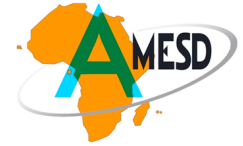


Orientations stratégiques IRD dans AMESD

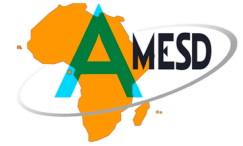
Frédéric Huynh
Institut de Recherche pour le Développement
Director ESPACE Unit
Maison de la Télédétection - Montpellier - France

huynh@ird.fr - www.espace.ird.fr



Presentation

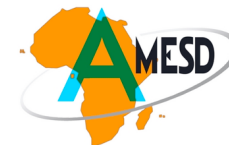
- IRD : Institut de recherche pour le développement
 - French public science and technology research institute
 - Under the joint authority of the French research and overseas development ministries



Presentation

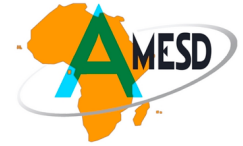
■ Activity

- IRD conducts scientific programs contributing to the development of the countries of the South with an emphasis on the relationship between man and the environment



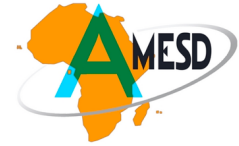
Missions

- 3 main missions
 - Research
 - Expertise
 - Support and training

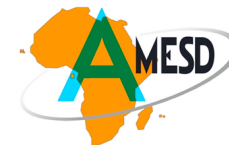


Scientific activities

- 5 scientific departments
 - Earth and environment
 - Living resources
 - Societies and health
 - Expertise and consulting
 - Support and training



- The Inter-establishment Agency for Research for Development
 - In 2006, the IRD was entrusted with the founding and management of AIRD, to intensify and coordinate the French policy concerning the development of Southern countries through research.
 - Today, the AIRD :
 - in the North : universities (CPU), CNRS, Inserm, CIRAD, Institut Pasteur and IRD
 - in the South : the main multilateral organization and qualified personalities



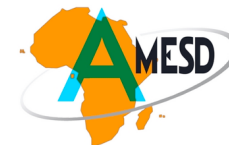
Scientific activities

Priority programmes :

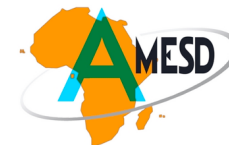
- ☐ Public policies and fight against poverty
- ☐ International migrations
- ☐ Emerging diseases
- ☐ Climate change and Natural hazards
- ☐ Water resources and access to water
- ☐ Ecosystems and natural resources



IRD
Institut de recherche
pour le développement



- The IRD around the world
 - Africa - Indian Ocean :
490 researchers and engineers
 - Latin America – Caribbean :
200 researchers and engineers
 - Asia – Pacific :
228 researchers and engineers

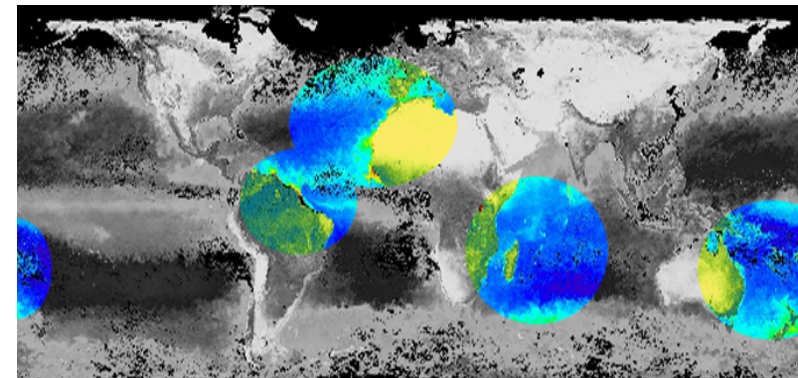
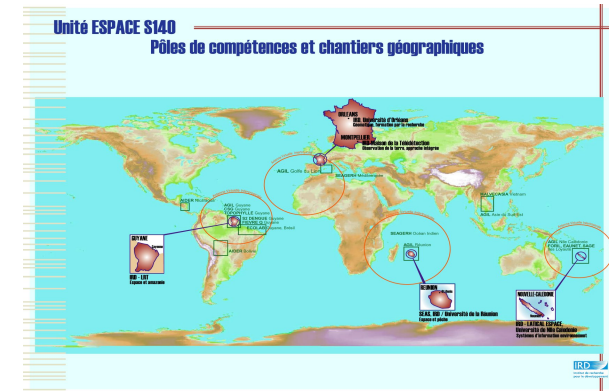


■ Implantations

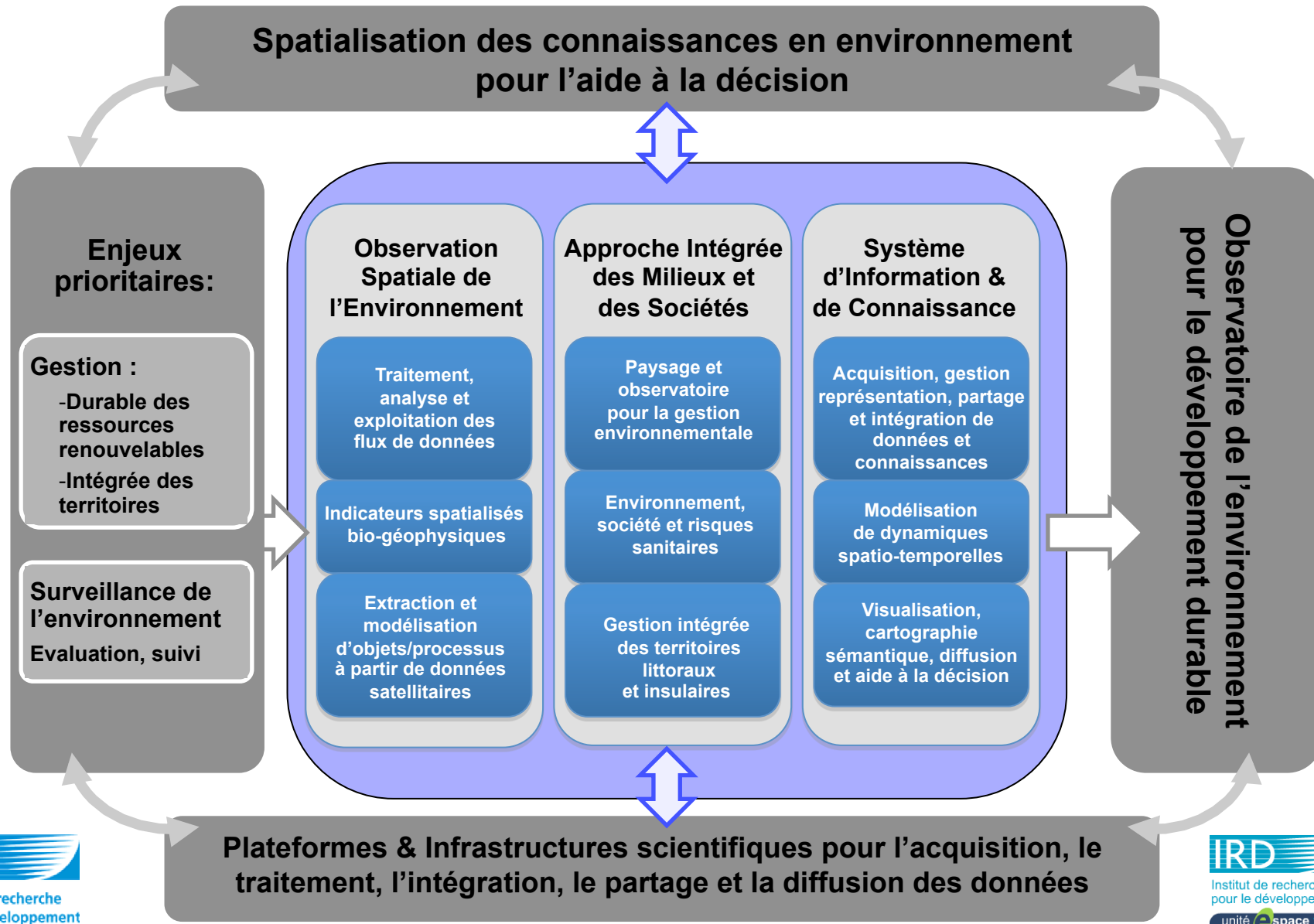
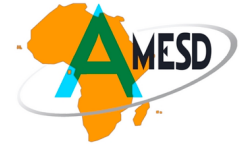
- Establishments in mainland France
 - Montpellier, Paris
- 5 centres in the French overseas territories
 - French Guyana, Martinique, New Caledonia, French Polynesia et La Reunion
- 22 centres in other countries, mainly in the inter-tropical zone
- IRD researchers are involved in about fifty countries

IRD-ESPACE Unit

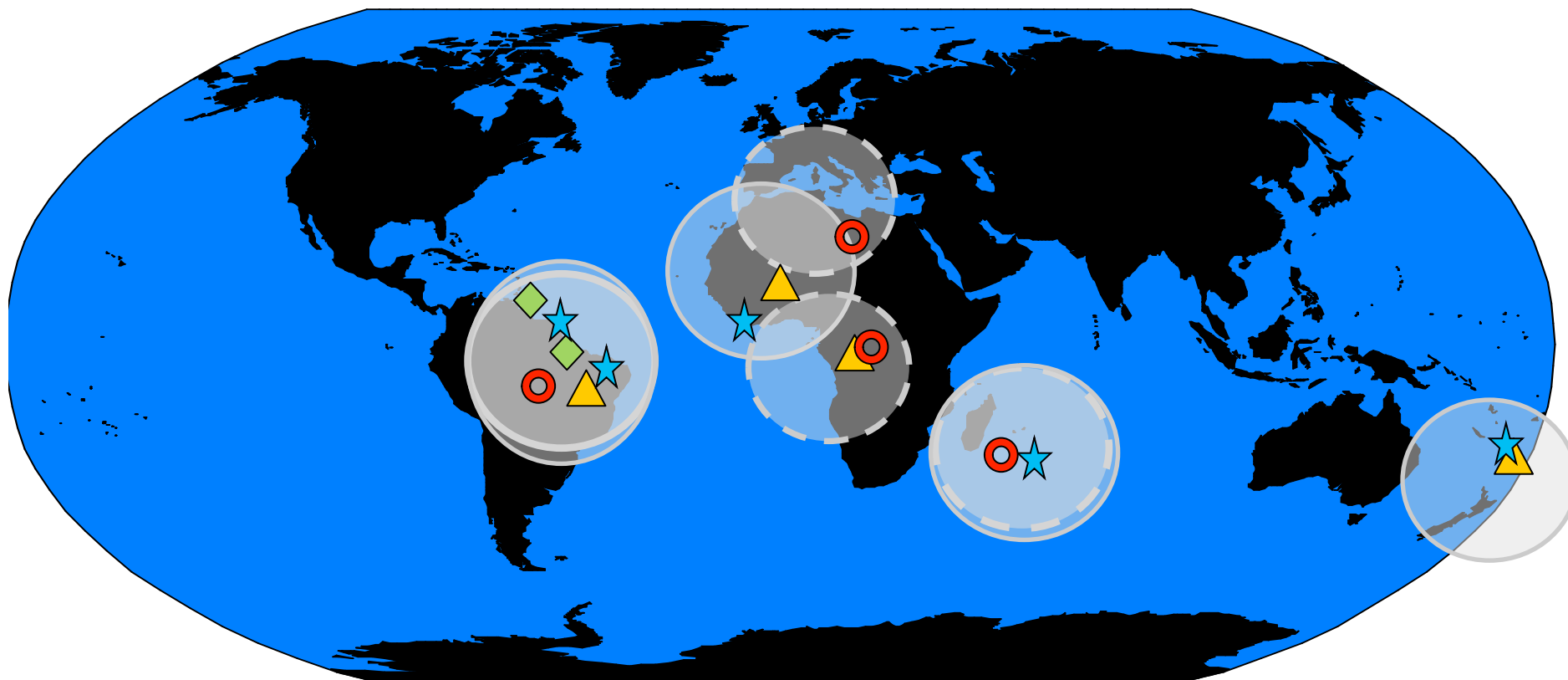
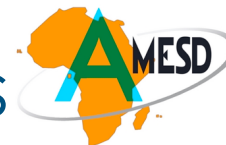
- develop innovative methodologies based on earth observation and integrated approaches for natural resources management
- transversal and pluridisciplinary research team (73 scientists and engineers) specialised in developing spatial applications in the context of development
- principals direction of research :
 - ☐ earth observation in tropical region (spatial indicators, real time monitoring)
 - ☐ integrated approaches (spatial analyses, actor representations, participative approaches),
 - ☐ environmental information systems for decision support.
- thematic applications : marine ressource, littoral (ICZM), health (spatial survey), land use and land cover changes, water, forest monitoring
- Service activities : international network of receiving stations (NOAA/AVHRR, SeaWifs, SPOT-VGT, SPOT, ENVISAT) as regional space observatories for research science and environmental survey



Organisation de la recherche



Pôles régionaux et chantiers géographiques



Gestion intégrée des littoraux



Gestion durable des ressources



Environnement et santé



(Eau, sol, végétation)

Energies renouvelables



Activités de services communs

Stations, plate-formes, logiciels

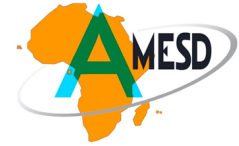
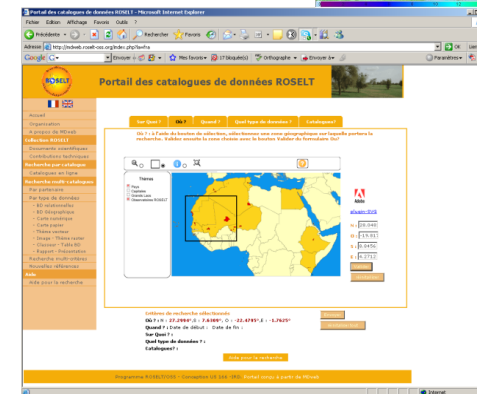
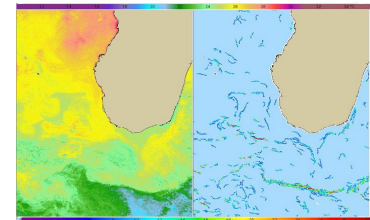
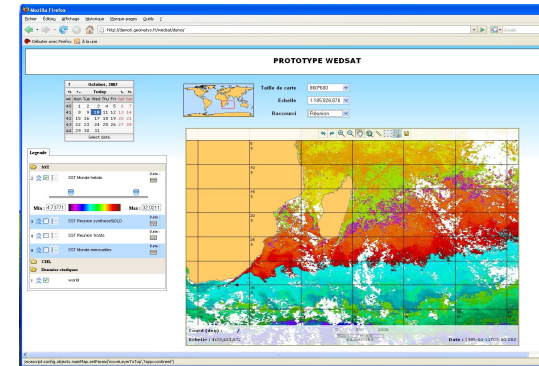
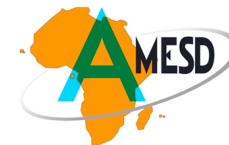


Plate-formes et infrastructures scientifiques

- Stations de réception et services d'observation SEAS
acquisition, traitement temps réel, contrôle qualité, indicateurs, produits environnementaux
- Des infrastructures de données spatiales « open-source » au service du partage de données
(MD-WEB) et l'aide à la décision (SIEL)



Réseau de stations de réception



Polynésie, 2004



Guyane, 1998



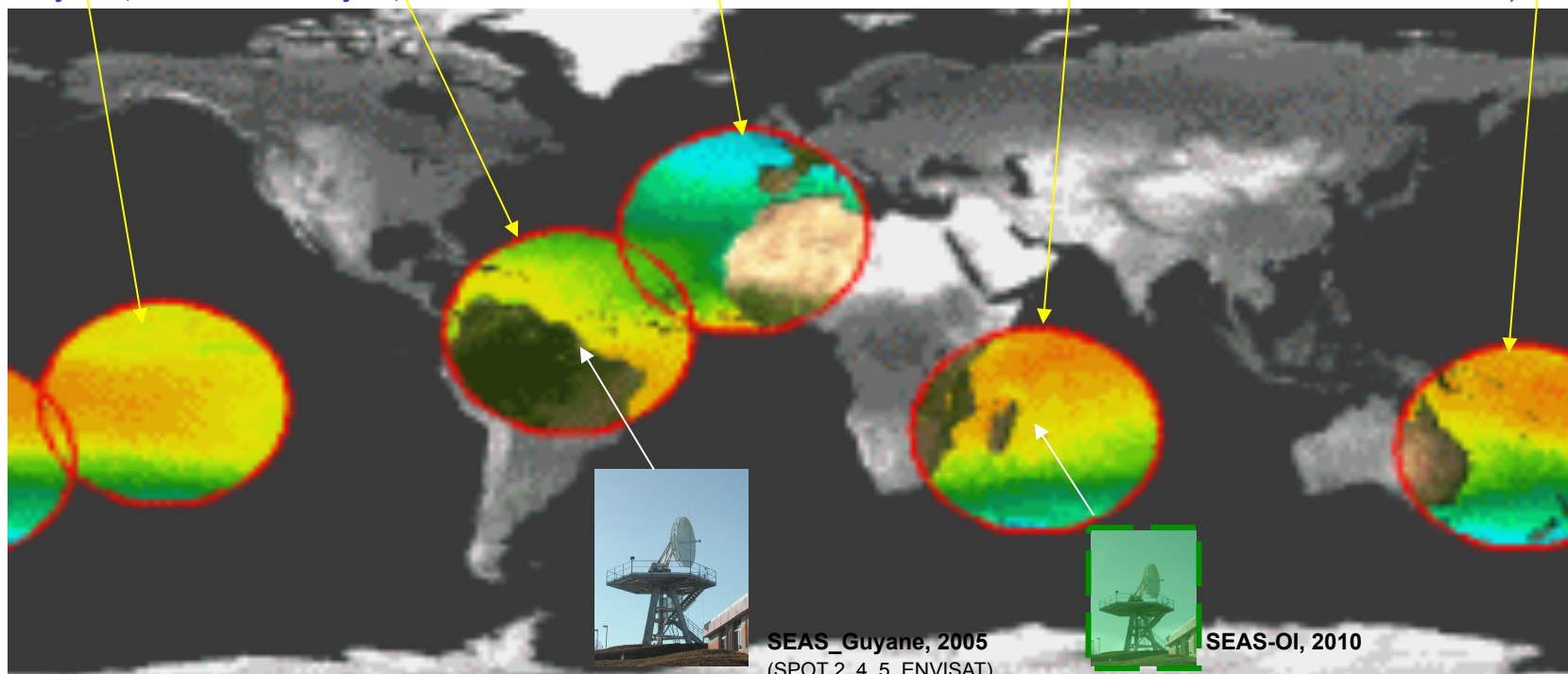
Canaries, 1996



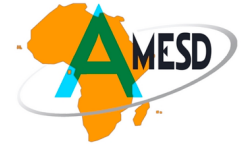
Réunion, 1991



Nlle Calédonie, 1997



Formation



Formations diplômantes

- Masters GEOMATIQUE, Informatique, REMI-VERT (UAG) et Eau
- Master « risque et télédétection »
- Masters internationaux : Université Hanoi (USTH), Univ. Brasilia, ...

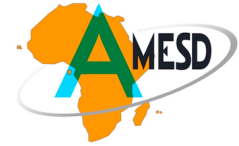
Formations des formateurs des pays du Sud

- AUF (Océan Indien, Afrique Centrale, ...)
- UEA, UNB : université d'été/OMP

Formations à la carte et conception de modules spécialisés

- dans le cadre de projets CNPq, Unesco-Cnes

Transfert, valorisation



Incubation d'entreprises innovantes

Montpellier : système d'information open source : Géomatys (MTD/GEOSUD)

Nouvelle-Calédonie

Guyane (au travers de Seas-Guyane)

Incubation d'entreprises innovantes au Sud

- partenariat IRD-IRA Tunisie
- projet de maturation du SIEL soutenu par les services de valorisation de l'IRD
- perspective d'entreprise Franco-Tunisienne 2010-2011, incubateur IRA Médenine

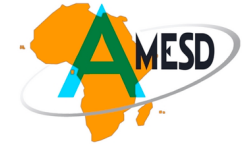
Partenariats industriels

- Spatial : Thales Alenia Space (UE-UA AMESD), EADS/SPOT Image/infoterra (SEAS-Guyane), CLS, Noveltis
- Environnement : BRLi, ONFi
- informatique : Géomatys

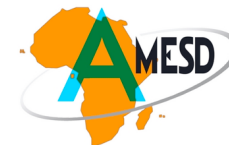
■ IRD dans AMESD : les motivations

- (1) se positionner auprès de l'UE et de l'UA au travers d'un projet structurant à l'échelle du continent
- (2) Diffuser ses connaissances, valoriser ses acquis et son expertise internationale
- (3) Impliquer les partenaires des Pays du Sud au travers de programmes communs
- (4) se projeter sur les nouveaux enjeux de recherche pour le développement aux échelles régionales et continentales tout en renforçant les axes de coopération au niveau des Etats dans le domaine des observatoires de l'environnement alimentés par le spatial.

■ IRD



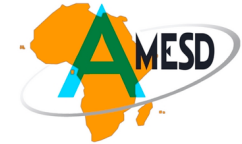
- Recherche scientifique pour le développement avec les pays du Sud
- Fonction d'Agence de la recherche pour le développement depuis 2006 : ensemblier de la Recherche française pour le développement à l'échelle internationale, capacité de co-financements
- Expérience de plus de 50 ans de la recherche en Afrique sur les thématiques d'AMESD
- Représentations permanentes dans les pays Africains en Afrique Francophone et Anglophones
- Partenaires de programmes, projets et réseaux
- Possibilité d'affectation de personnels (statuts reconnues par les pays dans le cadre des accords de coopération), capacité à embaucher des CDD sur ressources extérieures sur place
- Implication dans des projets GMES/GEO (LIMES, GSE Forest Monitoring), GEO/GEOSS, GEO-NET-CAB, ...)
- Implication dans des projets en Afrique : AMMA/UE, HYCOS/WMO, gestion eau Afrique/mandat NEPAD, Roselt/OSS, formation AMMAnet/MAE/FSP, Zambeze River/FFEM, IWMI/Limpopo, ORE HYBAM, ...
- Implication dans des programme de gestion de réseaux hydrologiques et bassins versants du Niger, Sénégal, ...
- Production de données/indicateurs/EO pour la gestion durable des ressources et la mise en place d'observatoire de l'env. pour le développement



■ IRD

- Réseau des IRD représentations IRD en Afrique de l'Ouest, de l'Est, du Sud
- Equipes IRD impliquées dans AMESD
 - Unité ESPACE coordination, indicateurs environnement par satellite, approche spatiale et intégrée (littoral, désertification, eau), observatoires spatiaux, gestion de production de données spatiales (réseau Seasnet, bande X SPOT/ENVISAT)
 - UMR LMTG, UMR G-EAU (Niger, Sénégal), HSM (Niger, Afrique Centrale), LMTG (Congo), IFR ILEE « Eau et Env » 500 pers : gestion intégrée de l'eau
 - UMR LTHE (AMMA) impact du climat en Afrique de l'Ouest
 - Unité EME, approche écosystémique des pêches/ressources halieutiques
- Formation dans les pays du Sud (département DSF) : appui à la création d'équipes en Afrique, thèses et postdoc (40 bourses par an)
- Références de l'IRD sur des grands projets :
 - AMMA : mousson africaine (40 partenaires, 30 M€)
 - ROSELT : opérateur IRD/OSS désertification, réseau d'observatoires opérationnels (11 pays Africains)
 - Formation en Afrique (AMMANet, 400 chercheurs Africains, FSP/AFD), projet RIPIECSA, MAE/FSP (Recherche interdisciplinaire et participative sur les interactions entre les écosystèmes, le climat et les sociétés d'Afrique de l'Ouest)
 - Gestion durable des ressources halieutiques (FEDER/Europe)

SEASnet project

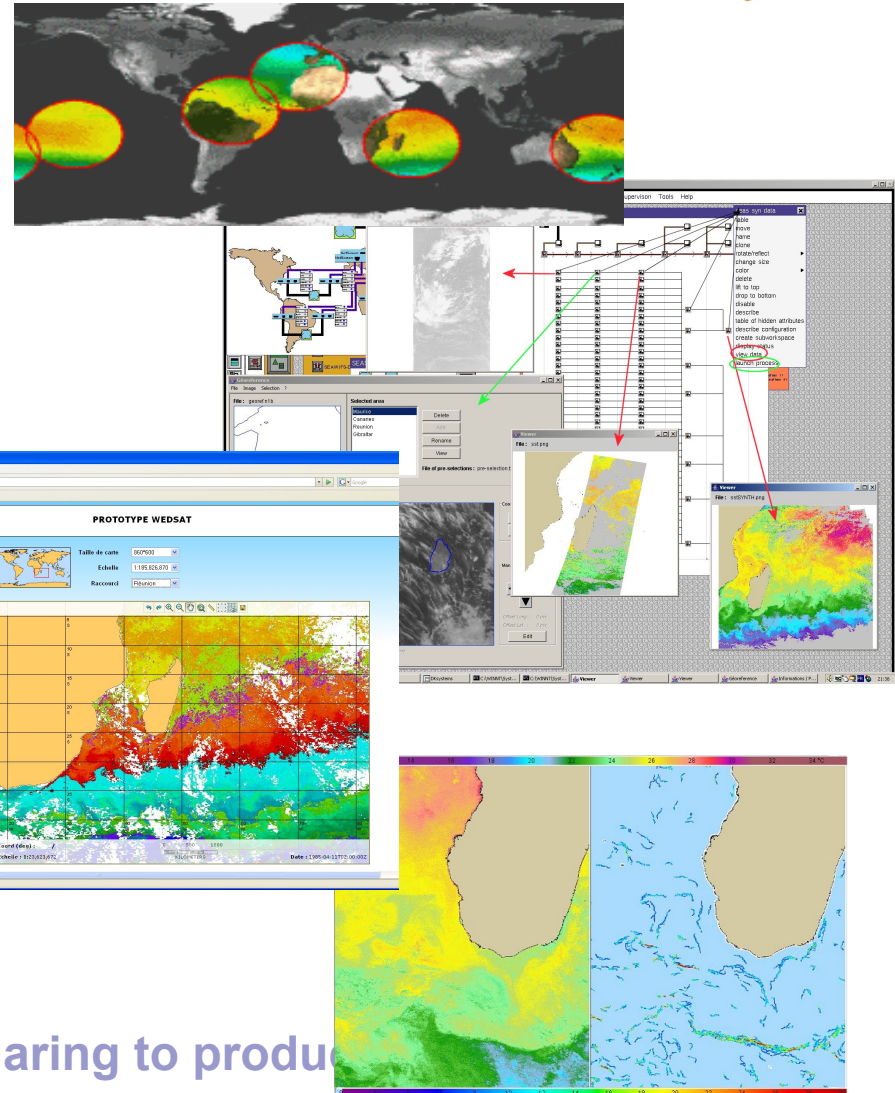


- A regional network based on 5 receiving stations (L-Band : NOAA-AVHRR, Seawifs) to survey the intertropical regions
- A partnership with France (IRD), Spain (Canaria Univ.) and institutions in developing countries

Specificity :

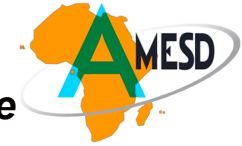
- Independent data sources
- Control data sets quality
- Observation on long-term
- Genericity in methodology
- Participative way (users, managers and scientists) to develop long term applications

Spatial data, tools and knowledges sharing to produce



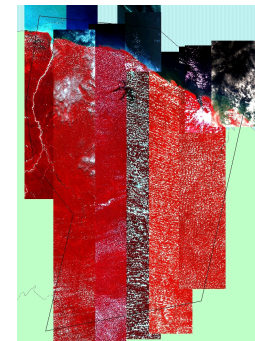
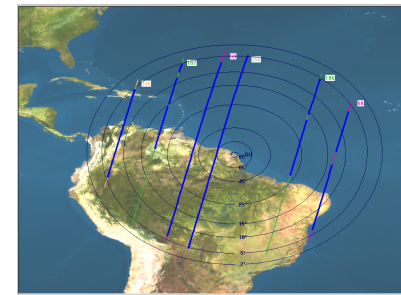
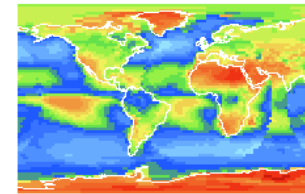
SEAS-Guyane

SEAS Guyane project : Survey of the Environment Assisted by Satellite



Ground receiving station for high resolution remote sensing applications
Technological plate-form for acquisition and treatments of space datas (SPOT, ENVISAT, ...)
for resarch, formation and regional development projects

A long term project to develop regional capacities to built regional environmental observatories



JOURNÉE



GN



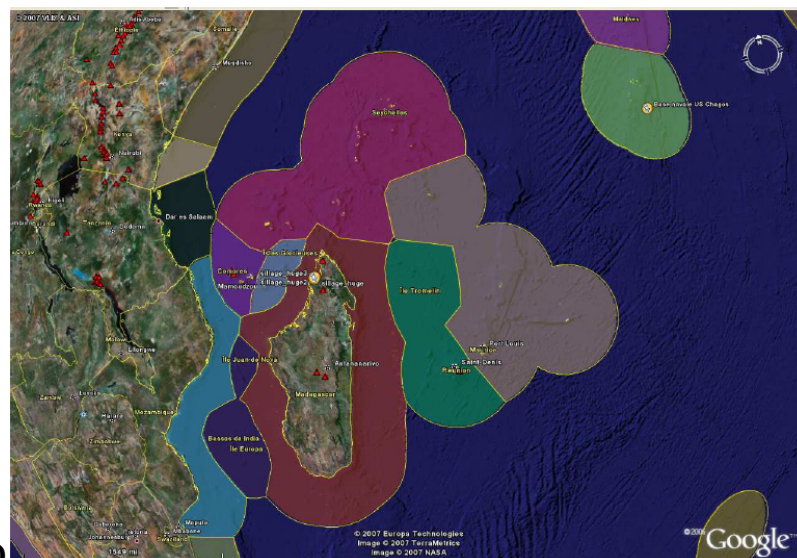
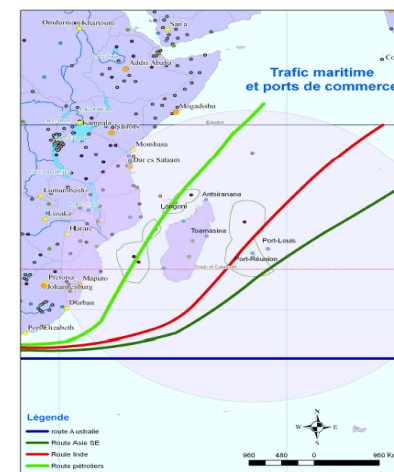
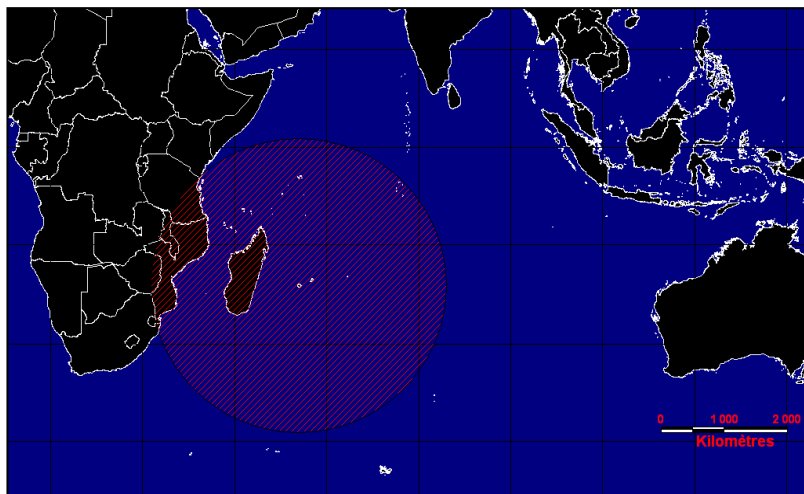
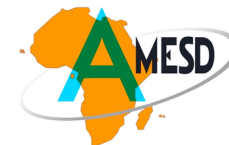
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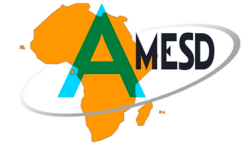


10 NÎMES

22

SEAS OI : project





www.project-mdweb.org

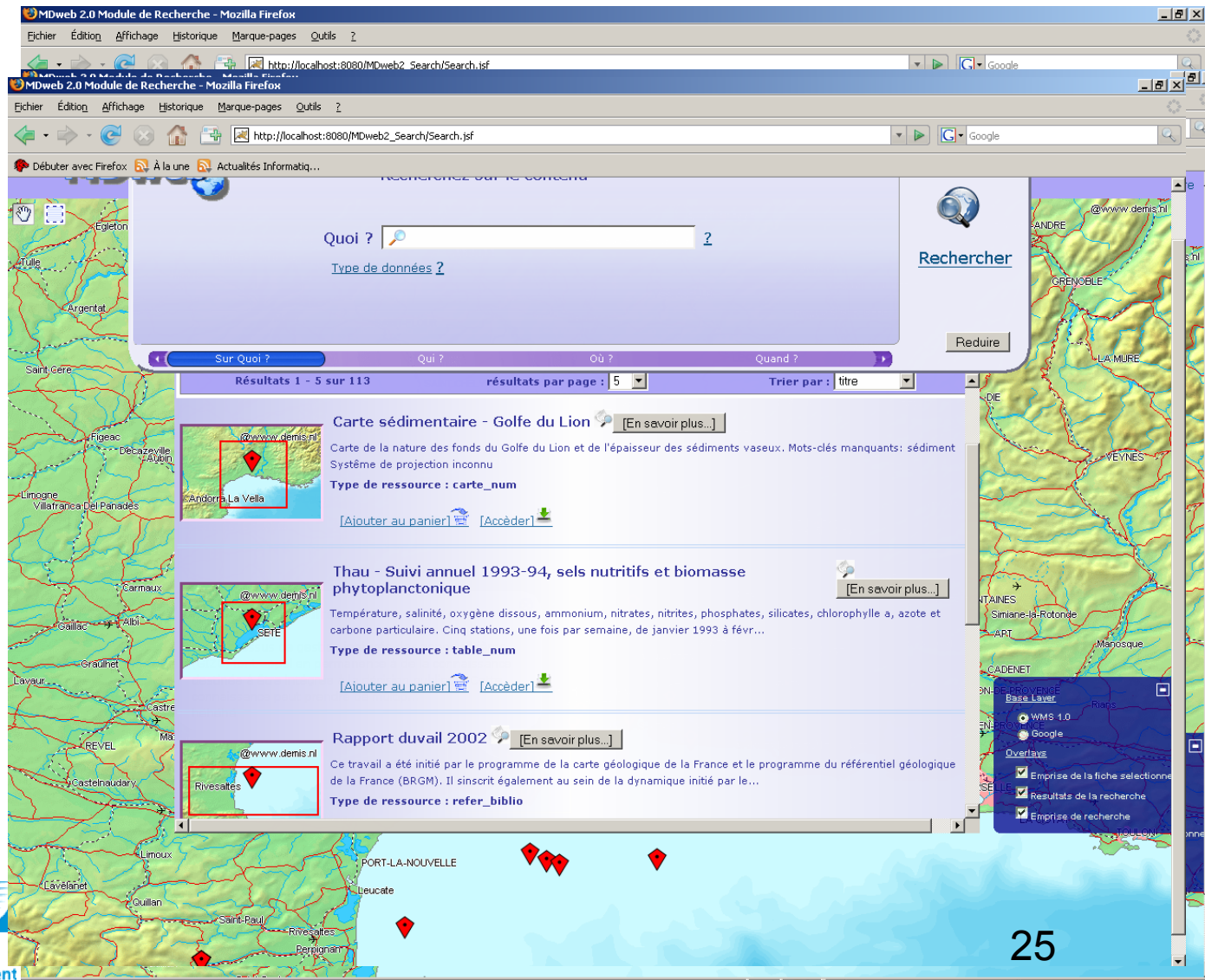
A generic spatial search engine for
sustainable development purposes

A contribution to build portal

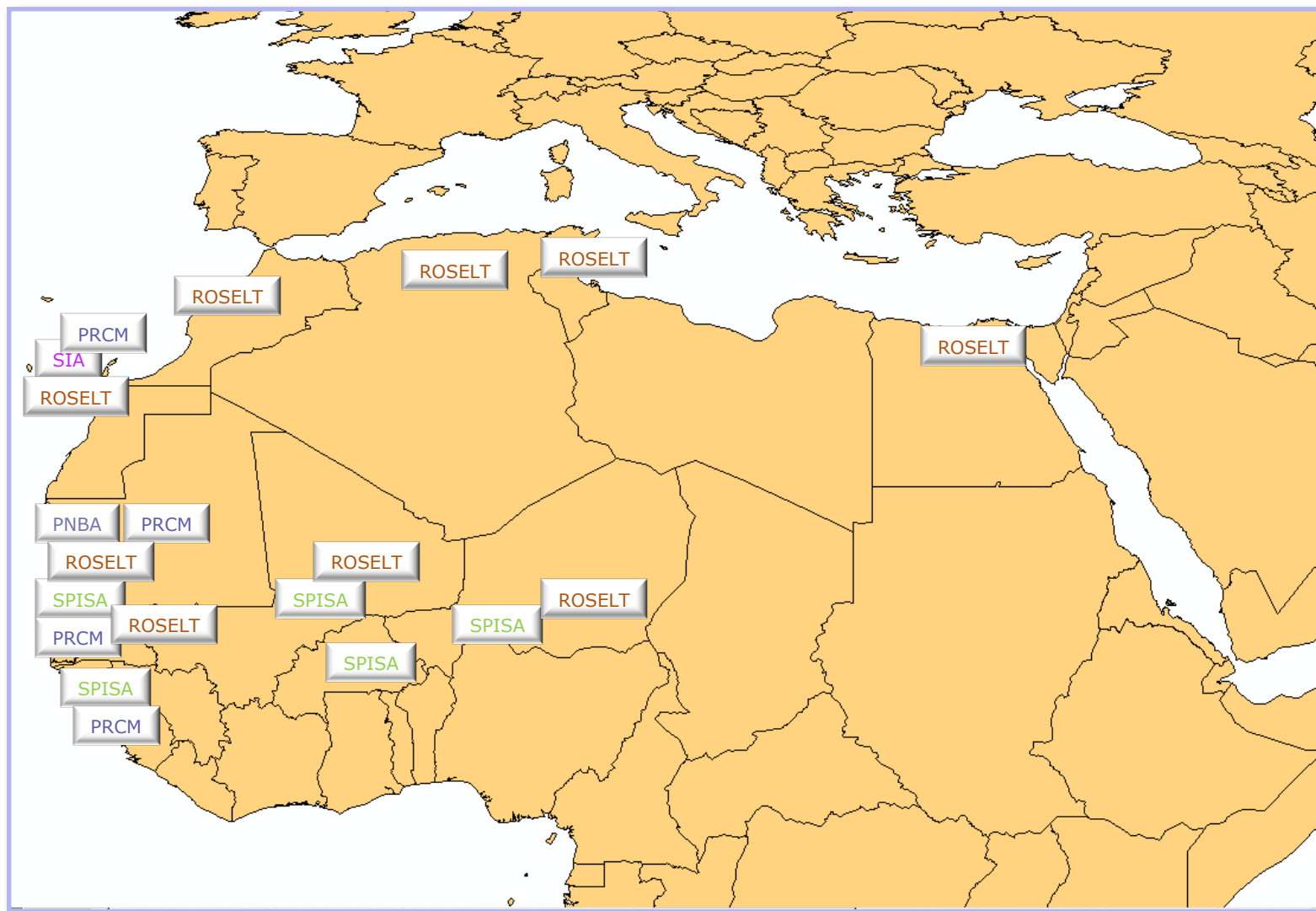
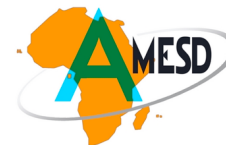


JOURNÉES AMESD GME 26 ET 27 JANVIER 2010 NÎMES²⁴

Some screen shot of spatial search engine



Various data sharing projects in Africa, South America



ROSELT

PRCM

SPISA

SIA

PNBA



Institut de recherche
pour le développement

GEO Network for Capacity Building (GEONetCab)



GEONetCab workflow



Abstract

The purpose of the GEO Network for Capacity Building (GEONetCab) project is to create the conditions for the improvement and increase of the GEO capacity building activities and framework, with special emphasis on developing countries, new EU member states (and EU neighbouring states) and climate monitoring and will serve the bigger goal of improved effectiveness and efficiency of GEO capacity building for application in the GEO societal benefit areas. Coinciding with this purpose, successful brokerage with (potential) clients for earth observation products and services will be facilitated.

The project will deliver the following output:

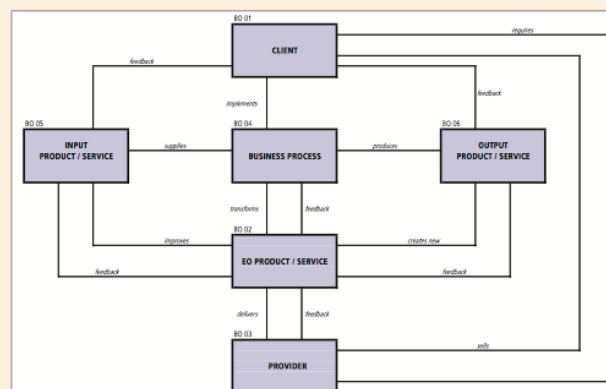
1. Capacity building needs in earth observation are identified (at a generic and global level, but with emphasis on the target regions).
2. Specifications for earth observation capacity building are described.
3. Resource providers are identified.
4. Sustainable brokerage between stakeholders (including resource providers) is established.
5. A mechanism to facilitate cooperation between stakeholders and providers is established.
6. A global base of technical expertise for education and training in earth observation is established (with emphasis on developing countries, new EU member states and climate monitoring).
7. Monitoring and evaluation mechanisms for determining the efficacy of GEO capacity building efforts are established.

To achieve maximum impact demonstration projects will be carried out in Southern Africa, the French-speaking African region, Czech Republic and Poland, with spin-offs to EU neighbouring countries and Latin America and Asia. The project (with a duration of three years) will be carried out by a strong consortium of partners from the Netherlands, France, South Africa, Morocco, Czech Republic and Poland, supervised by an advisory board with worldwide representation and strong connections to GEO.

Project partners

Beneficiary Number	Beneficiary name	Beneficiary short name	Country
1 (coordinator)	International Institute for Geo-Information Science and Earth Observation	ITC	Netherlands
2	Centre National d'Etudes Spatiales	CNES	France
3	L'Institut de Recherche pour le Développement	IRD	France
4	Space Research Centre of the Polish Academy of Science	SRP	Poland
5	Charles University	CU	Czech Republic
6	Council for Scientific and Industrial Research	CSIR	South Africa
7	Regional Centre for Space and Technology	CRASTE-GT	Morocco
8	Umoet Africa Pty Ltd	UMVOTO	South Africa

Business model earth observations products and services - general concept



For more information:

Mark Noort

International Institute for Geo-Information Science and Earth Observation (ITC)
PO Box 6, 7500 AA Enschede, the Netherlands
Phone +31(0)53 4874 221, Telefax +31(0)53 4874 436
E-mail m.noort@itc.nl, Internet <http://www.itc.nl>

Supported by the European Commission

Framework Programme Theme ENV-2009-1

Environment (incl. Climate Change)

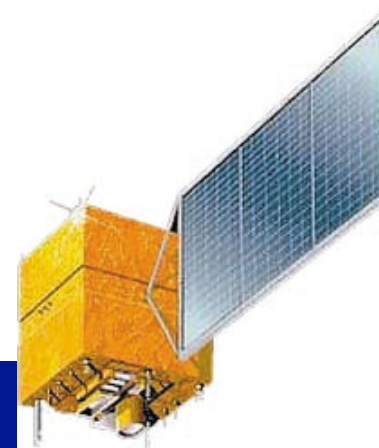
Coordination and Support Actions

Expected duration: October 2009 – September 2012



seas
GABON

Coopération Tripartite Gabon-France-Brésil



Le Spatial au Service de la Gestion Durable des Forêts en Afrique Centrale

