Proceedings of the 6th AGILE
April 24th-26th, 2003 – Lyon, France

WHERE TO FIND GI IN EUROPEAN POLICY

Massimo Craglia* and Alessandro Annoni**

*University of Sheffield, gisdata@shef.ac.uk

**Joint Research Centre, alessandro.annoni@jrc.it

The rallying cry that "GI is everywhere" has often been used by the GI community to try and justify specific action in support of GI from the EC, particularly in relation to its Research and development Framework Programmes. The Fifth Framework Programme recently closed funded many projects with a strong GI component and also included a specific Cross Programme Action on GI. In the Sixth Framework Programme which has recently begun, there is no explicit action line on GI, but this should not be a cause of disappointment because the importance of GI is increasingly being recognised by the EC, and there will be may opportunities to undertake research that is both scientifically and policy relevant in this field. To demonstrate the increasing role of GI in support of EU policy, this paper reviews the main areas of policy that have a strong spatial dimension, namely environmental, agricultural, regional, and transport policy, with a particular attention paid not only to the spatial impacts but also to the needs implicitly or explicitly stated in these policies for geographic information to assess needs, formulate policy, monitor its implementation, and evaluate its effectiveness. Whilst not exhaustive, the policy review undertaken in this paper clearly highlights a number of key issues:

- There has been a significant shift in policy at national and EU level during the 1990s away from sectoral approaches and top-down regulatory mechanisms which were manifestly unable to address the increasing complexity and interaction of environmental, economic, and social issues. What has emerged, particularly in the light of increasing environmental concerns, is a more integrated approach to policy where the interactions and cumulative impacts of different policies and actions are assessed ex-ante to increase their effectiveness. This shift to a more integrated, joined-up approach is evident in all the areas of policy analysed.
- Directly flowing from the point above, is the emergence of spatial planning at the regional scale as a powerful framework for analysis, co-ordination of intervention, and evaluation of impacts. The formulation of the European Spatial Development Perspective is most clear embodiment of this approach, but its principles are also present in the other areas of policy analysed. These include for example the requirements for rural development plans, river basin plans, noise management plans, and integrated plans for coastal zone management.
- The regional approach to planning, the increasing recognition of the importance of local issues and local stakeholders, and a tightening of the requirements for monitoring and evaluation, have also increased the importance of more focused interventions, and hence the importance of geographic information to assess needs, target intervention, and monitor effectiveness. The increasing requirement to adopt GIS for policy monitoring and evaluation in fields such as agriculture, and water management are examples of this increasing importance.
- As the need for better monitoring and evaluation in complex environments is recognized, so are the current deficiencies in harmonized, consistent datasets and indicators at the appropriate geographic scale and time series. This is a recurrent theme, and clearly much needs to be done to improve the data framework across

the Union in all policy fields. Data needs can be characterized under three main headings:

- (i) Where EU-wide data for a given administrative level is not available, such as urban level data at NUTS5, to support new policy concerns such as urban policy, although the data might exist locally
- (ii) Where new policies span geographically across different administrative units and require new data collection efforts, for example in the case of the new river basin districts
- (iii) Where the unit of analysis requires new data and methods for its characterization, such as the increasing use of landscape as a geographical entity.

To address these data limitations we are starting to see a major shift in emphasis towards a more decentralized approach to data management, leaving the data at the level at which it can be more easily collected and updated, with an attempt to integrate more cohesively information flows from local to global and vice-versa. Assuring access to such geographic and environmental data becomes in this scheme an absolute pre-requisite. Hence the initiative launched by DG Environment towards the development of an Infrastructure for Spatial Information in Europe (INSPIRE) embedded in Community legislation. The path towards the development and implementation of such initiative is not going to be without challenges, but if it will come to fruition it will constitute a significant milestone in European policy and clearly put GI on the “map” of policy makers across Europe.

The paper is organised as follows: Section 1 introduces the broad trends that are increasingly emphasising a regional approach to EU policy-making. Section 2 to Section 5 review key policy areas such as the environment, agriculture, regional policy, and transport respectively. Section 6 draws the conclusions and highlights some the main implications for research arising from the review. In particular, it suggests the following as worthy of further activity from the GI (but not only) research community:

1. There is a need to increase the flow of disaggregated data from the local level to the European in all the policy domains. This is part of the objectives of INSPIRE but there are research needs on the organizational and institutional mechanisms that facilitate long-term and sustainable data sharing frameworks.
2. There is a need to develop new datasets and indicators for new policy domains such as eEurope, which currently do not exist e.g. internet access, e-business turnover, etc.
3. Research on data policy is clearly a major area that needs to be pursued vigorously as it is currently grossly under-researched. Issues of analytical frameworks and metrics to evaluate the impact and effectiveness of different policy options are of major importance, for example research on the impact of regulation.
4. Need for increased data comparability and interoperability, including web-based visualization and data exploration, and integration from different sources e.g. remotely sensed and administrative data, quantitative and qualitative indicators
5. Agreed methodologies to characterize and analyse territorial units such as landscape are of great importance as we move away from only administrative units of analysis towards functional ones, and change over time becomes of critical importance for impact assessment. This also requires agreed methodologies on how to aggregate data to different flexible geographies, such as river basins, coastal zone management areas, and nature protection areas to put into practice the analytical frameworks identified, as well as better integration of time in spatial databases.

6. Need to develop methodologies to add intelligence to information collected for one purpose so that it can also be used as proxy in another policy area, thus cutting down on the cost of data collection and provide more timely responses to policy needs.

Of course this is only a selection of a larger menu of research requirements, but enough to keep us all busy for a good few years.