training and Capacity Building Workshop  
Stellenbosch, South Africa, from October 2-3, 2003

## Main purpose

✓ Identifying the key priorities of African institutions in education, training and capacity building for the improved use of RS support of SD

## Stellenbosch recommendations

- Building concrete partnerships between CEOS Members and Associates and relevant African institutions for education, training and capacity building in support of the WSSD Follow-up Programme
- African stakeholders, and other appropriate organizations, will form an African Advisory Group to the CEOS Working Group on Education and Training and the CEOS WSSD Follow-up Programme to ensure that top African priorities are addressed in the efforts of these programs.

# Stellenbosch recommendations

- CEOS should facilitate access to current high resolution data sets for specific key needs (e.g. food security, public health, poverty alleviation, disaster management, ocean forecasting, water and sanitation, the development of applications of satellite and other data having significant socio-economic benefit in Africa) by organisations such as universities, regional RS centres and specialised agencies.
- CEOS to work in partnership with relevant African institutions to assist in the development of key applications, also to be used to raise awareness and commitment in Africa at high levels within governments and organizations.

# African Advisory Group(AAG) to CEOS

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- ✓ AAG was created at the CEOS WSSD Module 1 Capacity Building Workshop in Stellenbosch, South Africa, 2-3 October 2003.
- ✓ AAG consists of stakeholders including representatives of academia, government and NGOs who have an interest in the CEOS' work as data users and remote sensing capacity building experts.
- ✓ AAG was formed to provide advice, input and feedback on CEOS' SD activities as well as other implementation efforts

# CEOS WSSD Follow-up Programme

Website: <http://ceoswssd.noaa.gov/>

Article 27 of WSSD Implementation Plan refers to  
“water” - “space” - “developing countries”

27. Improve water resource management and scientific understanding of the water cycle through cooperation in joint observation and research, and for this purpose encourage and promote knowledge-sharing and provide capacity-building and the transfer of technology, as mutually agreed, including remote-sensing and satellite technologies, particularly to developing countries and countries with economies in transition.



# ESA TIGER's Initiative: Space – Water – Africa

## ✓ **A concrete step**

to implement the outcome of the Johannesburg WSSD

## ✓ **Mission**

“Develop sustainable EO information services for integrated WRM in developing countries, with a focus on Africa”

## ✓ **Key requirements**

Sustainability → strategic partners needed

Appropriateness → level of technology must fit user's capabilities

User engagement → driven by African users

## What Tiger can offer ?

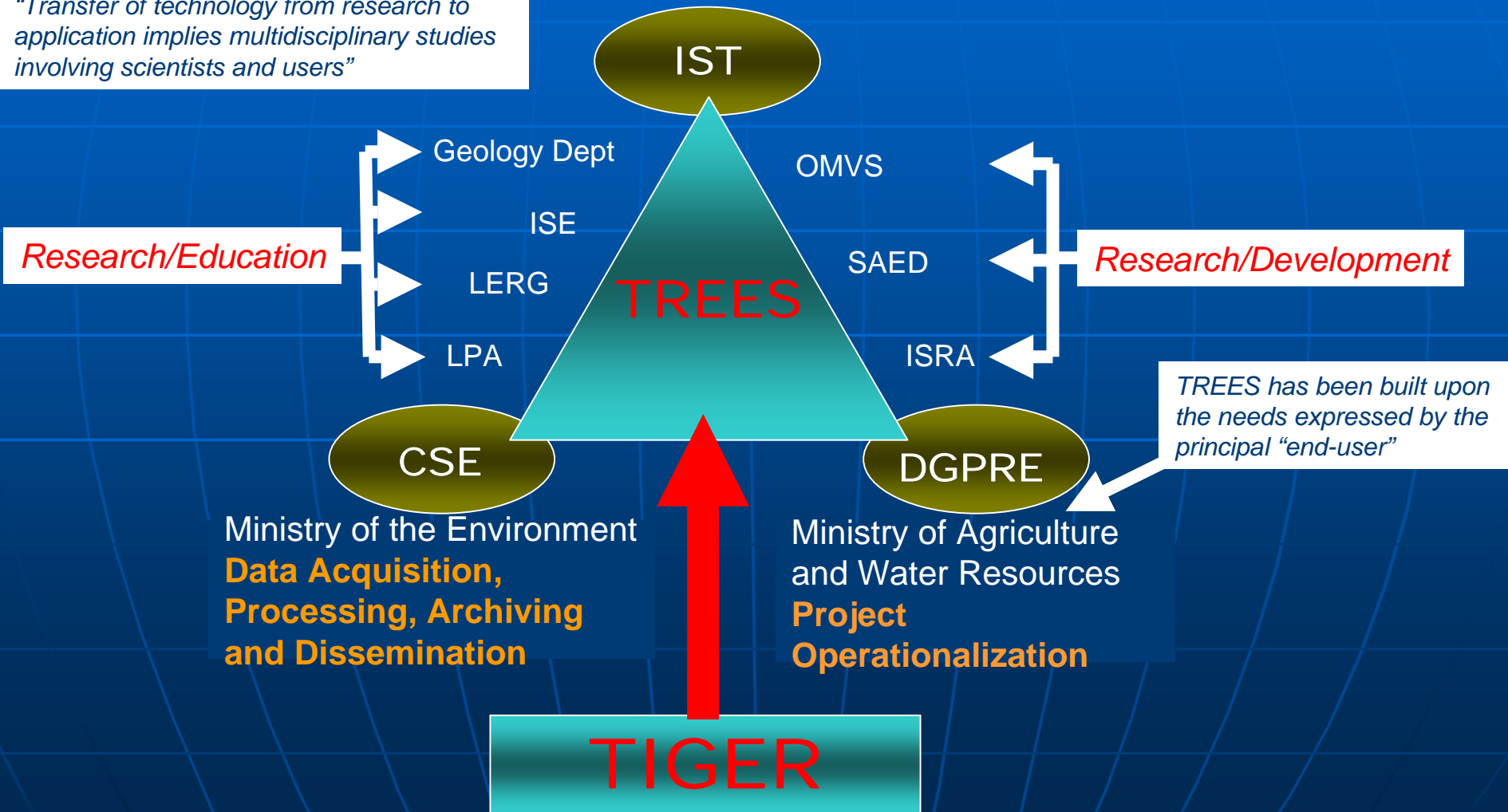
- Free access to satellite data (ERS, ENVISAT,... and non ESA data !?)
- Free access to data processing software
- Support for education, training, capacity building and technology transfer
- Experience sharing
- Linkage with potential donors for funding needs

# TREES

## Remote Sensing of Water and the Environment in Senegal - A response to TIGER -

Cheikh Anta Diop University of Dakar  
**Scientific Coordination**

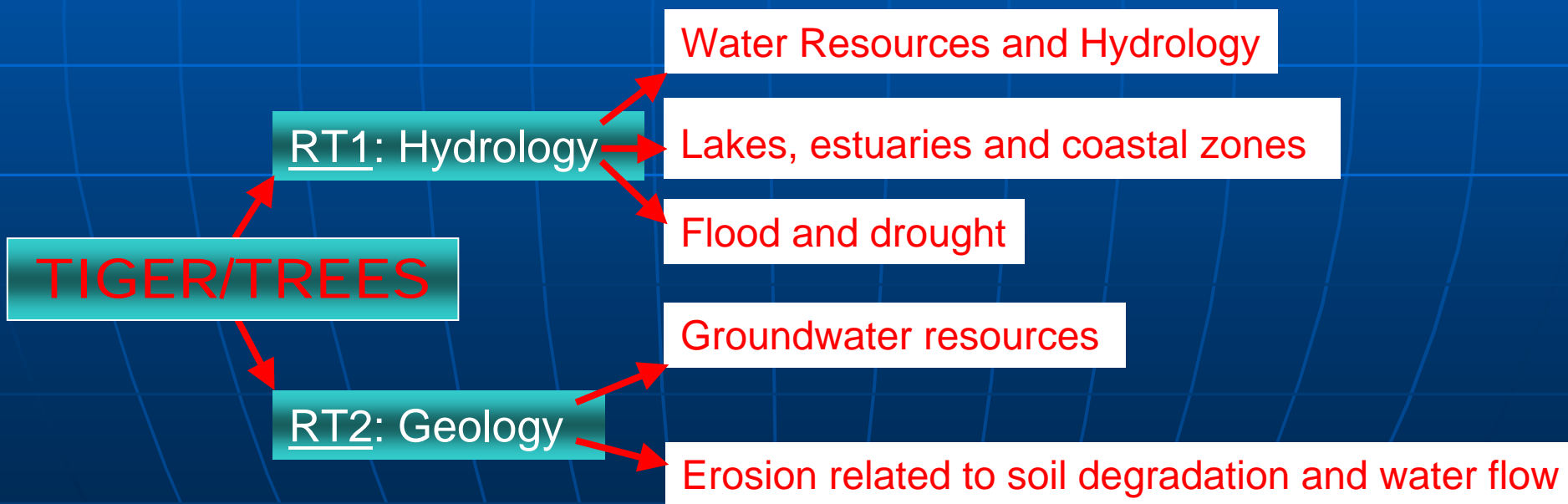
*"Transfer of technology from research to application implies multidisciplinary studies involving scientists and users"*





## TIGER/TREES is broken into:

2 Research Themes (RT1), 5 Sub- Research Themes,  
(8 specific Research Projects)



## Major objectives and challenges of TIGER/TREES

- ✓ Awareness raising (scientists, water managers, politicians, private sectors)
- ✓ Capacity building, education and training (reach a critical mass of trained educators, research scientists and managers; reinforce the place of RS techniques and applications in the curricula of universities)
- ✓ Move the project to a sustainable programme

## What do we need for TIGER/TREES ?

- ✓ ESA data (...and non ESA data !)
- ✓ Institutional, political and financial support (lab and field equipments)
- ✓ Support in capacity building, education and training (linkage with CEOS module 1 !)
- ✓ Strong networking at thematic, national, regional and continental level (for experience sharing)

THANK YOU FOR YOUR ATTENTION !



The Millenium Gate  
(Dakar, Senegal)