



Capacity Building Activities at SANSA

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|| GEO Capacity Development
|| Side Event
|| 8th November 2016

SANSA Programmes

Earth Observation



Image acquisition
Image distribution
Value-added
services
Value-added
products

Space Science



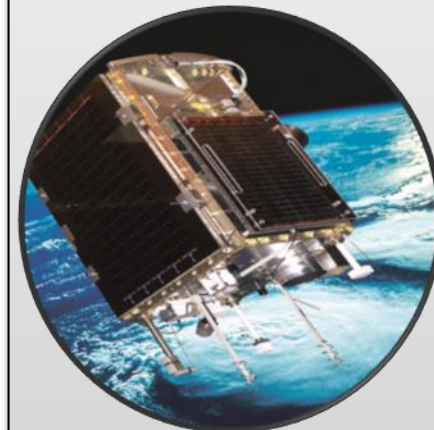
Geo-space
observations
Space physics
Space weather
EM technologies

Space Operations



Launch support
In-orbit testing
Emergency
support
Carrier monitoring
Hosting

Space Engineering



Satellite
development
Industry
development

Capacity Development: EO short courses, tools and products



Training courses

- **Introduction to Remote Sensing for Educators**

Target Audience: School Teachers
(Grade 10-12)

Outcomes: To provide practical GIS & RS lessons, to improve the way in which Geography is taught in schools.



Partners: Private companies, Depart. of Education, Universities & Local Conferences.

Training courses

- **Introduction to Remote Sensing for Local Authorities**

Target Audience: Local authorities/municipalities; Government departments

Outcomes: To provide practical RS to local authorities, to improve service delivery through adoption of EO.



Partners:

Training Courses...

- **Spectrometry and Spectral Analysis**

Target Audience: Students (Honours, MSc, PHD), Lecturers, Interns.

Outcomes: To enable quality RS research and increase knowledge-base for analysing spectral data.



Partners: Universities; Research Institutions

Courses for Educators

- **JICA Hands on Training on Japanese EO Satellites**
- **Advanced SAR Training Course**
- **SAR Interferometry Training Course**



Target Audience: Scientists, Government institutions, Research councils, Private companies, municipalities.

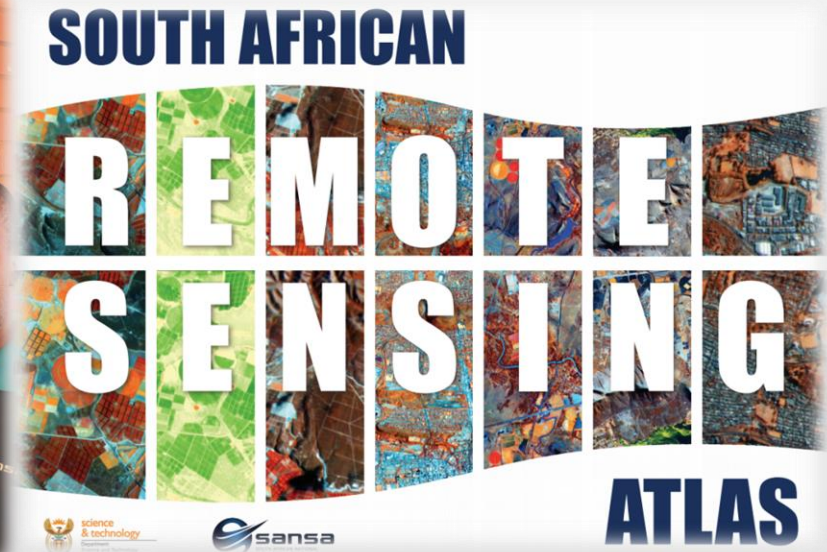
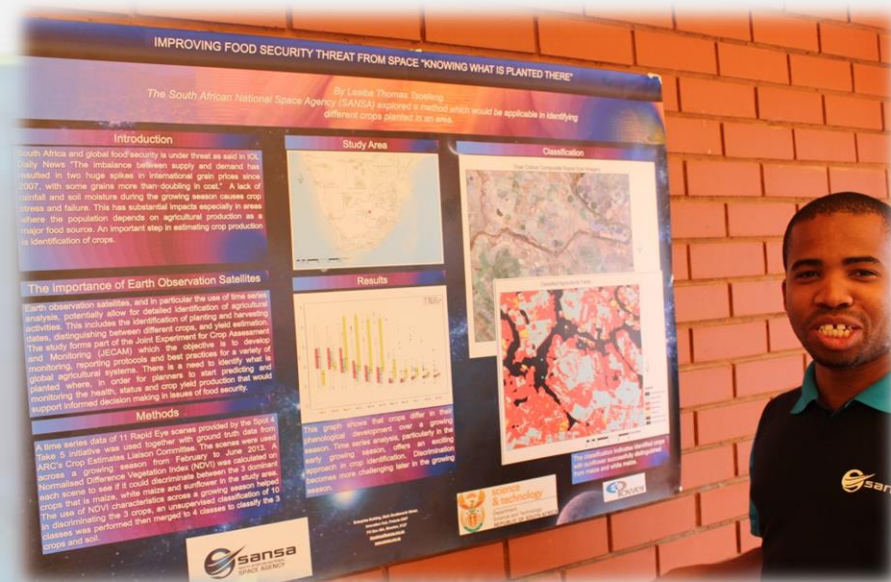
Outcomes: To build capacity on SAR processing for various applications.

Partners: Space Agencies



Capacity Building Resources

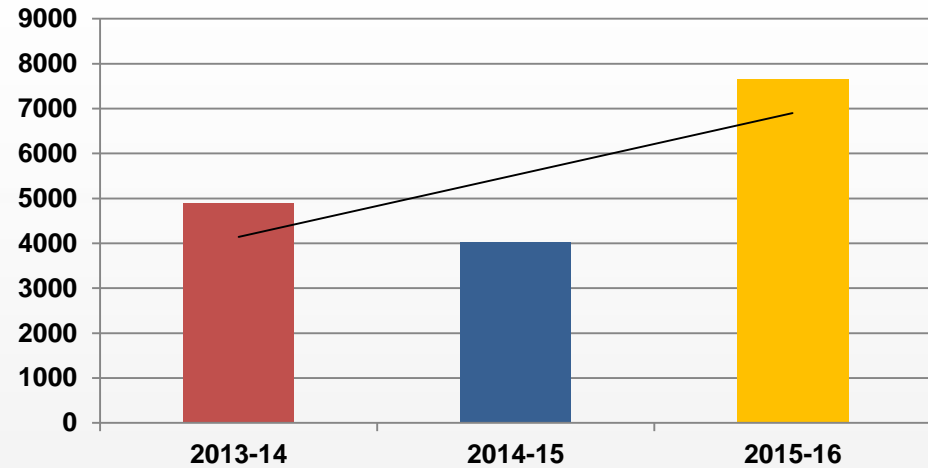
- **Fundisa Disk & Portal** – Contains SPOT, VAPs, Self-Guided Tutorials, RS lecture Series, Open Source Software, 3rd Party resources (2TB Hard drive).
- **Posters** – On Various RS Applications.
- **South African RS Atlas** – Hard copy, PDF, CD, 3D glasses, website: <http://atlas.sansa.org.za/> .
- **Fundisa School's Edition** – Open source, RS data, and self-guided tutorials (DVD disk)



Courses for Educators

- **Sci-Fest National Festival**
- **SASOL Science Festival**
- **National Science Week**
- **Site Tour for School Learners**
- **School visits**

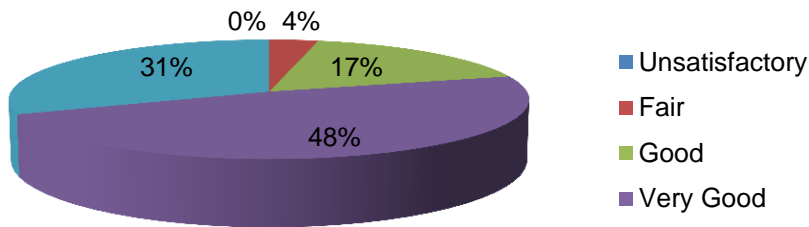
No. of Learners Reached



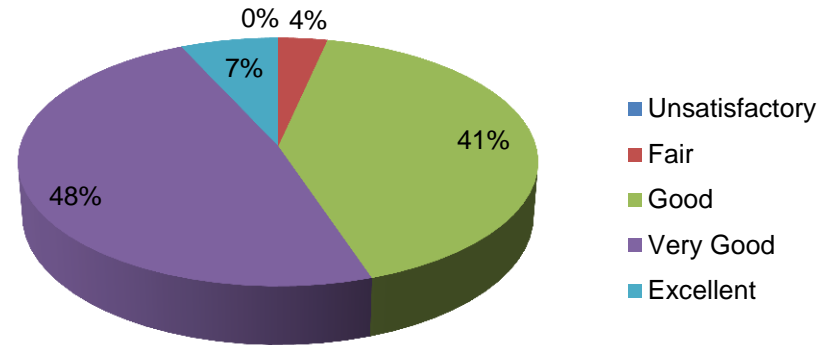
Feedback

COURSE INSTRUCTOR & MATERIAL SATISFACTION

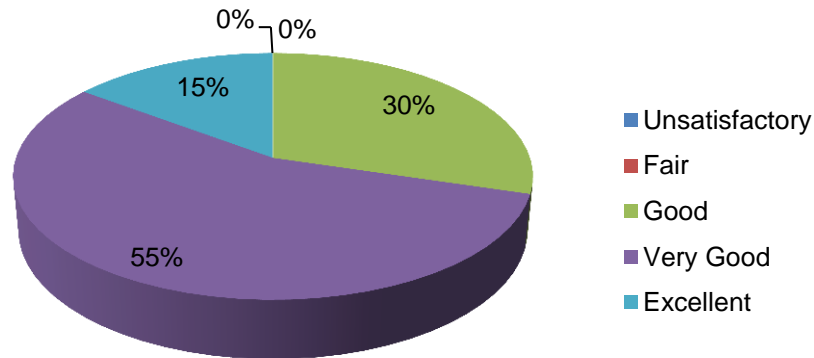
Course Material Rating



Instructor Overall Rating



Overall Course Rating





Activity

CB-2: Build awareness and demonstrating the value and applications of EO targeting teachers, students and practitioners in major conferences. The first of these is an event during the Living Planet Symposium (ESA and DLR) in 2016 and SANSA at ISRSE (2017) (ESA, DL and SANSA)

CB-4: Continue exploration and providing of appropriate E-learning courses in relevant applications (ISRO, INPE, NOAA and NASA)

CB-7: Survey of CEOS Capacity Building activities and a task report on capacity Building in CEOS + Document on best practices in Capacity building (SEO, NASA, SANSA and USGS)

CB-9: SAR Training Workshops. Two planned SAR data access and basic processing training workshops. (SANSA, ESA, DLR)

CB-16: SRTM- Training Workshops (USGS, NASA and SANSA)

CB-14: Create a planning document for the release of newsletters and mail-outs (SEO, SANSA, NASA, USGS and ISRO)

CB-4: Contribute to Capacity Building Portal (GeoCab Portal) ; Populate the Capacity Building Portal. Joint Project with GEO (NASA, GEO, USGS)



Contribute in bridging the skills gap of SAR technology in the region and to provide awareness on how and where to access freely available SAR data and processing software such as the Sentinel Application Platform, commonly known as SNAP.

The working group's contribution to the “*Training the Trainer*” initiative, about 95% of the workshop participants were lecturers at universities. Such an approach ensures that the knowledge and material acquired can be shared with students.

Title	Name	Surname	Organization	Country	Responsibility
Mr	Phila	Sibandze	SANSA	South Africa	Course Coordinator
Prof	Christy	Hansen	Delft University of Technology	Netherlands	Course Coordinator
Prof	Chris	Schmullius	Friedrich-Schiller-University Jena	Germany	Course Coordinator
Prof	Chris	Stewart	European Space Agency	Italy	Course Coordinator
Prof	Mikhail	Urbazaev	Friedrich-Schiller-University Jena	Germany	Course Coordinator
Mrs	Joalane	Marunye	National University of Lesotho	Lesotho	Participant
Mr	Aniceto	Chauque	Universidade Eduardo Mondlane	Mozambique	Participant
Ms	Hilma	Nghiyalwa	University of Namibia	Namibia	Participant
Ms	Zodwa	Ndlela	University of Swaziland	Swaziland	Participant
Dr	Fadzai	Zengeya	University of Zimbabwe	Zimbabwe	Participant
Dr	Cosmo	Ngongondo	University of Malawi (UNIMA)	Malawi	Participant
Dr	Proches	Msigula	Sokoine University of Agriculture	Tanzania	Participant
Dr	George	Chirima	Agricultural Research Council	South Africa	Participant
Mr	Moses	Chisola	University of Zambia	Zambia	Participant
Dr	Douty	Chibamba	University of Zambia	Zambia	Participant
Mr	Michael	Phiri	National Remote Sensing Centre	Zambia	Participant
Ms	Phoebe	Odour	RCMRD	Kenya	Participant

Zambia SAR Training Workshop (10-14) October: Participants



Big Question: What is the future plan for these SAR Workshops??

Collating all available SAR tutorials, tools and online courses and provide access to those that have participated in face-to-face SAR training workshops. (ESA, DLR, NASA and SANSA). WGISS– CEOS Data Discovery Webinar **

SRTM- Training Workshops

19-22 Sept- 2016



- A four-day Regional Training on Shuttle Radar Topography Mission (SRTM-2) took place from 19 – 22 September 2016 at the International Centre for Integrated Mountain Development (ICIMOD) Headquarters, Kathmandu, Nepal.
- The training focused on the use of 30-meter elevation SRTM-2 datasets, which are freely and publicly available, and are extremely valuable for addressing critical issues impacted by the Earth's topography, including water flow, heavy rainfall, river plain flooding, coastal storm surges, agricultural stresses; and public health challenges.
- Participants were from relevant Government Ministries and agencies in Hindu Kush Himalaya (HKH) and Mekong regional countries, the training was facilitated by experts from NASA SERVIR hubs
- Expected outcomes: The ability to describe the availability, applications, and limitations of satellite DEMs at varying spatial scales in different thematic areas
- Ability to use DEM data for demarcation of river basins, flood inundation mapping, and hydrological modeling
- Understanding of the accuracies of DEM derived products at various spatial scales.
- The US Government (NASA, USAID, NOAA and USGS) and CEOS (WGCapD), and the Secure World Foundation (SWF) were partners and collaborators with ICIMOD to organize the training.



**Activity**

Gift Workshop in Cape Town
27-28 August 201, Iziko Museum

WGCapD represented by ESA and
SANSA

Also distributed: ESA School Atlas,
SANSA School Atlas, SANSA
FUNDISA Disc and access to the its
Portal

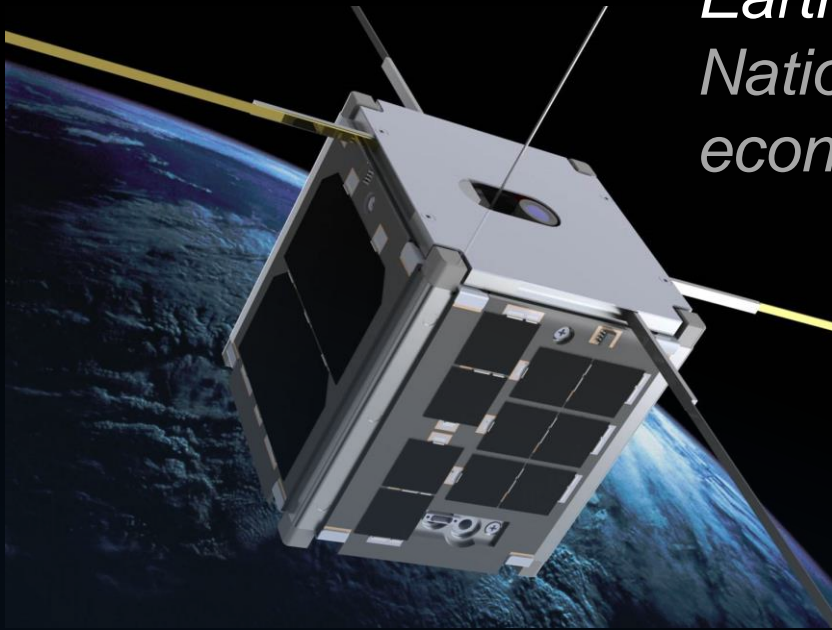
Progress



Activity	Progress
<p>Capacity Building in support of UN Sustainable Development Goals</p> <p>Data Cubes</p> <p>GEOGLAM</p> <p>Engagement with GEO AmeriGEOSS/AfriGEOSS</p>	<p>The Working Group’s future plan is to re-structure in order to support CEO strategic objectives –Example SDGs and Data cubes</p> <p>The most important enabler is resource availability in terms of people and funds.</p> <p>Discussion underway to implement a capacity Building activity in support of GEOGLAM</p> <p>USGS and NASA are our representatives on GEO Capacity Building Task team . Discussions are underway to bring more coordination in GEO capacity building tasks and other teams</p>

- 2nd SAR Training Workshop (Pretoria) 23-25th January 2017 Funded by JICA in support of RESTEC and JAXA
- 3rd SAR Training Workshop (Gabon) (Date?? February 2017) Funded by ESA Copernicus Office
- WGCapD 6th Annual Meeting: To be hosted by DLR (March 27-29)
- Space Agencies, GEO and CEOS will benefit from coordination of their capacity building activities
- Welcome to Pretoria for ISRSE-37 May 8-12 2017

*Earth observation provides integrated
National solutions towards social and
economic development*



Thank you

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science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

