Project/Contract no.:	**SSA4-CT-2004-012302**
Project acronym:	**VGT4AFRICA**
Project full title:	**Distribution of VEGETATION data in Africa through EUMETCast**
Instrument:	**Specific Support Action**
Thematic Priority:	**FP6-2003-SPACE-1: Aeronautics and Space**

PERIODIC ACTIVITY REPORT 2007: PUBLISHABLE EXECUTIVE SUMMARY

Period covered:	**From 2007/01/01 to 2007/12/31**
Start date of project:	**2005/01/01**
Date of preparation:	**2008/02/20**
Duration:	**36 months**
Coordinator organization:	**VITO (www.vito.be)**
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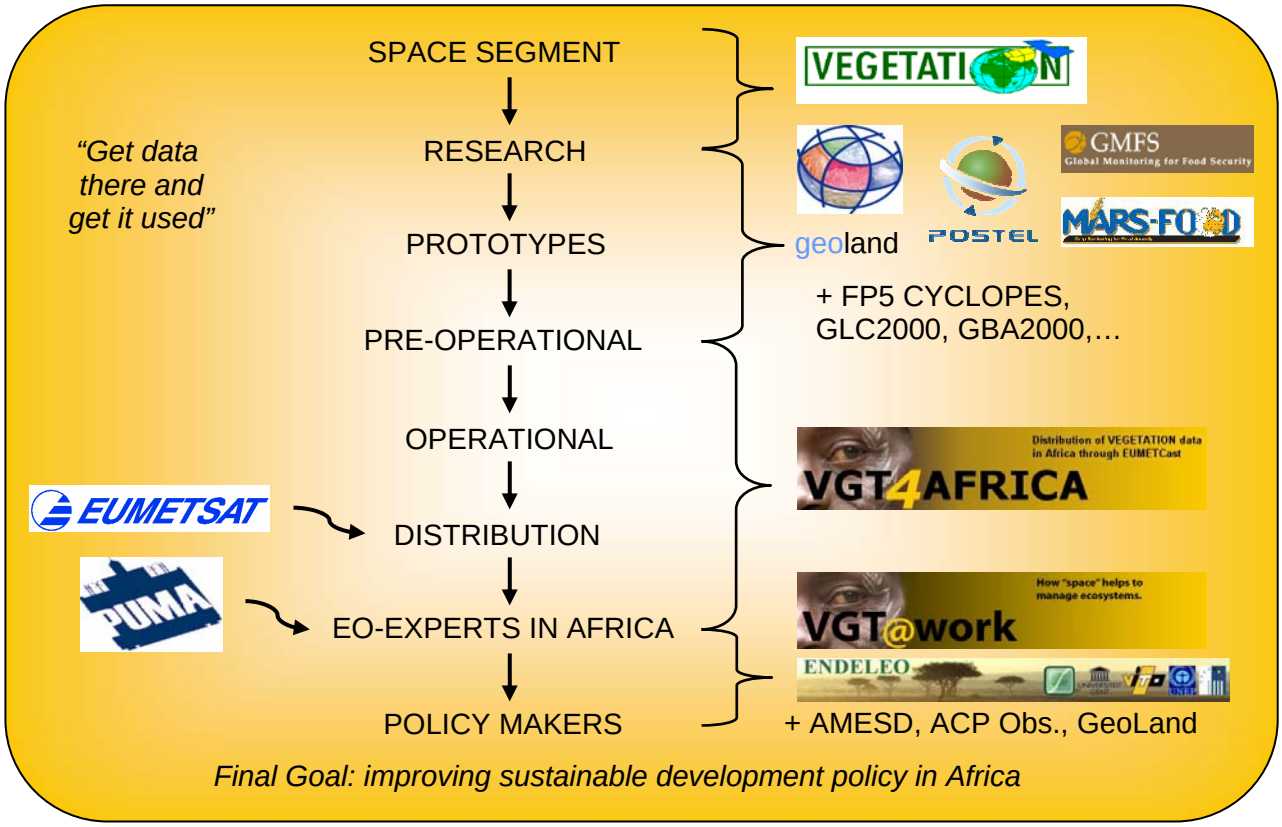
Revision	**1**

Publishable Executive Summary

The operational production, distribution and the effective use of environmental, remote sensing and Earth Observation data is of enormous benefit to the African people and sustainable development. The achievements of the VGT4Africa partners, VITO, JRC-IES and MEDIAS-France, in the final year of the 3-year VGT4Africa project that operationally provides data derived from SPOT-VEGETATION via EUMETCast, is described in this report.

Distribution of SPOT-VEGETATION data in Africa through EUMETCast



Introduction

The European Commission intends to promote the involvement of the developing countries in the **Global Monitoring for Environment and Security** (GMES) initiative, by ensuring their access to Earth Observation data, especially from satellite measurement networks. The VGT4AFRICA project responds to this EC intention and provides to Earth Observation experts in African countries VEGETATION derived data and products. The local EO-experts can extract valuable information from this data which helps their local policy makers in their decision making processes.

Objectives

In the framework of GMES and in complement to the PUMA and AMESD projects, the VGT4AFRICA project aspires to set up and maintain **an operational capacity for production** as well as **timely and free delivery** of VEGETATION

data from the SPOT satellites and high-level derived products **to all African countries.** The African user community includes all national meteorological services of Africa as well as regional institutions responsible for environmental monitoring. This data should be used to support sustainable development policies in Africa.

The main objectives of the VGT4AFRICA project are to enable the African Experts to work with the delivered environmental information. This objective can be split up in a technical and the human one.

The "Technical objective" is **to give easy and free access** to low resolution Earth Observation data products to African users in **all African countries** via the EUMETCast telecommunications system provided by EUMETSAT;

The "Human objective" is to aid the African Earth Observation experts in receiving the data and **to train them** in working with the products.

In other words, we could say that we want to "*get it there and get it used*"!

This service is an important step to help African authorities and institutions in fulfilling their environmental monitoring and reporting obligations and in improving the management of their natural resources. The African users can achieve this by developing their own **operational environmental monitoring services** based on the exploitation of the products delivered through the above-mentioned system. For long-term sustainability, the VGT4AFRICA project is part of a larger strategy to which many projects contribute, as indicated in the figure above.

2007: growth in product usage

An overview of the EUMETCast stations and their status at the end of the project, as known to the VGT4AFRICA partners, is provided in the table below. As can be seen, the 5 additional EUMETCast stations actively receiving the VGT4Africa data **nearly double the total number of receivers** in comparison to the end of 2006. Quite a few receivers are in preparation as well.

Largely thanks to the dissemination of DMP, VPI and SWB data since the end of 2006, the availability of Phenology data since mid 2007 and the promotion of the data in various training and outreach activities, the **usage of the VGT4Africa data** enjoyed another big **increase** in 2007. The data were not only used in the 4 regional training workshops foreseen in this project and organized by partner JRC. The 4th and final regional training session, hosted by the IGAD region's Climate Predication and Application Center (ICPAC), was held in September 2007. But the provided products were even used in training sessions organized by third parties, such as the International Institute for Geo-Information Science and Earth Observation (ITC).

The **number of product**s successfully **downloaded** from the project website **increased five-fold**, from 2000 (end of 2006) to around 12000, representing a total volume of over 200 GigaBytes.

The number of registered web site users doubled w.r.t. 2006 as well, resulting in **over 100 users** at the end of 2007, spread over more than 20 different countries.

The user community contains a **wide variety of users**, from PhD students over research institutes, universities to **regional center**s (spanning an economic or development region of multiple countries) and even **international organizations** like United Nations Food & Agricultural Organization (FAO) and World Food Programme (WFP).

The VGT4Africa data disseminations can thus be seen as a way to reunite multiple research communities, across projects and research themes, at continental scale.

The integration of the LAI, fCover and Albedo

products required more effort than expected. The Phenology products, although ready in mid 2007, needed to be revised because of a technical constraint preventing their EUMETCast dissemination.

However, through **relentless efforts of the partners** - even partly at their own expense in early 2008 - **nearly all** foreseen **products** were **operationally produced and delivered** to users in early 2008. Only Burnt Area's final integration tests were postponed until Geoland-2, that is expected to start around mid 2008. This includes an additional 10th product, VPI, that was added to the portfolio in 2006.

A **final user workshop** was organized at VITO in November, with 10 different users from all corners in Africa. At this workshop, the partners gathered user feedback, which is important for the further continuation and strategy of this work.

A lot of effort also went into the **continuity of VGT4Africa**'s efforts, for instance through a number of follow-on or related activities like FP7 Geoland, FP7 DevCoCast, VGT@Work, ACP Observatory and African Union Commission's AMESD initiative.

Organization	**Country / region**	**Station status at end of 2007**
Agrhymet regional center	CILSS region (9 countries in western Africa)	Active since 2005
Agricultural Research Council, Institute for Soil, Climate and Water (ARC-ISCW)	South-Africa	Active since 2005
Botswana Met. Office & Southern African Development Community (SADC)	Botswana, SADC region (14 countries in southern Africa)	Active since 2006
University KwaZulu Natal (UKZN)	South-Africa	Active since 2006
National Meteorological Institute (INAM)	Mozambique	Active since 2006
National Meteorological Service	Sudan	Active since 2006
Geographic Information Systems and Remote Sensing Regional Outreach Center of the National University of Rwanda (CGIS-NUR)	Rwanda	Active
National Meteorology Directorate	Ivory Coast	Active
Kenya Meteorology Department (KMD)	Kenya	Active
National Meteorological Agency	Ethiopia	Active
Zambia Meteorology Department, Remote Sensing Unit	Zambia	Active
ASECNA	Senegal	In preparation

Organization	Country / region	Station status at end of 2007
National Meteorological Service	Swaziland	In preparation
National Meteorological Office	Congo-Brazzaville	In preparation
National Meteorological Office	Mauritania	In preparation
Water Resources Department	The Gambia	In preparation
Institute for Arid Regions (IRA)	Tunisia	In preparation
National agency for meteorology and satellite tele-detection (METTELSAT)	Dem. Rep. of Congo	In preparation

Overview of VGT4AFRICA reception via EUMETCast at the end of 2007

Outlook

A number of activities carry on where VGT4Africa leaves off. Examples include the VGT@Work project, started in 2007, that will focus on further training of African Earth Observation specialists in the CILSS and SADC regions in the use of VGT4AFRICA data. It will help them improve their specific applications, thus further bridging the gap between the African EO experts, targeted by VGT4AFRICA, and the policy makers.

Other initiatives such as the FP7 Geoland and FP7 DevCoCast will continue and improve the data production and dissemination and extend this system to Developing Countries in Asia and South America. To accomplish this, the GEONETCast system will be used. GEONETCast is currently one of the most operational components of the Global Earth Observation System of Systems (GEOSS).

The African Union's African Monitoring of the Environment for Sustainable Development (AMESD) initiative will for instance maintain the existing EUMETCast receivers in Africa and install several more.

The ACP Observatory will focus more on the thematic interpretation of the provided data.

Impact of the project

The project was well received in the Earth Observation community that focuses on global land applications, for instance at multiple EC and ESA workshops and forums.

Many people, both on the European and on the African side, which include not only Earth Observation specialists, but also policy makers, have already shown interest in the project, particularly in how we approach the end users in Africa. The new approach using satellite telecommunications, combined with operational, reliable data provision, were key success factors.

The cooperation in the consortium, with EUMETSAT, the VEGETATION programme and the African users, but also with related projects, happens in a very constructive atmosphere, which pave the way for further collaboration.

VGT4Africa at a glance

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PUMA

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