
Economic and Social Council

12 June 2013

Committee of Experts on Global Geospatial Information Management

Third session

Cambridge, United Kingdom of Great Britain and Northern Ireland

24-26 July 2013

Item 7 of the provisional agenda*

Legal and policy frameworks, including critical issues related to authoritative data

Legal and policy frameworks, including critical issues related to authoritative data

Report of the Secretariat

Summary

The present paper contains the report on the legal and policy issues to be considered in developing a framework to support global geospatial information management in the public and private sectors, including critical issues related to authoritative data. At its second session, held in August 2012, the Committee of Experts on Global Geospatial Information Management discussed a number of substantive items concerning the need to evolve consistent and transparent policies and laws in areas such as data privacy, licensing, ownership, national security, liability and intellectual property. In its reports on the inventory of issues (E/C.20/2012/5/Add.1) and on future trends in geospatial information management (E/C.20/2012/3/Add.1), the Secretariat specifically identified institutional arrangements and legal and policy frameworks as critical issues to be addressed by the Committee in the coming years. The value of geospatial information is now recognized around the globe, and world leaders are interested in using the data to address such critical global issues as sustainable development and disaster response preparedness. While the geospatial community recognizes that “a location-enabled society” is achievable in terms of the availability of technical tools and methodologies, the legal and policy frameworks required to facilitate the progress of such a society lag far behind. A recent survey prepared by the Committee of Experts, profiling the status of national geospatial information management systems in Member States (see E/C.20/2013/5/Add.1), has provided a comprehensive picture of the impact that legal and policy issues have on geospatial information management in Member States. The results of the survey indicate that policy and legal issues pose a challenge to Governments in their efforts to collect, use and distribute geospatial information. The challenge will become even greater as Governments, the private sector, universities, non-governmental organizations and citizens become increasingly involved as both producers and consumers of geospatial information. The Committee of Experts is invited to take note of the report and to express its views on the way forward in addressing the issue.

* E/C.20/2013/1

I. Introduction

1. At its second session, held in August 2012, the Committee of Experts on Global Geospatial Information Management discussed a number of substantive items concerning the need to evolve consistent and transparent policies and laws in areas such as data privacy, licensing, ownership, national security, liability and intellectual property. Specifically, the Committee considered a report on the inventory of issues that should be addressed by the Committee in the coming years (E/C.20/2012/5/Add.1). Of the nine thematic groups of issues identified, issue two ‘establish best practices in institutional arrangements, legal and common frameworks’ was thought to be one of the most important and immediate to address. A separate report, the future trends in geospatial information management (E/C.20/2012/3/Add.1), identified ‘legal and policy frameworks’ as one of the five main themes and trends requiring attention in the global geospatial information development cycle.

2. In March 2013 a global UN-GGIM questionnaire survey was circulated to profile the status of national geospatial information management systems in Member States (as referenced in document E/C.20/2013/5/Add.1 of this session). As many countries are at different stages of geospatial evolution and maturity in terms of consistent and transparent legal and policy frameworks, a section of the questionnaire, prepared by the Centre for Spatial Law and Policy, included a survey of the impact that legal and policy issues have on global geospatial information management. As of 7 June 2013, approximately sixty Member States had responded to the survey.

3. Due to the specialized nature of this topic, a background paper entitled “Developing a Legal and Policy Framework for Geoinformation Management” was prepared by the Centre for Spatial Law and Policy so that the Committee of Experts may be more informed on the topic and the legal aspects and impacts of geospatial information management. The background paper also elaborates on the survey responses and provides a comprehensive picture of the significant impact that certain legal and policy issues are having on geospatial information management in Member States globally.

4. The Committee of Experts is invited to take note of the report and background paper, and to express its views on the way forward in addressing the legal and policy frameworks for geospatial information management, including critical issues related to authoritative data. Points for discussion and decision are provided in paragraph 14.

II. Legal and policy challenges

5. Geospatial information can play a critical role in spurring economic growth and productivity, enhancing governance and improving a citizen’s quality of life. Now being used by governments, organizations and individuals across the globe geospatial information modeling and analysis provides understanding to complex situations, enabling effective decision making, driving innovation and efficiencies, and underpinning economic growth. The global recognition of the value of accurate and reliable geospatial information has resulted in world leaders wanting to use these data and tools to tackle global issues, including sustainable development. While the geospatial community recognizes that this is technically achievable in a location-enabled society, the legal and policy frameworks required to facilitate the

progress of such a society are not developing in a consistent way and lag far behind technological developments.

6. There are a number of legal and policy challenges that must be addressed by Member States in order to maximize the benefits of geospatial information, while still protecting governments and citizens against potential risks. These challenges have arisen because the legal and policy communities have been unable to keep up with the rapid adoption of geospatial technology and the growth of applications that utilize geospatial information. As a result, governments are struggling to develop a policy and legal framework that addresses the collection, use, visualization, analysis, distribution, storage and retention of geospatial information. Such frameworks will become even more important in the future, as the cost of collecting, using and distributing geospatial information decreases and is used for more critical, real-time decision-making in applications such as intelligent transportation systems, smart grids and smart cities.

7. Some legal and policy challenges can be addressed through specific laws and/or policies that direct government agencies to share geospatial information with other agencies or with their citizens, such as those that mandate the creation of spatial data infrastructures. However, government agencies are typically only one source of geospatial information – industry, citizens, non-governmental organizations and universities are also important sources. Moreover, while directed data sharing policies can facilitate geospatial information management by governments, other legal and policy issues (e.g. privacy, confidentiality, national security, liability concerns) may in practice impede geospatial information management. Most of these issues have arisen due to laws, policies, regulations, court decisions, etc. that are unrelated to geospatial information management. As a result, they often cannot be addressed through a single piece of legislation or a directive.

8. Working through these issues will take time and requires participation of the broader geospatial community within Member States. However, it is critical to address them now as they will become even more complex and difficult as new technologies and applications develop. Because the issues are so varied, addressing them will require more than implementing a single law, policy, and/or a directive. It will require understanding and addressing the full range of policies and laws that impact the collection, use, and distribution of geospatial information.

III. The impact of legal and policy issues

9. At the time of compiling this report, approximately sixty Member States had responded to the questionnaire survey. Results (detailed in the background document submitted by the Centre of Spatial Law and Policy) indicate that legal and policy issues present a material challenge to 70% or more of the governments as they try to collect, use and distribute geospatial information. This challenge will become even greater as governments, the private sector, universities, non-governmental organizations and citizens increasingly become both producers and consumers of geospatial information.

10. The impact of the legal and policy issues can be summarized as follows:

- (a) **Licensing/data sharing agreements:** Abiding by the terms and conditions of the various licensing/data sharing agreements poses a significant challenge for government agencies in geospatial information management. Increasingly geospatial products and services are created using data from

many different sources. Often, each data type will be subject to its own licensing/data sharing agreements, with varying terms, restrictions and conditions. Licensing of geospatial information has become complex in part because of the challenge of protecting intellectual property in a digital world. Determining the extent of intellectual property rights in data is not as straightforward as it is with other types of property. Such uncertainty increases the chance of disputes and lawsuits, particularly as parties recognize the value of geospatial information. Therefore, government agencies are often very cautious with geospatial information in order to avoid litigation.

- (b) **Privacy:** As the collection and use of geospatial information has increased, so have data protection and privacy concerns. Most data protection/privacy laws and regulations were introduced before ‘location-based’ information became widely available. There is a great deal of uncertainty associated with what geospatial information should be protected, how it should be protected and who should be responsible for such protection. This makes it difficult for government agencies. The challenge will be to develop a legal and regulatory framework that addresses the data protection/privacy risks while not making it unnecessarily difficult to collect, use or transfer geospatial information. Such a framework must balance the benefits with the risks associated with improper collection, use or sharing of geospatial information.
- (c) **Data quality and liability:** One of the unique attributes of geospatial data is its versatility; a single data set can be used for a number of different applications. However, the quality of the data (accuracy, timeliness, precision, completeness, etc.) may not be sufficient for all applications. The potential liability issues associated with poor data quality become even more important as geospatial information is used for more critical, and increasingly real-time, decision-making. Unfortunately in most countries the law with respect to liability for data errors, particularly for digital products and services, is not well developed. This creates a great deal of legal uncertainty which has a huge negative impact on the collection, use and distribution of geospatial information by government agencies.
- (d) **Authoritative data:** An important consideration for government agencies with regard to liability is the use of the term “authoritative data” to describe government data. The term “authoritative” has a few different meanings, including: having or proceeding from authority – official; clearly accurate or knowledgeable; or valid or trusted, recognized by an appropriate set of governance entities. In many cases, it is not always clear which definition is intended, or that it may cover the integrity and consistency of the data. This subtle difference could become significant in a geospatial context, as there is not an extensive body of law in many countries with respect to liability associated with errors in information products such as maps and databases. Those cases that do exist tend to be very fact-specific and do not provide broad legal guidance. Recent research suggests that the more the data provider knows that the user is relying on the accuracy of the data, the greater the degree of responsibility the data provider has to ensure the information is accurate. Government agencies that are holding themselves as authoritative sources of data would be advised to review local law to assess their liability exposure for errors in the data, and what protections they have or can take to minimize their exposure.

- (e) **National security:** National security restrictions are also negatively impacting geospatial information management by government agencies. Defence and intelligence agencies world-wide have expressed concerns that certain geospatial information can be used to threaten a nation's security. Therefore, a number of Member States have imposed restrictions on geospatial information for national security reasons. Some have placed resolution restrictions on commercial imaging satellites; some restrict the right of citizens to update non-governmental maps with local knowledge; while others have placed restrictions on mapping activities or the export of geospatial information. A legal and regulatory framework will need to balance the perceived national security risks with the growing economic and societal benefits associated with geospatial technology.

IV. Addressing the legal and policy challenges

11. Legal and policy issues impact geospatial information management at the local, national, and global levels. However, because each nation has its own laws and policies, there is no simple universal solution. Each Member State will need to develop its own legal and policy framework. Logically, these frameworks can, and should, be normalized to a great extent, since geospatial information must be shared across borders to address critical trans-national issues such as sustainable development.

12. In order to improve geospatial information management frameworks, Member States should consider a comprehensive review of the extent to which legal and policy issues impact the collection, use, and distribution of geospatial information within their respective countries. It is important to begin to address these issues now, as they will become more complex as applications involving geospatial information become more common and more stakeholders emerge. Representatives from government, industry, universities and non-governmental organizations should be included in this process, since each group is both a provider and a consumer of the information. The review should include all relevant potential sources including laws, policies, regulations, directives, procedures, court cases, license agreements, international treaties and agreements and even national constitutions.

13. Upon completion of the review, the stakeholders can begin to consider ways to address the issues within each nation's existing legal and policy framework. In some cases this may simply require educating lawmakers, policymakers and lawyers on geospatial technology and the value of geospatial information management so they can make informed decisions and provide sound advice. Some Member States may wish to create new laws and policies, while others may decide to address the issues by clarifying how existing laws and policies will apply to geospatial technologies and/or applications that use geospatial information.

V. Points for discussion

14. The Committee may wish to:

- (a) **Take note of the report and work done by the Centre for Spatial Law and Policy; and**

(b) Express its views on the way forward in addressing the legal and policy frameworks for geospatial information management, including critical issues related to authoritative data.