

Santiago Borrero (Colombia) welcomed delegates.

Nick Land (EuroGeographics) presented the paper “Building Europe’s Spatial Data Infrastructure (ESDI)”

ESDI is required by both private and public bodies. There need to be more imaginative uses of data held at national levels. What is needed at the European level, and to what quality?

Pricing (and especially licensing) is the key to success. Some changes may be needed to national policies. There is an increasing need to be transparent. Estimates suggest that an investment of 2-300 Euros annually would bring a benefit of 300-1,000 Euros.

Ian Masser (GSDI Association) presented the paper “Global Spatial Data Infrastructure (GSDI): At the crossroads, moving forward”

The evolution of GSDI was outlined. GSDI coordinates the actions through awareness and implementation of policies, standards and other mechanisms. GSDI’s structure is changing, and a strategic plan is being introduced to focus on: awareness of infrastructure issues; SDI research; capacity building; fund raising.

David Maguire (ESRI, USA) presented the paper “The impact of global change on the future of National Mapping Agencies”

He also listed ten statements not in the paper to generate discussion:

- Change and Uncertainty is the norm
- A GIS is primarily and Information system
- IT/IS is driven by hardware improvements
- The geographic database is the core of the GIS and the NMAs
- “All” technology exists today to satisfy NMA’s needs.
- GIS portals are vital
- The net is key to the NMAs futures – but not in the ways they may think !
- Standards, while important, should not be elitist
- The perceived value of data and information will change
- Geography on demand will be of great importance.

Fraser Taylor (International steering committee for global mapping) presented the paper “The international map of the world and global map: will history repeat itself?”

Maps can help to integrate international development and technology.

The first attempt to create a world map occurred in 1891, but slowly failed as the USA dropped out, war and UN finally withdrew funding in 1986.

GlobalMap, the latest attempt has resulted in 18 countries being completed – with some unexpected names. Global Map is not just a product, but also a process.

Developing countries need to do some of the work (and so build their own capacity). Global Map taps into environment and sustainable development.

John Latham (FAO) presented the paper “Strategies for harmonised land cover mapping and monitoring – AFRICOVER and beyond”

Land cover data is essential as it is the most important descriptor of the environment; most readily detectable signs of human impact; changes rapidly – so needs to be monitored. It provides the basic information for geographical analysis and is used by multiple disciplines.

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AFRICOVER aims to produce a digital database of land cover at a scale of 1:250,000. there are 70,000 possible classifications which are allocated using an algorithm. The Land cover classification scheme will be submitted to ISO for use as a draft international standard. To date, 1/3 of Africa has been covered at a cost of \$1.1 per square kilometre. 78 people have been trained and have gained new skills. The project is producing comparable statistics across countries for the first time.

Discussion

To start the discussion, **Santiago Borrero (Colombia)** asked delegates whether they agreed with David Maguire's view that "NMAs have to make the transition from government department to commercial business to survive"

Irwin Itzkovitch (Canada) commented that much of NMA's output is concerned with public policy and has political implications that would preclude the use of commercial companies to create that output.

David Maguire (ESRI) replied that in his paper he defines the NMA in different ways and that such a transition to a commercial organisation does not mean that it could not retain a more public/policy orientated role.

Don Grant (New Zealand) asked if NMA's should, therefore, limit themselves to a policy only role and divest themselves of any commercial function ?

Ian Masser (GSDI) answered that it did depend a great deal on how you define a NMA – although they may ultimately own the data and provide it for policy that does not mean they need to collect the data in the first place – some mapping functions could be contracted out.

Bas Kok (Netherlands)

1. How does the data policy of INSPIRE fit with reuse of information by private companies

Nick Land replied that he saw a conflict between the ethos of INSPIRE, that the information should be made free of charge, and the Public Sector Directive which indicates that information could be made free of charge or a charge could be applied – an argument that still needs to be resolved.

2. Is there any paragraph in INSPIRE on dissemination of data to citizens – how can citizens use access the information?

Nick Land replied that it was a key responsibility for INSPIRE to make the information available to the citizen and services were being put in place to do so. There still needs to be the resolution of if the information should be paid for but Nick expressed the view that payment could be made at an organisational level, for instance, so that the information was "free of charge" at the point where the citizen access INSPIRE.

3. What is the specific role of European Commission – and countries - in the process?

Nick Land replied that the EU Commission had been a driving force behind INSPIRE and had helped create the right conditions for it to develop. Member countries got involved in a number of ways such as on working groups, drawing up action plans and in the consultation process, however, the private sector was not involved and maybe they should be.

Mike Turnhill (Oracle UK) commented that INSPIRE is very important; regional initiative is sensible. Concerned about the timing gap between now and 2007. How can short term objectives be set to make progress?

In the IT sphere, the GRID programme may provide a strong framework for INSPIRE

Nick Land replied that although the legal process for adoption is quite long there were many shorter term initiatives to be undertaken that would keep the momentum

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going, such as the Working group for developing an implementation strategy, action plans on metadata, portals and specification.

The work is being funded from existing budgets and therefore this should also help to continue the work whilst adoption was going through. However, there are unresolved issues with regard to ownership and leadership of the project.

With regard to linking with GRID – in practical terms and in the interests of coordination there is no reason why those links should not be made but you have to be careful that you do not give the impression that the two initiatives are the same as it may undermine the reasons for your own existence in other peoples' minds !

Barbara Ryan (USA) Two comments on points in the “All technology to implement NMA work exists now”. What is the role of federal governments?

Perceived value of data will change. All services were built on NMA data. Is it enough to map a country once, and not coordinate maintenance?

David Maguire replied that he believes that technology available today is sufficient; it is the organisational, commercial and political environments and issues that present the biggest stumbling blocks to getting where we want to go. With regard to the perceived value of data he suggested that there were two types;

1. Small/medium scale data and consumer orientated data – these would become widely available and free of charge
- 2.”Professional use “ datasets for scientific, political and socio-economic purposes i.e. for specific use in certain disciplines not mass consumption by the general public – these datasets would need to be managed in a coherent way and government/public sector should take a central role and responsibility for maintaining them.

Furthermore it should be noted that in many countries transportation and utilities have been privatised – is GI so much more important than clean water that it should be ring fenced from the private sector ?

Fraser Taylor commented that if the Global Map initiative was left to the private sector it would never be completed !

Santiago Borrero asked Nick Land that as Eurographics was a virtual mapping agency for Europe was there really a need to have NMA's in Europe?

Nick replied that it was not an aim of INSPIRE to replace the work of NMA's

Derek Clark (South Africa) How can the proliferation of initiatives be minimised – or closely aligned? This is particularly important for developing countries, who are being very stretched.

John Latham replied that the Africover programme had contributed to other initiatives, such as Global Map and so was a good use of resources and reduced duplication of effort. Volunteer contributions had been very important to the process. However, there is no getting away from the fact that harmonising vast datasets is a big task and resource hungry. Also the information collected at 1:1000,000 for Global Map would not be applicable to uses at the national or sub national level, so the data does need to be collected separately – initiatives may not be as overlapping as they might first look. It should also be noted that the information does go back to the contributors, so the results of the resources used are returned to the country that provided them.

Fraser Taylor commented that from his experience trying to coordinate agencies, particularly in international development was a very hard task and that there was duplication of effort and often ineffective coordination especially at the operational

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level. He agreed that there is a need to differentiate between small and larger scale data that would be used for different purposes but urged delegates to remember to collect once and use many times.

Ian Masser commented that he perceives GSDI to be complementary rather than a replication of other initiatives. It also had an important lobbying function as well.

Kate Lance (USA) commented that with so much going on it is difficult to absorb it all, to make the necessary links or even to build on what has gone before; communication is key to ensuring that things deliver.

Hadgu Medhin (Ethiopia): Much of the Africover work was to be done by Africans. What was achieved, in terms of technology transfer; what was the involvement of the regional centre; and what were the costs ?

John Latham replied that the Africover project was explicitly conceived as a regional venture. Some donors did pull away which had a detrimental effect on the regional centres including Ethiopia. However, under new management the regional centre is now engaged fully, staff have been motivated again, full time staff have been trained and some national capacity is being built.

In all some 78 people have received training and each country has produced its own database with in house skills and the custodianship of the database remains with the country, ensuring the continued use of those skills.

Dave Cowen (USA) commented that the Africover work classifications work is vital, linked as it is to food security. Is the UN going to be pre-eminent in terms of moving these things forward at a global level ?

John Latham replied that the UN was not the only contributor to the project – the USA made a great deal of data available for instance. The UN/FAO role is not an implementer but as a supporter - to raise awareness, to advocate and to provide advice on standards, to give technical inputs and to build capacity in countries to help themselves. Such a project as Africover could never be done successfully by the UN alone.

Fraser Taylor commented that the issue is very important. There are at least 30 different UN initiatives relating to GI data. Coordination is very vital and is currently a major challenge. Organisations are bad at coordinating between themselves and there is often no mechanism to bring them together. NMAs have a role as the coordinators of GI data and are in a position to make choices on what is in the nation's best interests.

Santiago Borrero (Colombia) commented that UN has a co-ordinating role pertaining some GSDI components. Member states need to demand new ways, methods and results. ECOSOC may provide a new forum for activities in a similar way to the UN Commission on sustainable development – and asked, should there be a UN commission for GI ?

Qassim Al Ghanim (Qatar) asked why the previous attempts at a Global map failed?

Fraser Taylor replied that the reasons were covered in more depth in the paper, but in brief he believed that in the past NMAs were not interested in making it succeed largely due to then national priorities and geo political factors. Things have changed since then and he believes that there is no conflict now between national interests and international interests as far as Global Map is concerned because of its strong environmental/resource management slant.

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Santiago Borrero (Colombia) asked each member of the panel what the benefits of belonging to their associations would be to an NMAs?

Ian Masser replied that joining an association gives;

- Access to information
- Participation in activities from which they might otherwise be excluded
- Opportunities for networking and joining/ creating discussion groups
- Influence and playing a part in shaping developments

Nick Land replied that there were four main benefits;

- Provide for the exchange of information and the generation of best practice
- A properly established association as a legal framework within which to operate
- An association can keep you informed of what is going on – a global voice
- A single place for others to come to for information, advice, consultation
- Promotes the work of each individual member.

David Maguire declined to reply as he was not representing an association.

Fraser Taylor replied that the benefits were

- Passion and commitment
- Contributing to a global “first “
- Clear goals with positive results and firm deliverables

John Latham replied that the benefits were;

- Access to data
- Ability to contribute to a Standard for Land Cover classification

Santiago Borrero (Colombia) commented that there are many European initiatives and were they well coordinated ?

Nick Land replied that coordination could be improved !

David Cowen (USA) asked why is the Digital Chart of the World not considered as part of the Global Map?

Fraser Taylor replied that he didn't have time to bring it in to his presentation but there was certainly scope for its inclusion.

David Cowen also asked what the source material for Africover is - is it raster or polygonised?

John Latham replied that both were used and sometimes converted from one to the other. Polygonal data provided better accuracy for ground truthing.

Mark de Mulder (USA). Vanessa challenged the conference to understand what it did next. What is the link between NMAs and initiatives described today?

Fraser Taylor replied that the Global Map steering committee was made up of heads of NMAs and would encourage those that have not signed up to do so. The project would not exist without them and was driven by them.

John Latham replied that he did not see any competing interests between the Africover project and the NMAs involved – they are very necessary to the completion of the project.

David Maguire commented that he saw three key challenges for NMA's – these would be the production of three datasets;

A global address file

A global administrative boundaries file

A global street centre line file

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These three would enable GIS to go to the next level.

Santiago Borrero (Colombia) David Maguire commented that portals are vital. How ready is the technology to create global portals? We don't see that GIS data sets are being made available in the developing world.

David Maguire replied that portals would provide that access and that even limited resources can produce very good results. The issues are all solvable – we just need to get organised!

David Cowen (USA) asked the panel that if they had one wish to globalise GI, what would it be?

Nick Land replied that people should change their behaviour !

Ian Masser replied that there should be less emphasis on data creation and more on the users. Data sharing is biggest challenge.

David Maguire replied that it would be to get beyond just the technology and into science of using GI to solve real world problems.

Fraser Taylor wanted Global Map to be complete by 2007- and that it needs NMA help to do it.

John Latham replied that he would wish for improve communication, and to move into a harmonised domain.