

The CSIR is an active player in putting satellite data to work for the benefit of regional and other African communities. The CSIR Satellite Applications Centre acquires, processes and distributes data from many satellite sensors, covering the area from 3 to 50 degrees south (as far north as Bujumbura, Burundi). The organisation is active in a range of geo-information applications and in disaster management systems, such as the Advanced Fire Information System (AFIS).

The CSIR archives satellite remotely-sensed data of the southern African continent and is at the centre of the implementation of an advanced earth observation data centre through the South African Earth Observation Strategy (SAEOS).



Satellite photo of Pretoria CBD



Low resolution satellite image over South Africa for weather assessment

Data reception

From coarse to high-resolution data:

- Landsat MSS, TM & ETM (from 1972)
- NOAA 17 and 18 - AVHRR (from November 1984)
- SPOT 2 (from 1994)
- ERS 2 - SAR (from 1994)
- SPOT 4 (from June 1999)
- EROS A1 (from 2001)
- Terra and Aqua - MODIS (from December 2003)
- SPOT 5 (from October 2006)
- SAC-C (from 2008)
- CBERS (from 2008).

The CSIR has distribution contracts with Space Imaging (GEO Eye), Digital Globe, Spot Image, USGS, MDA (RSI) and Infoterra.

Value-adding remote sensing applications include:

- Change detection analysis
- Land-use and land-cover classification
- Space maps
- Project-specific monitoring and spatial analysis services
- Advanced image processing.

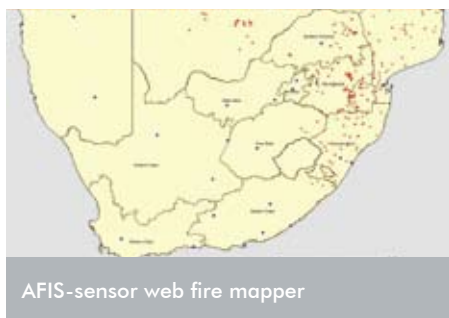
Application areas

Input for a wide variety of decision-makers in the following areas:

- Agro-environment
- Food security
- Ocean resources
- Water management
- Disaster management and mitigation
- Housing development
- Utilities and infrastructure planning
- Mining safety
- National safety and security.

Advanced Fire Information System (AFIS):

- Pinpoints fires in near-real time over southern Africa
- Sends location via SMS to Eskom and fire protection agencies
- Active fire map broadcast by the SABC.



AFIS comprises a partnership with the University of Maryland and NASA, with funding from Eskom and the Department of Agriculture.

Implementing a South African Earth Observation System

The South African Earth Observation Strategy (SAEOS) is being rolled out as part of the Global Earth Observation System of Systems (GEOSS) and is funded by the Department of Science and Technology.

Contact details
CSIR Satellite Applications Centre

Dr Corné Eloff
Manager: Earth Observation
Service Centre

Tel: +27 12 334 5058
Fax: +27 12 334 5001
Email: celoff@csir.co.za

www.csir.co.za

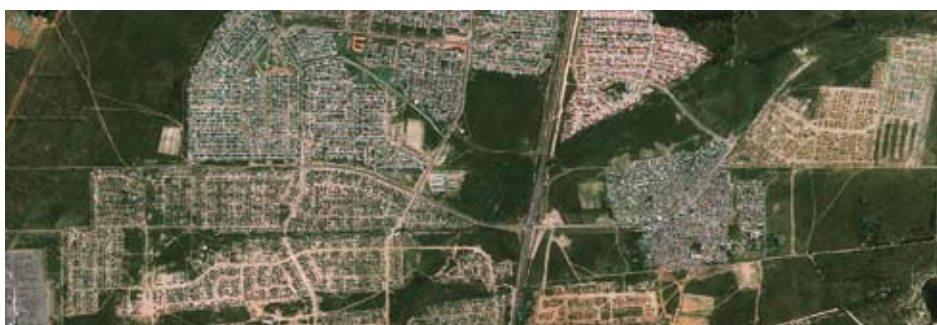


Storage disk arrays

- State-of-the-art hardware and software for significant storage capacity and fast data extraction for image processing
- Fully automated remote sensing supply chains
- Complementary to the earth observation portal of the South African Environmental Observation Network (SAEON).

SPOT 5

- Direct open information through multi-government licence for government departments, research institutions and academia



Satellite photo of an urban area

- National 2,5 m resolution natural colour seamless mosaics for 2006, 2007 and 2008:
- 2006 national mosaic: August 2005-March 2006
- 2007 national mosaic: April 2007-March 2008.



Satellite photo of Cape Town

Funded by Statistics SA, the national Departments of Science and Technology, Agriculture, Water Affairs and Forestry, Environmental Affairs and Tourism, Defence, as well as the Municipal Demarcation Board, the Development Bank of South Africa, the Independent Electoral Commission and Eskom.