EARSC

European Association
of Remote Sensing
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GMES Global Land Meeting

António Rodrigues de Sousa, Board Director

12-13th December 2011, Lisbon

What is EARSC?

○ EARSC is a non-profit-making organisation created in 1989 as the voice of the European geo-information EO service industry

○ Mission & objectives:

   ○ to foster the development of the European Geo-Information Service Industry

   ○ to stimulate a sustainable market for Geo-information services using EO data, openly accessible to all members

○ Today EARSC has 70 members in more than 22 countries, and is a recognized association worldwide

○ Represents European geo-information providers creating a sustainable network between industry, decision makers and users

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What does EARSC do?

- To achieve our mission, we focus on:
    - Improving customer awareness and acceptance of Earth observation and remote sensing based solutions
    - Improving market access for our members
    - Promoting our members capabilities
    - Engaging with key organisations (ESA, the EC and others) to make the EO VA sector's views known and acted upon.

- EARSC works with many partners to achieve these goals.

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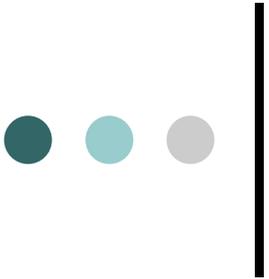
Strengths of the European EO industry

- Large experience providing information based on RS data to government, industry and the citizen
- Mastery of space-borne/airborne/in-situ systems and sensors technologies
- Strong and demonstrated capability in export services
- Innovative sector developing new services and approach to markets
  - GMES: new land services, for example
    - Land accounting
    - Forest management

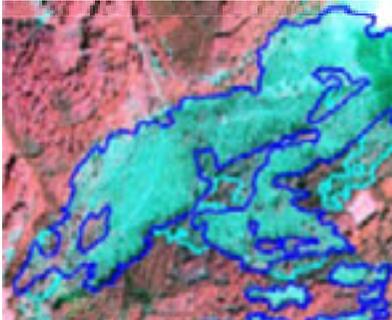# Downstream potential: Land Accounting System (croplands extension)
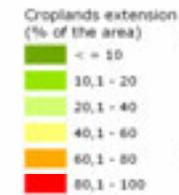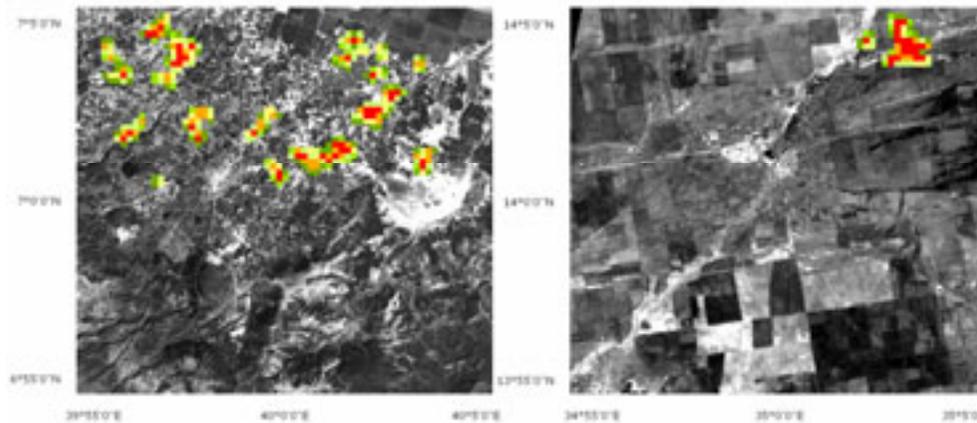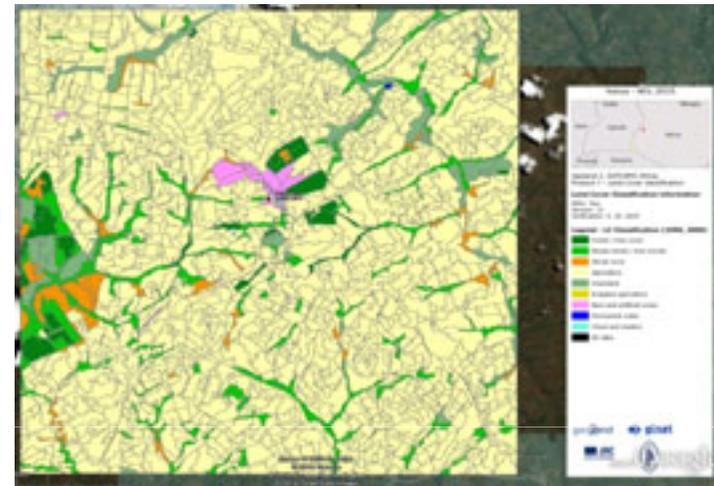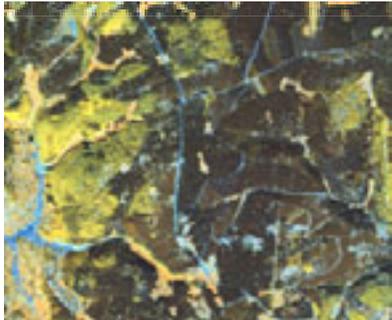
Forest structure and damage

Rapid assessment of storm damages	Exact assessment of storm damages	Monitoring of Insect infested damages
• Provision of Results within 7 to 10 days after storm event • MMU < 3ha • Accuracy > 90%	• Provision of Results within 2 to 3 months after storm event • MMU < 0.3 ha • Accuracy > 90%	• Continuous Monitoring during bark beetle season (May - August/Sept.) • Damaged Trees • Accuracy > 80%
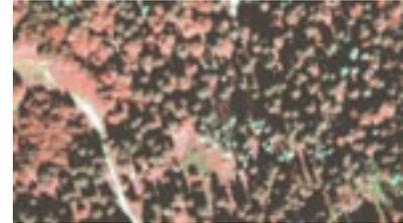
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EARSC and GMES

- EO Services industry can bring maximum economic benefit to Europe from the GMES programme by exploiting GMES Core services into new areas:

  - opportunities using GMES products & services in commercial sectors

  - Export of GMES products & services

  - Develop efficient and innovative downstream products & services for EU public customers (and others).

- Hence, EARSC has a strong interest in the way GMES will be implemented:

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GMES derived products for commercial customer

- **Day- & night-time population distribution for spatial planning**
  - Customer: Russian Telecom

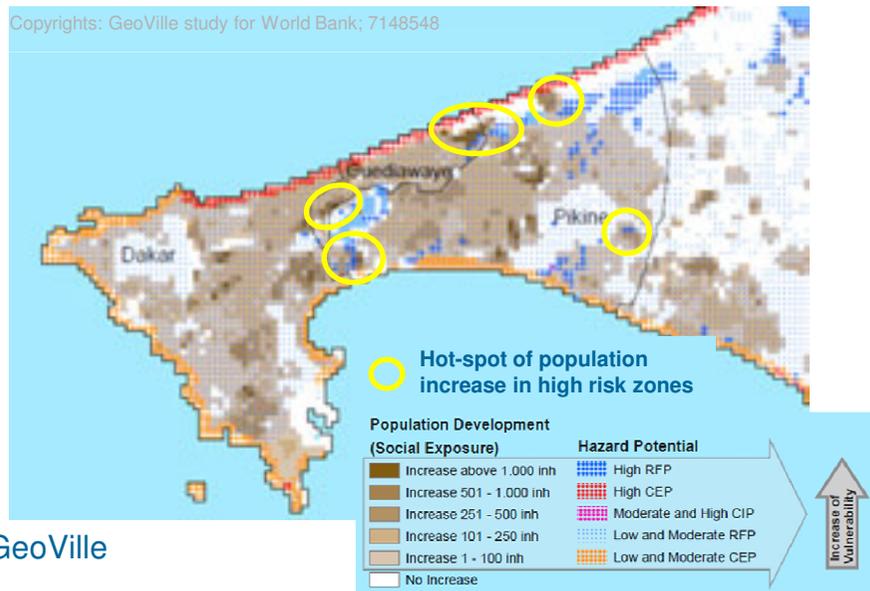| Population	
	> 0 to 10
	> 10 to 20
	> 20 to 50
	> 50 to 100
	> 100
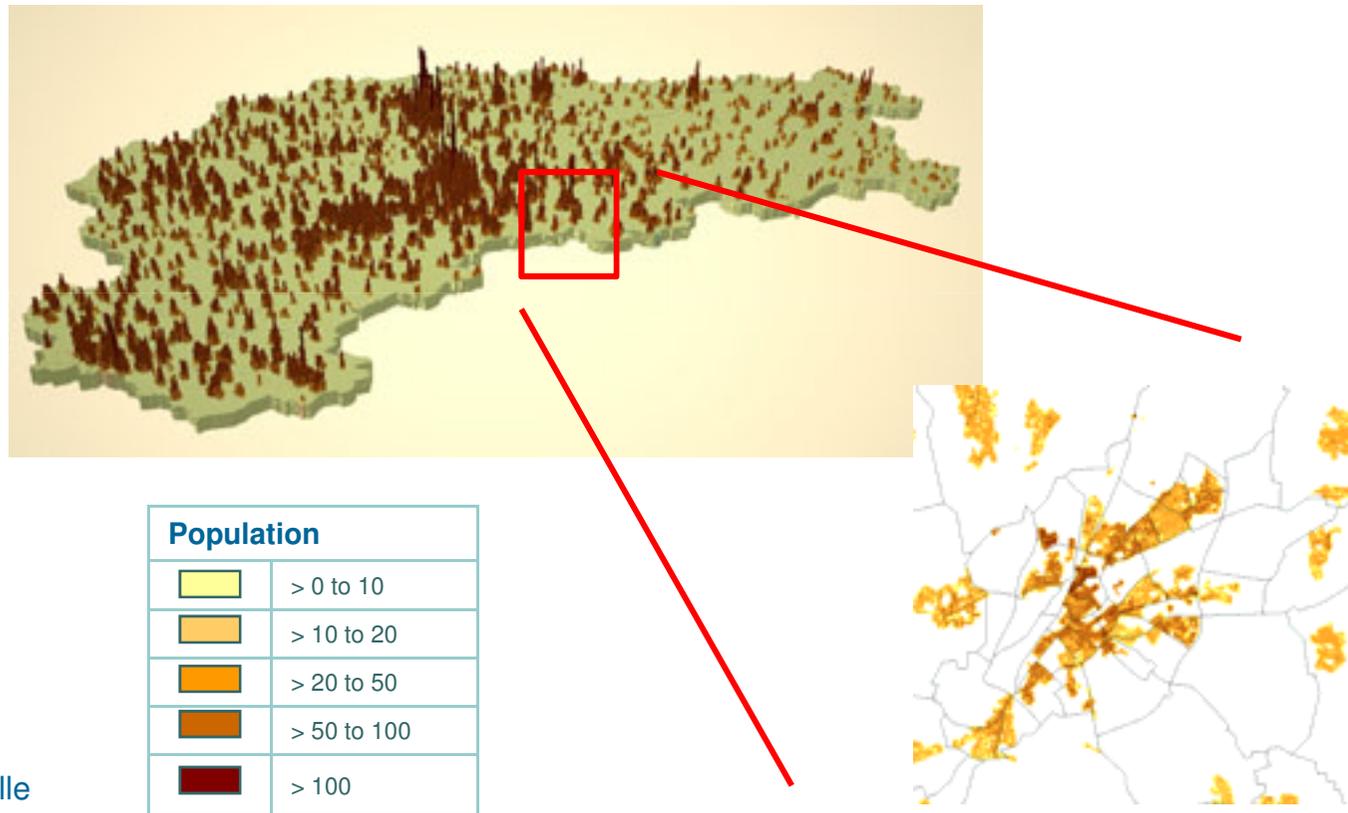
Copyright: GeoVille

GMES products for export customer

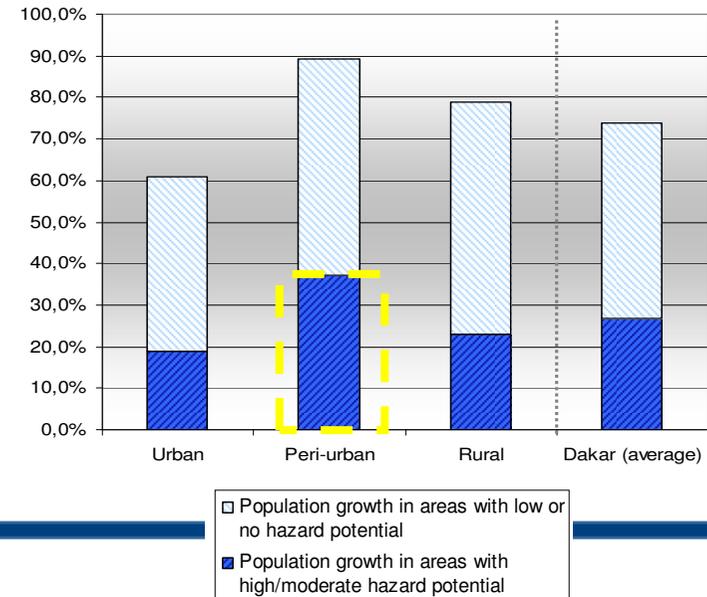- **Preparing African cities to counter climate change**
  - Customer: World Bank

Hot-spots of social vulnerabilty since 1999

Copyrights: GeoVille study for World Bank; 7148548

Guediawaye

Dakar

Pikine

○ Hot-spot of population increase in high risk zones

Population Development (Social Exposure)
- Increase above 1.000 inh
- Increase 501 - 1.000 inh
- Increase 251 - 500 inh
- Increase 101 - 250 inh
- Increase 1 - 100 inh
- No Increase

Hazard Potential
- High RFP
- High CEP
- Moderate and High CIP
- Low and Moderate RFP
- Low and Moderate CEP

Increase of Vulnerability

Copyright: GeoVille

Copyright: World Bank, GeoVille

Population growth 1988-2008 in risk zones

| Urban | Peri-urban | Rural | Dakar (average) |

- ☐ Population growth in areas with low or no hazard potential
- ■ Population growth in areas with high/moderate hazard potential
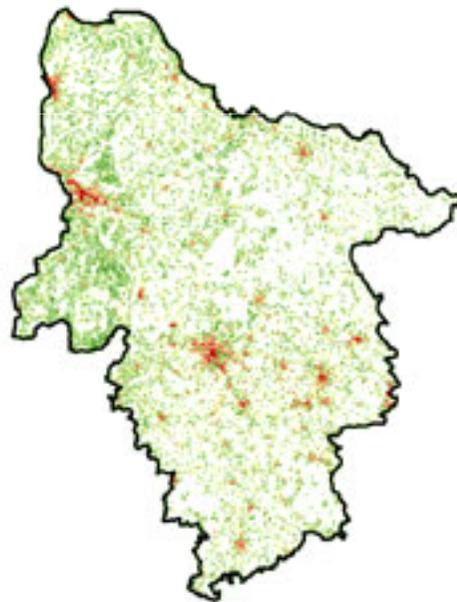
Downstream product for EU public customer

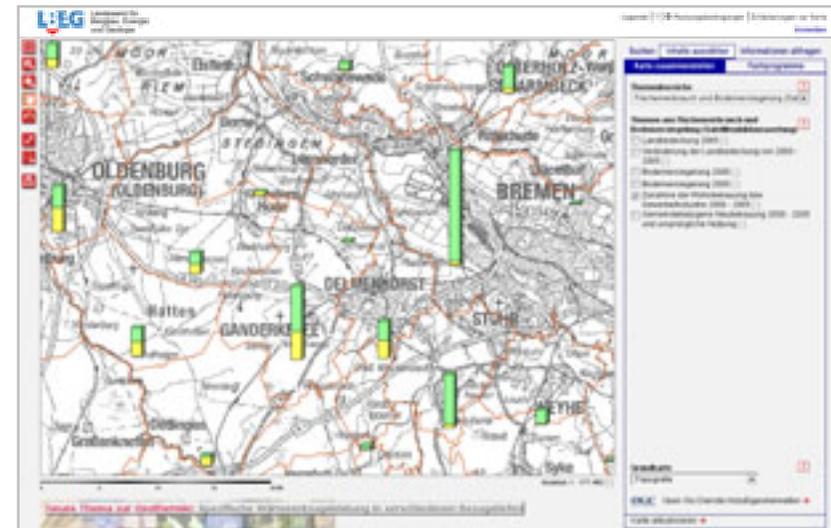○ **Land take maps of urban areas and soil sealing**

  ● Customer: LBEG Lower Saxony / Germany

Land take map & soil sealing

Growth of residential and
industrial/commercial areas 2000-2005

Copyright: GeoVille

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EARSC and GMES

- EO Services industry can bring maximum economic benefit to Europe from the GMES programme.

- Hence, EARSC has a strong interest in the way GMES will be implemented:
    - Clarity in the market for GMES products and services; how will they be procured? Where will budgets be placed?
    - Clearly defined and understood responsibilities in the public and private sectors.
    - Clear data Policy

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EARSC and GMES Data Policy

- Raw data from Sentinels should be free and open.

- Data from commercial satellite operators should be procured under appropriate license conditions.

- Core services to be freely and unconditionally available to all users and downstream partners.

- Downstream services should be procured commercially on a fair and competitive basis.

- A registration system for GMES users should be put in place to ensure that basic quality conditions are met and licensing conditions are respected as well as achieving fair competition on the international market.

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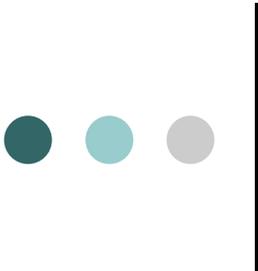
EARSC and GMES Data Policy Recommendations

- An industrial viewpoint must be part of the decision making regarding the overview, management and evolution of GMES. For example, a GMES Services Supplier Group could be established alongside the GMES User Group so as to provide a platform for this exchange.

- A comprehensive governance arrangement for GMES should be put in place as early as possible. Recognising the difficulties to achieve this, an interim governance structure is suggested to be put in place in 2012 with a permanent structure to follow.

- A budget for GMES should be established as soon as possible within the Multi-annual Financial Framework including sufficient funding to ensure the development and supply of the GMES products. Funds should also be made available to support future research needs into new and innovative products and services.

- A registration scheme for GMES data and products must be put in place and covered by European legislation.
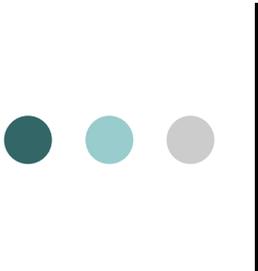
Tendering recommendations for operational GMES services

- Follow best practice recommendations regarding the weighing ratio of 60% - 80% on quality versus price

- A-priori detailed definition of technical specification and quality criteria as well as the quality control method is required in order to ensure unambiguous criteria for result acceptance.

- In the framework of GMES it should be made sure that SMEs have the chance to participate toEuropean tenders with a fair share for SME policy reasons (Small Business Act)

- To ensure the quality and reliability of the service provides warranty and liability conditions are a prerequisite for operational GMES procurement contracts.

- The most appropriate tendering mechanism is put in place depending on the nature of the service and its scope, taking into account criteria such as quality, efficiency and value for money.

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Develop the Downstream Sector

Recent Reports from Booz and Co and ESPI have highlighted the need for policy makers to give more support to the downstream sector:

- Enhance financial instruments stimulating the development of innovative downstream Applications (ESPI)
- Increase the development of user applications and services. (ESPI)
- Ensure data harmonisation and standardisation. (ESPI)
- A key part of realising the potential of the industrial policy goals of GMES is to facilitate the development of a commercial downstream sector of service providers and applications using data supplied through GMES (Booz)
- a commercial strategy should be developed for downstream sector development (Booz).

- EARSC looks forward to working with the policy makers to develop the strategy for exploiting GMES through downstream services.

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The European private service industry as partner in the operational GMES programme:

must play a leading role on the European and global market for GMES-derived geo-information products to:

• ensure that GMES services and downstream services will be user-driven and compliant with user needs and
• ensure the maximum economic benefit for Europe

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The European Service Industry offers strong assets to support GMES services

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