

# Geospatial Sciences for Sustainable Development in Africa

**Global Dialogue on Emerging Science and  
Technology (GDEST) 2008**

**Cape Town, South Africa,  
17-19 March 2008**





# The GDEST meeting

- 98 Participants from 15 countries
- 41 oral presentations
- 5 panels
- 14 poster presentations
- 4 tea breaks, one still to come!
- 3 lunches, 2 dinners (1 for rapporteurs)
- Large number of interactions!

# The GDEST meeting

- 3 main types of contributed papers:
  - National position/status papers
  - Applications of geo-information and geo-information technologies
  - Policy/organisational papers

# The GDEST meeting

- Re-invigorating collaboration between the USA and African countries in the field of geo-spatial sciences
- Questions:
  - What are the high potential areas for engagement?
  - Have we progressed since WSSD in bridging the digital divide?
  - What strategies have been successful in developing SDI?
  - What are the obstacles to using geo-spatial tools in operational support?

# Discussion: where are we?

- Applications of geo-information and geo-information technologies abound
- Applications go beyond mapping - to presenting information in format that demands response
- Constraints:
  - There is capability, but inadequate capacity
  - Co-ordination of activities
  - Access to data

# Discussion:

## do we have data?

- *Yes*
- *No*
- *Definitely*
- *Maybe it works for this, but it doesn't work for that*
- *When there's no cloud cover*
- *When there's no power outage ('load shedding')*
- *All of the above!*

# Discussion:

## do we have data?

- *Is there a sound if a tree falls in the forest  
...and there's nobody to hear it?*
- *Data exist –*
  - *But their existence may not be known*
  - *They may not be made available by those who  
'control' the data to other potential users*
  - *They may not be fit for purpose*

# Where do we want to be?

- We want the 'go-go' scenario!
- *Gogo* (grandmother - isiZulu) needs to understand how we make a difference!
- Have sustainable critical mass of African expertise to harness geo-information for sustainable development
- Access to data:
  - Remotely sensed data and derived information
  - Appropriate resolution RS data
  - Geo-referenced demographic and socio-economic data

# Where do we want to be?

- Ability (infrastructure) to use data effectively
- Measurement of outcomes
- Definition and communication of impacts
- Successful engagement with decision-makers
  - At outset of projects, to ensure adequate resourcing
  - On conclusion of projects, to communicate findings and their implications

# How do we get there?

- Begin with what we have (“*don’t dilute, don’t duplicate*”) at national, sub-regional, regional, global (GSDI, GEO) scales
- Interventions/projects undertaken should take cognisance of needs of African countries, e.g.
  - There should be plans for preservation and/or maintenance of data after the project ends
  - Decision-making by consensus
  - There should be local sensitivity, such as reporting back to communities involved in studies

# How do we get there?

- The needs of the users of the information/systems developed must frame our initiatives
- Capacitating local government/communities is important for sustainable development
- Universities are the appropriate vehicles for human capacity development in collaborative programmes

# Recommended actions -1

- Continue dialogue, review progress and bring other partners into discussion at the following fora:
  - AAG meeting – April 2008
  - ESRI User conference – August 2008
  - AARSE '08 – Ghana, October 2008
  - IGARSS '09 – South Africa, July 2009
  - AfricaGIS '09– Uganda, October/November 2009

# Recommended actions - 2

- Fund face-to-face networking at national, sub-regional and regional levels for sharing of information, experience, co-operation and co-ordination - through linking networking opportunities with training interventions
- Training required in communication skills

# Advertorial:

- There will be a keynote address at AfricaGIS '09 on Communicating the Use of Geo-information

# Recommended actions -3

- Build on what exists (I):
  - Recognise African human capital in designing projects/programmes
  - Utilise African *networks of excellence* (AARSE, AGIRN, EIS-AFRICA, University networks, e.g. UNEDRA)

# Recommended actions - 4

- Build on what exists (II):
  - Use existing *platforms* for dialogue, information sharing and communication (AARSE conference, AfricaGIS)
  - Support collaborative African *projects* (African Resource Management satellite constellation, Mapping Africa for Africa, AFREF)

# Recommended actions - 5

- Compile and maintain an inventory of geo-information initiatives in Africa
  - Develop case studies of successes and failures
- Implement the third phase of Mapping Africa for Africa – the sub-national picture
  - Bring geo-referenced demographic and socio-economic data into the picture - ‘Measuring Africa for Africa’
    - Assess what is available and understand the challenges to these data becoming widely available
    - Identify interventions needed (e.g. capacity building, policy formulation, infrastructural needs)

# Recommended actions - 6

- Develop sustainable mechanisms for the supply of high resolution RS data to mapping agencies
- Strengthen the regional centres (e.g. RCMRD, RECTAS)
- Support AARSE's ongoing initiative establishing the African Journal of Geo-information

# Recommended actions - 7

- Strengthen universities in relation to building and sustaining capacity
  - Infrastructure to enable training to be provided in-country
  - Assist university teachers to obtain higher degrees
  - Curriculum development and modernisation
  - Sandwich programmes for graduate students and mid-career professionals

# Proceeding from this meeting

- Papers presented to be distributed as-is to participants
- Identify mentors, to partner younger professionals in publishing papers
- Review paper to be published in journal (e.g. South African Journal of Science)

To borrow from

- and build on -

Dr Fedoroff's closing remarks:

- *"We have much..."*
- *"We have much to learn..."*
- *"We have much to learn from each other"*

# Thank you!

- Not the end...
- *...volunteers, more specific goals and milestones, comments please?*