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# Towards the Definition of the Canadian Participation in the TIGER Initiative

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# Overview

- What is the TIGER initiative?
- Canadian assets for participation
- Canadian industry interests
- How CSA can support the initiative



## **CEOS Statement, WSSD**

**" There is no sustainable development without adequate information about the state of the Earth and the environment."**



# History of the TIGER initiative

- Concrete step to implement the outcomes of WSSD

## Article 28 - WSSD Plan of Implementation\*

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.

\* [http://www.un.org/jsummit/html/documents/summit\\_docs/131302\\_wssd\\_report\\_reissued.pdf](http://www.un.org/jsummit/html/documents/summit_docs/131302_wssd_report_reissued.pdf)



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# TIGER Initiative

- Develop sustainable Earth observation (EO) information services for integrated water resources management in developing countries, with a focus on Africa.
- TIGER principles:
  - Sustainability – strategic partners needed
  - Appropriateness – level of technology must fit user's capabilities
  - User engagement – driven by African users



# Proposed TIGER Approaches

## Four management approaches

- Water management based on trans-border river basin (i.e., Niger, Nile, Limpopo, etc.)
- Water management based on regional governance entities (i.e., SADC)
- Water management based on national plans and priorities
- Water management based on a thematic approach (i.e., wetlands, ground water and aquifer)



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# TIGER Themes

## Thematic Priorities

- Ground water resources and aquifers
- Wetland monitoring
- Food security and vegetation monitoring

## Premises

- Political priority – WSSD Plan of implementation
- Expressed African user interest
- Of strategic importance for Sustainers



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# TIGER Partners

## Four categories of partners:

- **End-users** – African water-management organizations (national, regional, basin), African governance organizations (NEPAD, African Ministerial Conference on Water, etc.)
- **Providers** – African Geomatics Organizations, CEOS partners, African and foreign VACs, etc.
- **Sustainers** – International financing institutions, aid and donor agencies;
- **Strategic Partners:** UNESCO, RAMSAR

**Provide a common working platform**

**Serve as an incubator for ideas, project conceptualization and design, funding resources and project implementation**





# Canadian Assets for TIGER

## TECHNICAL ASSETS

- RADARSAT-1 space and ground systems (flexible and operational)
- RADARSAT-2 – Data continuation
- RADARSAT-1 archive – baseline and monitoring of changes
- RADARSAT-1 thematic background missions – topographic, coastal, mapping/mosaics
- Africa mosaic
- SAR technical expertise – multi-sensor monitoring mission (ASAR)



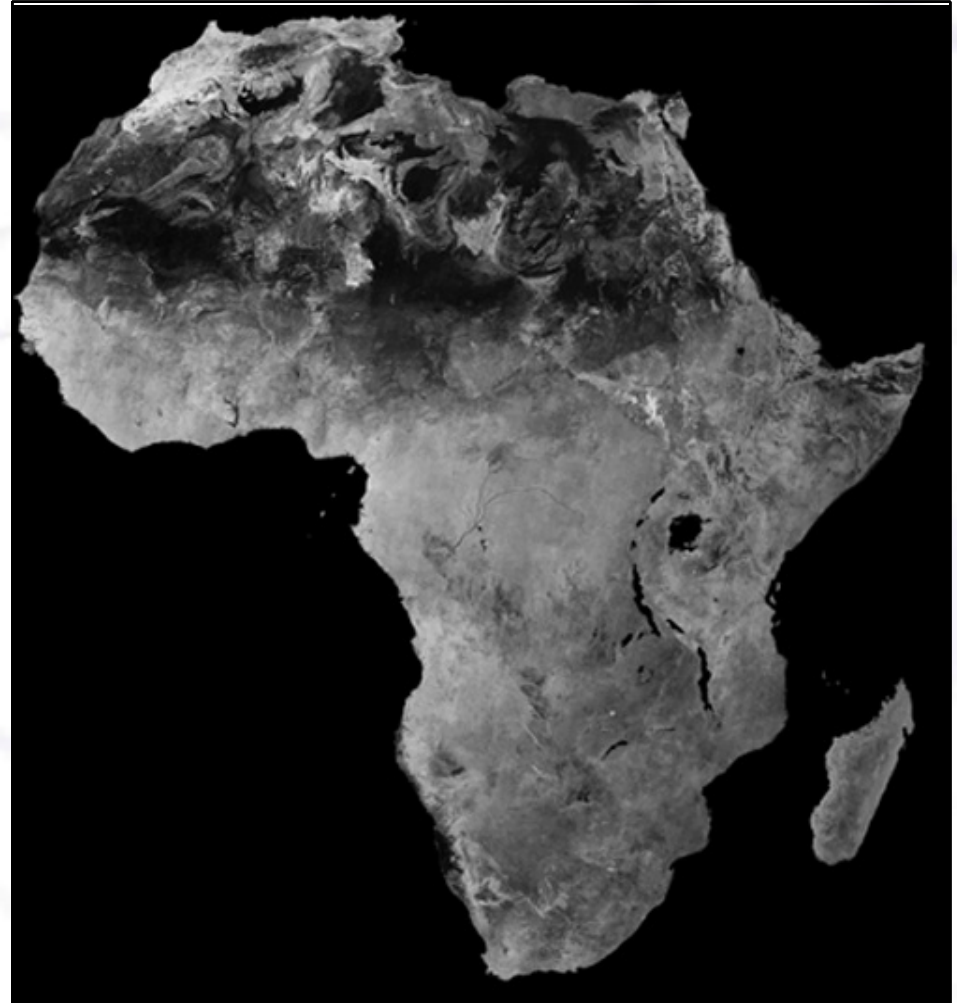
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# Africa Mosaic

- ❑ Unveiled at WSSD
- ❑ Composed of 1600 scenes
- ❑ Two acquisition modes:
  - ❑ Wide – sub-Sahara
  - ❑ ScanSAR - North
- ❑ Circa 2000
  - ❑ acquisition between 1999 and 2002
- ❑ Seasonally coherent





# Canadian Assets for TIGER

## CANADIAN EO INDUSTRY

- Proven **operational** expertise in the use of EO for TIGER's thematic priorities
- Existing cooperation with donor agencies on the use of space-derived info for sustainable development
- Existing interest in market niches/TIGER's thematic priorities
- Existing interest in the African market



# CSA Vision for TIGER

- To strengthen water resource management in Africa through **the use of Space EO technologies**
- To improve the ability of African water stakeholders to **better manage and mitigate** water usage, consumption, quality, distribution, etc, with the support of **operational tools and EO derived information**
- To **enhance the accessibility** of water resource **information** to support better decision making
- In agreement with TIGER initiative principles:
  - User pull – need
  - Sustainable solution
  - Appropriate use of the technology
- Support and diffuse Canadian EO Technology and know-how
- In line with the Canadian government strategy for aid in Africa



# CSA Support to TIGER

## CSA Strategy

- Funding programs (GRIP, EOADP)
- Horizontal collaboration with OGDs on sustainable development/environment "hot topics"
  - CISE for climate change indicators
  - EOSD for Kyoto
  - NWI – RAMSAR
- International reaches
  - CIDA
  - UN organizations – UNESCO, COPUOS, OOSA



- We have technical assets
- We have expertise
- The identified market is huge and potentially sustainable
- An initiative is being proposed
- The ball is in our camp

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