



#### GEOSUCCESS

STEREO & VEGETATION ontmoetingsdag 9 mei 2003

Caroline Heylen Project coordinator



### Agenda

- The project and partnership in brief
- What is GEOSUCCESS? Objectives, Products, Services
- The demonstration project Objectives, expected results
- Questions?







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#### The Acronym

#### GEOSUCCESS

Global Earth Observation in SUpport of Climate Change and Environmental Security Studies







### The Project Framework

- VEGETATION scientific support programme
- <u>Demonstration</u> of an <u>operational</u> service
- Directed at
  - the scientific community (global change, sustainable development)
  - policy-makers (international environmental treaties)







#### The Partners

#### - GIM

- Project Coordinator
- Services and website development
- Trasys
  - Product automation
  - Backoffice, integration in global architecture of Vito
- Vito
  - Operational activities
  - Scientific support, contacts with user community







### The Project Time Frame

- Started in January 2003
- Runs till June 2005
- 6-monthly phases
  - development
  - user feedback







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## **Objectives GEOSUCCESS**

- Contribute to GMES initiative
  - GMES: Global Monitoring for Environment and Security
  - European Commission/ESA initiative
  - how:
    - improved data collection
    - generation of information tht reflects trends and changes in the global environment
- Support to Kyoto protocol verification







### GEOSUCCESS Operational products

#### GEOSUCCESS

- creates <u>operational</u> products based on EO data (VGT and other)
- on evolution of vegetation cover and related parameters
- on global or regional level (low resolution)
- calculated (near) real time
- products developed by Vito and other scientific institutes







### GEOSUCCESS On-line services

#### GEOSUCCESS website

- accurate and regular delivery of information required for monitoring the environment
- processed data are immediately available
- thus (near) real time follow up of vegetation cover and appearance of unexpected results
- user-friendly interface
- user forum
- background information







# Overview of GEOSUCCESS products (1/5)

- Environmental Conventions
- Environmental Stress
- Natural Disasters







# Overview of GEOSUCCESS products (2/5)

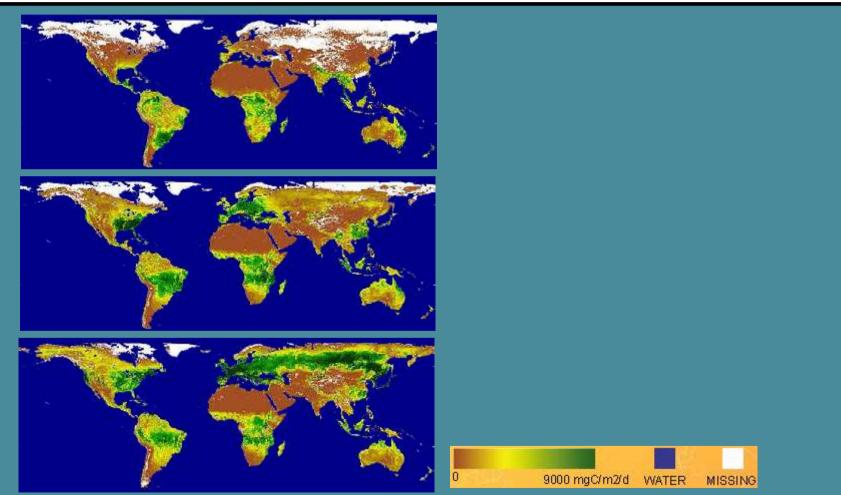
- Environmental Conventions
  - Net Primary Productivity
    - repeatable estimates of the net flux of carbon between the atmosphere and terrestrial vegetation
    - used to monitor vegetation growh, carbon sinks and sources, crop yield forecasing, deforestation, ...
    - updated every decade (10 days synthesis)
    - world wide
    - developed by VITO







#### Net Primary Productivity Map









# Overview of GEOSUCCESS products (3/5)

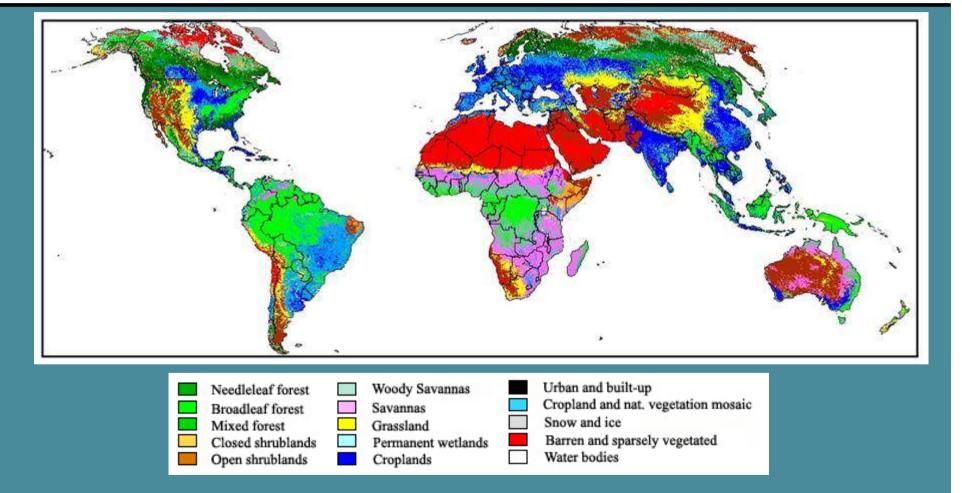
- Environmental Conventions
  - Biome Classification
    - spatial distribution of terrestrial ecosystems
    - 17 biome classes of IGBP
    - used in ecology and biodiversity monitoring
    - updated once a year
    - world wide
    - developed by VUB (Centre for Cartography and GIS) and VITO







#### Biome map









# Overview of GEOSUCCESS products (4/5)

- Environmental Stress
  - Small water bodies
    - monitors the state of small ponds in semi-arid regions
    - used in water and health management, maps indicate precise location of temporal water bodies
    - updated every 10 days
    - covers arid and semi arid regions in Africa
    - developed by JRC, implemented by VITO.







### Small water bodies

#### Burkina Faso





June 2001

October 2001







# Overview of GEOSUCCESS products (5/5)

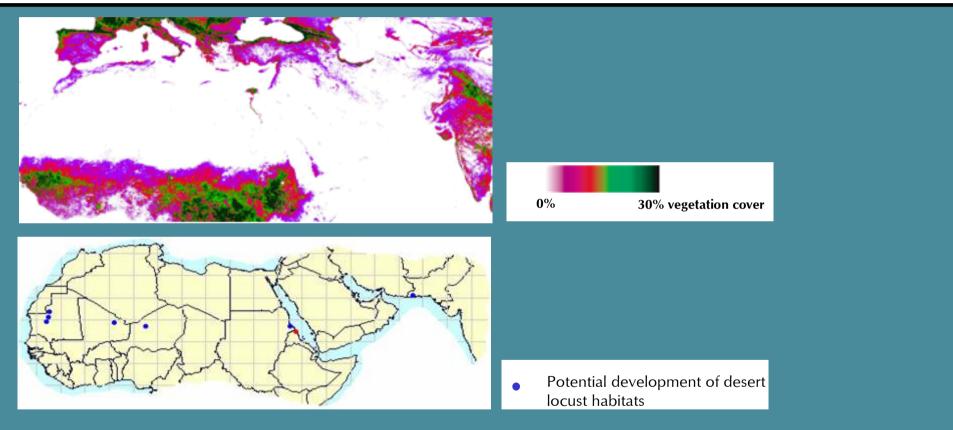
- Natural disasters
  - Apperent green cover percentage (arid regions)
    - desert locust common threat to agriculture in (semi) arid regions
    - used to monitor potential development of locust habitats
    - updated every 10 days
    - covers arid and semi arid regions in Africa
    - developed by FAO







# Apparent green cover percentage









# Overview of GEOSUCCESS services (1/4)

#### Website

- Order and download the products
- Scientific, methodological and technical information
- User forum
- FAQ







# Overview of GEOSUCCESS services (2/4)

#### Order products

- select product type
- select format
- select predefined ROI
- select period









# Overview of GEOSUCCESS services (3/4)

# Download products

 list of selected products

ROI	Instrument	Date	Туре	Format	Size
Africa	VGT1	2000 January 01	NPP	HDF	33.05 MB
Africa	VGT1	2000 January 11	NPP	HDF	32.79 MB
Africa	VGT1	2000 January 21	NPP	HDF	32.54 MB
Africa	VGT1	2000 February 01	NPP	HDF	31.96 MB
Africa	VGT1	2000 February 11	NPP	HDF	31.85 MB
Africa	VGT1	2000 February 21	NPP	HDF	31.45 MB
Select	t All				
		ctive products is t			
		pace to add new			
Cancel Add to your active products					







# Overview of GEOSUCCESS services (4/4)

### Download products – via FTP or HTTP

Active products						
File	Size	Days left for download				
V1KRNS10_19980401_NPPAfrica.ZIP	32.83 MB	-1				
V1KRNS10_19980411_NPPAfrica.ZIP	32.41 MB	-1				
V1KRNS10_20000101_NPPAfrica.ZIP	33.05 MB	5				
V1KRNS10_20000111_NPPAfrica.ZIP	32.79 MB	5				
Click on the product to dov	nload it !!!					
The total size of your active proc	lucts is 131	.09 MB.				
There is 4.87 GB free space to a	dd new pro	oducts.				
Add new products to y	our active pr	oducts				







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# The demonstration project Objectives/Expected results

Better serve the user community

Broaden the user-base

- Improved understanding of user needs
- Extension of the range of products
- On-line distribution channel for custom-made products
- On-line user-friendly analysis
- Developing appropriate pricing policies for key user communities







# The demonstration project Objectives/Expected results

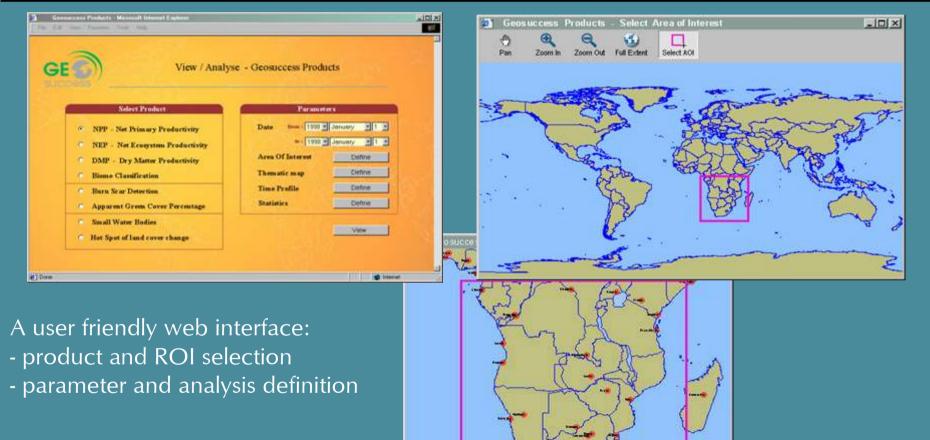
- Actual use of GEOSUCCESS (October 2002)
  - 102 registered users
  - 850 downloaded products, 60% NPP, 20% DL
  - Region of Interest: Africa and Europe
- Questionnaire (Oct 2002): improvements
  - "flexible ROI"
  - on-line consultation







## The demonstration project Improved and new services





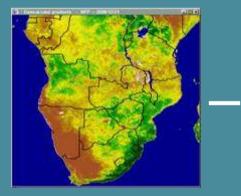




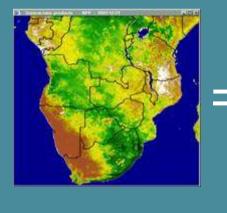
### The demonstration project Improved and new services

A user friendly web interface:

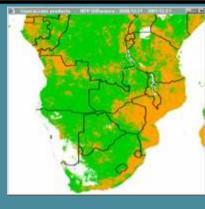
- on the fly analysis, maps and reports
- fast downloads of results



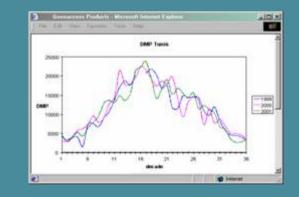
Results date 1



#### Results date 2



#### Difference map



#### Time series chart







# The demonstration project User interaction



#### Web forum

#### www.geosuccess.net







#### Thank you!

#### Questions ?



