

The European Union's IPA Programme

# INSPIRATION – Spatial Data Infrastructure in the Western Balkans

Reference N°: 2011/281-381

Project Identification No.  
EuropeAid/130907/C/SER/Multi

## **Regional SDI Legislation Framework Analysis and Recommendation Report (Act. 1.1 and 1.2)**

Final version - March 2013



This project is funded  
by  
the European Union



A project implemented by  
GFA Consulting Group GmbH / con terra /  
Umweltbundesamt / GDI Gisdata

Your contact persons within  
GFA Consulting Group GmbH are

Fritz Kroiss (Team Leader)  
Conrad Graf Hoyos (Project Director)

Annex 10 to the 2<sup>nd</sup> Progress Report

INSPIRATION – Spatial Data Infrastructure  
in the Western Balkans

EuropeAid/130907/C/SER/Multi

# **Regional SDI Legislation Framework Analysis and Recommendation Report**

(Act. 1.1 and 1.2)

Author: Fritz Kroiss

Disclaimer

The content of this publication is the sole responsibility of Fritz Kroiss and can  
in no way be taken to reflect the views of the European Union.

GFA Consulting Group GmbH

Eulenkrugstraße 82  
D-22359 Hamburg, Germany

Phone: +49 (40) 6 03 06 – 175

Fax: +49 (40) 6 03 06 – 179

E-Mail: [Conrad.hoyos@gfa-group.de](mailto:Conrad.hoyos@gfa-group.de)

This project is funded by the European Union

A project implemented by GFA Consulting Group GmbH / conterra / Umweltbundesamt / GDI Gisdata

Publisher for the consortium: GDI Gisdata, Zagreb

Zagreb, december 2013.

## Table of Contents

<b>1</b>	<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>2</b>	<b>REFERENCE TO THE PROJECT TOR AND INTRODUCTION</b>	<b>2</b>
<b>3</b>	<b>CONTEXT, OVERALL STUDY DESIGN AND STUDY OBJECTIVES</b>	<b>3</b>
<b>4</b>	<b>TARGET GROUPS</b>	<b>6</b>
<b>5</b>	<b>APPROACH</b>	<b>7</b>
<b>6</b>	<b>STUDY RESULTS</b>	<b>8</b>
6.1	Overview	8
6.2	Detailed analysis of the current situation of the region in terms of SDI legislation and alignment with the INSPIRE Directive (state of play, Act.1.1)	9
6.2.1	Situation on regional level	10
6.2.2	Albania	11
6.2.3	Bosnia and Herzegovina	12
6.2.4	Croatia	14
6.2.5	Kosovo*	16
6.2.6	The Former Yugoslav Republic of Macedonia	17
6.2.7	Montenegro	18
6.2.8	Serbia	19
6.3	Recommendations regarding updating and further improvement of regional SDI related to the requirements of the INSPIRE Directive and its institutional and organisational set-up (Act. 1.2)	21
6.3.1	Recommendations on the regional level	21
6.3.2	Recommendations on the level of the individual countries	26
<b>7</b>	<b>ANNEX: NATIONAL COUNTRY PROFILES</b>	<b>31</b>

## List of Figures

Figure 1: Overall study design	4
Figure 2: Scenario for a regional cooperation	23
Figure 3: Link between recommendations and the secretariat's tasks	26



# 1 EXECUTIVE SUMMARY

This report provides

- an analysis of the state of play regarding implementation of the legal framework as defined in the INSPIRE Directive,
- a brief analysis of organisational set-up of institutions taking a role in the NSDI of the beneficiary countries,
- an assessment to which extent joint regional NSDI structures exist in the Western Balkans as a region,
- recommendations for the creation of a regional NSDI infrastructure in the sense of cross border services,
- general recommendations for the beneficiaries in their role as individual countries, as a basis for the country reports to be elaborated in 2013.

As regards the assessment to which extent cooperation on regional level exists the “Regional Cooperation on Cadastre and Spatial Data Infrastructure (RCS)” is an excellent starting point but it has not yet developed into a network which has the capacity to build up regional NSDI structures. Although some initiatives in this direction have been taken by individual projects, further political will and support from the countries of the region, as well as donors will be needed to create real added value. Furthermore a network on NSDI issues on university and research level in the Western Balkans exists, but it does not provide or envisage regional NSDI structures.

As regards assessment of the situation in the individual countries, chapter 6 of this report contains detailed analysis per country. Furthermore National Country Profiles can be found in the Annex, consisting of

- (1) Tables of Concordance (ToC)
- (2) Implementation Questionnaires (IQ) and
- (3) an Additional Questionnaire, containing some further issues practical implementation aspects which have been considered relevant

In the recommendation part of this report several recommendations are made regarding the creation of a regional NSDI infrastructure, including provision of cross border services.

The regional level recommendations are followed by general recommendations for the beneficiaries in their role as individual countries, as a basis for the country reports to be elaborated in 2013.



## 2 REFERENCE TO THE PROJECT TOR AND INTRODUCTION

The Terms of Reference state the following about the activity 1.1 and 1.2:

### *“1.1 Regional SDI Legislation Framework Analysis*

*This will involve the compilation of a regional analysis of SDI legislative frameworks for each of the partners (e.g. existence and work of formal and informal national SDI bodies), including a state of play and comparison in terms of knowledge and implementation of SDI, as well as harmonisation with the INSPIRE Directive requirements.*

### *1.2. Regional SDI Establishment Recommendation Report*

*On the basis of the Regional SDI Legislation Framework Analysis (1.1), the report should give recommendations for upgrading SDI's in Beneficiary in line with the European SDI.”*

(Project ToR, page 16)

During the project team meeting on 26 September 2012 the beneficiaries accepted the consultant's suggestion to combine the outputs of Act. 1.1 and 1.2 into one joint report.

Based on this agreement the *Regional SDI Legislation Analysis and Recommendation Report* covers two main aspects:

- a) Analysis of the current situation of the region in terms of SDI legislation and alignment with the INSPIRE Directive (state of play);
- b) Recommendations regarding updating and further improvement of regional SDI related to the requirements of the INSPIRE Directive and its institutional and organisational set-up.

In the sense of a master plan the above results of activities 1.1 and 1.2 will form the basis for the detailed recommendations for each beneficiary country to be elaborated or upgraded under activity 1.3.



### 3 CONTEXT, OVERALL STUDY DESIGN AND STUDY OBJECTIVES

#### Context of the study

Benefits of SDI both on a national and on a regional scale are evident and well known:

- Reduced costs for the provision of complex geo-data based on the one source principle. Basic geo-data like addresses, administrative boundaries, digital topographical maps, high resolution ortho-images, etc. are all deriving from one source. E.g. Ministries of Environment rely on existing geo-data sets produced by the cadastre agency. For the integration of the data, it is important that they are interoperable.
- Increased transparency as regards the geographic and environmental situation ensuring a better decision-making of companies for their future investments but also for citizens as regards e.g. renting or buying a flat or a house.
- Increased awareness of problematic environmental conditions in the region through better and more easy accessible information, as a sound basis for policy demand, policy formulation, policy implementation and policy monitoring resulting in a better targeted environmental policy and consequently in a more sustainable development.
- Development and provision of specific software applications, for example customised applications for mobile devices providing the data.

The INSPIRATION project as a whole and this report as one of the key outputs of the project should contribute to securing these benefits for the whole region of the Western Balkans and for each individual country.

This report is the output of activities 1.1 and 1.2 and a core element of Activity 1 of the project “Policy, Institutional and Legislative Framework Analysis” and should help the beneficiary countries to streamline their future activities, both individually and as a group of regional partners, in the field of NSDI and INSPIRE policy.

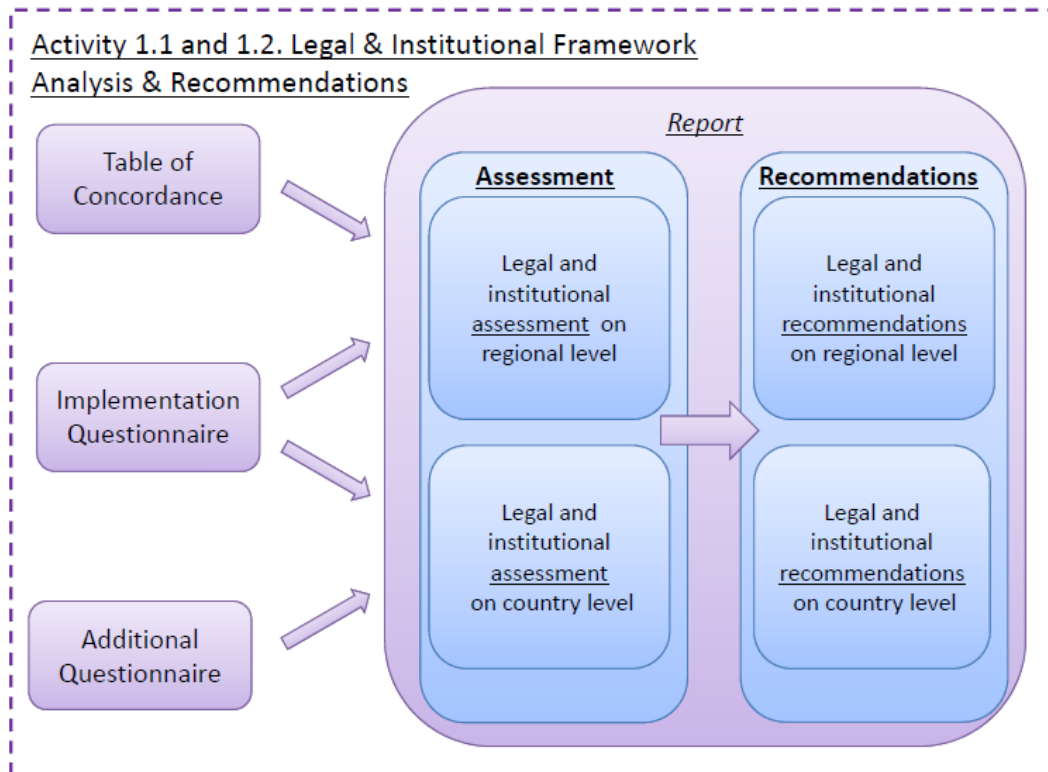
The goal of the exercise is understood in the way that not only the NSDI and INSPIRE compliance of the individual countries should be strengthened, but also the potential for NSDI structures and services on a regional level should be analyzed and respective recommendations should be made.

#### Overall study design

Based on above understanding the following scheme was applied:



**Figure 1: Overall study design**



### Objectives

The main purpose of this report is to present the analysis of the legislative and institutional framework for SDI in the beneficiary countries in a regional context and by way of this define a regional state of play and comparison in terms of knowledge and implementation of SDI/ requirements of the INSPIRE directive.

Based on the analysis a set of recommendations is developed which should help the individual beneficiaries to plan their further work towards further developing and shaping their SDI.

Besides these recommendations which are targeted to the individual beneficiary countries a set of regional recommendations will be given, highlighting how the overall regional co-operation could be shaped and further developed.

### Scope of the Report

The *Regional SDI Legislation Framework Analysis and Recommendation Report (Act. 1.1 and 1.2)* contains:

- Description of methodology and approach;
- Description of the current situation of the region in terms of SDI legislation and alignment with the INSPIRE directive (state of play);
- Description of SDI legal and institutional framework (including formal and informal NSDI bodies).
- Identification of fields and points which need further improvement in order to fulfil the INSPIRE requirements;



- Recommendations, regarding updating and further improvement of regional SDI related to the requirements of the INSPIRE Directive and its institutional and organisational set-up.
- Annex with Country Profiles





## 4 TARGET GROUPS

As defined in the project TOR and in the Inception Report the beneficiaries of the project are as follows:

**Main beneficiaries:** National Mapping and Cadastre Authorities (NMCA's) as principal coordinators and focal points;

**Secondary beneficiaries:** Universities providing education in surveying, geodesy and geomatics; Ministries of Environment;

**Tertiary beneficiaries:** NSDI stakeholders, e.g. other governmental institutions, especially Ministries of Agriculture (LPIS), statistical offices, local authorities, geological and hydrographical surveys, private surveying, GIS and geomatics commercial sector, research organisations.

In the context of this report the most important target groups for the institutional recommendations are:

- Decision-makers at Government and Ministry level
- Decision-makers inside the main beneficiaries of the project (Cadastre Agencies)
- Institutional and legal experts in the main beneficiary institutions



## 5 APPROACH

In the sense of a benchmarking exercise so called Tables of Concordance (TOCs) and Implementation Questionnaires (IQs) have been used, which allow to compare the efforts of the individual countries towards compliance with the INSPIRE Directive.

These TOCs and IQs which are commonly used to monitor progress towards EU compliance of legislation and its implementation a third (additional) questionnaire has been developed to learn more about the institutional set-up and practical implementation arrangements in the Beneficiary countries.

These three types of Questionnaires were sent out to the heads of WG on legal and institutional aspects in each of the Beneficiary countries with the request to fill them in till a set deadline. Support was offered in the form of local expert's assistance. (Local experts paid by the project had been contracted in each of the beneficiary countries beforehand).

Some countries responded with delay but finally some feedback was received from all Beneficiary countries. Six countries out of seven have provided all requested filled in questionnaires. Only in Bosnia and Herzegovina there were some difficulties with receiving feedback. While the Federation of Bosnia and Herzegovina reported that they have no whatsoever NSDI legislation and therefore cannot fill in the Questionnaires, the Republic of Srpska sent back the filled in Additional Questionnaire only and did not provide filled in TOC and IQ.

Based on these questionnaires and additional research the analysis provided below in Chapter 6.2 has been compiled.

This analysis comprises:

- the legislative framework and its enforcement,
- the organisational set up, including the involvement of other stakeholders

Based on the analysis regarding both regional and national level conclusions and recommendations have been drawn up in Chapter 6.3 below.

Recommendations comprise:

- Measures to be taken on regional level
- Measures to be taken on the level of individual countries

Note: Measures to be taken on the level of individual countries given in a general form valid for all 7 beneficiary countries. No individual country recommendations are provided in this report, as this is the scope of the 7 individual country legislation recommendation reports to be prepared under Act. 1.3 which is planned for the year 2013 (Q 3 and 4 of the project).



## 6 STUDY RESULTS

### 6.1 Overview

#### Assessment part of the report (Act. 1.1):

As regards analysis of the co-operation on regional level desk research and interviews were carried out which lead to the following conclusion:

Cooperation on regional level exists in the form of the “Regional Cooperation on Cadastre and Spatial Data Infrastructure (RCS)” as an excellent starting point, but this network has not yet developed into a network which has the capacity to build up regional NSDI structures.

As regards the level of the individual countries this analysis is based on the information provided by the beneficiary countries in the tables of concordance - ToC, the implementation questionnaires - IQ (which both were either sent by the countries for needs of the INSPIRATION project or were prepared by the countries for the Annual Progress Monitoring, implemented by the European Commission) and the additional questionnaire (AQ) developed exclusively for the needs of the Project.

The evaluation of this information leads to the following conclusions:

Albania, Croatia, Kosovo\*, former Yugoslav Republic of Macedonia (FYROM), Montenegro and Serbia have sent their contribution. The Republic of Srpska only sent an AQ and the Federation of Bosnia and Herzegovina has only informed that the Directive is not yet transposed and implemented in the country.

All beneficiary countries except for the Federation of Bosnia and Herzegovina introduced into their national legislation measures transposing Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) between 2010 and 2012. In some cases this legal framework has been additionally improved or amendments are under preparation and/or consideration. Some of the countries are at a more advanced stage of implementation, like Croatia for example, where the upcoming accession to the EU is a trigger to the process, and also the former Yugoslav Republic of Macedonia and Montenegro, which in the recent years have received candidate status and could open negotiations with the European Commission.

More specifically, in Kosovo\* a whole set of new laws regulating the land administration system and work of the Kosovo Cadastre Agency, i.e. “Law on Cadastre”, “Law on Immovable Property Rights” and “Law on Address System” have been passed (all in 2011), a new “Law on Registration of the Immovable Properties” and a “Law on Organization and Functioning of the National Infrastructure for Geospatial Information in the Republic of Albania” were adopted in Albania and the “Law on State Surveying and Cadastre of Immovable Property” in Montenegro was amended to include an NSDI chapter in Montenegro in 2012. In Bosnia and Herzegovina the Republic of Srpska enacted a new law on Measurement and Cadastre, containing a chapter “Geospatial Data Infrastructure of the Republic of Srpska”. The relevant legislation in Croatia, Serbia and FYROM had been significantly amended to reflect NSDI and INSPIRE requirement already earlier.

\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.



These legislative efforts lead to partial transposition of the Directive, while full transposition is planned for the future. It seems that scope of spatial data sets (the coverage of the themes under the Annexes of the Directive) and requirements regarding interoperability of the spatial data sets and services pose major problems.

The new legislation introduced in most of the countries provides a legal basis for establishment of an administrative framework for implementation of the INSPIRE Directive by establishing NSDI bodies and by defining their responsibilities. The key competent authority in each of the countries is usually the cadastre or the geodetic authority.

Information provided by the beneficiary countries shows that in most of the countries implementation is at its initial stage, but also that the general level of understanding of the INSPIRE Directive in the administration of the countries is relatively good. Croatia, Macedonia, Montenegro and Serbia show highest level of compliance, which is logical in view of their well-established legal frameworks.

It is evident that in all countries various stakeholders have been identified and involved in the process of introducing and implementing an NSDI and the INSPIRE Directive. These stakeholders represent the central and regional/local authorities and sometimes also private sector institutions. In some countries agreements and memoranda of understanding ensuring the sharing of spatial data and providing related services have been concluded or are currently negotiated.

#### Recommendations part of the report (Act. 1.2):

A standard template has been developed for presentation of recommendations which is used for the assessment and recommendation reports in all three project activities.

Recommendations are structured in a similar way as the assessment part of the report, namely (a) recommendations on regional level and (b) recommendations on the level of individual countries.

Different to the assessment part of the report the recommendations part does not refer to the individual situations in the beneficiary countries, but gives general recommendations valid for all countries.

As mentioned above the development of individual recommendations per country is part of the individual country report to be prepared under Act. 1.3. in the second year of the project.

## **6.2 Detailed analysis of the current situation of the region in terms of SDI legislation and alignment with the INSPIRE Directive (state of play, Act.1.1)**

After a description the situation on regional level in the Western Balkans an individual analysis per country is provided.



### 6.2.1 Situation on regional level

Driven by the need for more intensive regional cooperation which is naturally linked also to the realization of joint projects the State Geodetic Administration of Croatia, assisted by the Norwegian Mapping and Cadastre Authority (Statens Kartverk) organized the First Regional Conference on Cadastre between 8 and 10 June 2008 in Opatija. This gathering was attended by the top management representatives of seven regional NMCA's from Bosnia and Herzegovina, Montenegro, Kosovo, Macedonia, Slovenia, Serbia and Croatia, as well as the European Commission and World Bank representatives and donor countries of Norway, the Netherlands, Germany, Sweden and Great Britain. In the following years similar conferences had been organized and the tradition has been kept till today with the latest Regional Cadastral Conference held in Banja Luka, BiH, in June 2012 with support of the INSPIRATION project.

The institutional framework for the above conferences is the "Regional Cooperation on Cadastre and Spatial Data Infrastructure (RCS)" which is an excellent platform for cooperation. But, although operational for several years, it has not yet developed into a network which has the capacity to build up regional NSDI structures effectively.

Also some other initiatives have been taken in the direction of an operational platform for providing NSDI services on a regional scale, and some of them envisage the provision of joint services. An example for such a project which started only recently is "Building resilience to disasters in Western Balkans and Turkey" ([www.preventionweb.net/ipadrr](http://www.preventionweb.net/ipadrr)). More details on that project can be found in the box below. Regional projects like this are considered as good starting point as well as best practice and should be integrated as thematic SDI in a regional NSDI context.

Furthermore a network on similar issues related to remote sensing and earth observation on university and research level in the Western Balkans already exists facilitated by projects such as BalkanGEONet (<http://www.balkangeo.net/>) or Observe (<http://www.observe-fp7.eu/>), but it does not provide or envisage regional NSDI structures.

**Building resilience to disasters in Western Balkans and Turkey**

The project ([www.preventionweb.net/ipadrr](http://www.preventionweb.net/ipadrr)) will strengthen national disaster risk management, and meteorological and hydrological services. The three main areas of work include:

- building and enhancing regional networking and coordination for disaster risk reduction;
- strengthening cross-border cooperation on disaster risk management and
- increasing regional capacity to monitor and predict hydro-meteorological hazards.

The project will also work towards an effective cross-border multi-hazard early warning system.



In the recommendation part of this report several recommendations are made regarding the creation of a regional NSDI infrastructure, including provision of cross border services. Further political will and support from the countries of the region, as well as donors will be needed to create real added value for the region in the sense of visible benefits of joint services.

## 6.2.2 Albania

### Summary:

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i></p> <p><b>Answer:</b> The strategy for NSDI establishment in Albania has been adopted by Government with Council of Minister’s decision no 144 from 22 02 2012</p>
<b><u>Legal framework</u></b>	<p><i>Has a legal basis for NSDI establishment been created?</i></p> <p><b>Answer:</b> The “Law for Organization and Functioning of the National Infrastructure for Geospatial Data in the Republic of Albania” has been enacted in June 2012. Necessary bylaws have still to be passed to make the law fully operational and applicable.</p>
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i></p> <p><b>Answer:</b> The above new law foresees the establishment of a new agency, namely the State Authority for Geospatial Information (ASIG), plus a Board for Geospatial Information (BIG) to be composed of all relevant public authorities</p>

Albania has recently adopted the Law No. 72/2012, dated 28/06/2012 "For organization and functioning of the national infrastructure for the Geospatial Data in the Republic of Albania". The aim of this Law is to transpose Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). It is evident from the provided updated Table of Concordance that this new Law introduces the definitions and some of the main provisions of the Directive. Among the issues that remain uncovered or unresolved in Albanian legislation there are the following:

- Whether the derogation under Article 4 (6) of the Directive would be applied;
- Not yet clarified which datasets in Albania fall under Annexes I-III of the INSPIRE Directive, which also leads to difficulties with implementing Article 5(1) of the Directive (Creation of Metadata)
- Bylaws mentioned in the new law still to be passed to make the overall concept as outlined in the law operational.

The practical implementation of the Directive is expected to start by the end of 2012 or at the beginning of 2013 by the establishment of the State Authority for Geospatial Information (ASIG). It seems that Albania has set a very ambitious plan to achieve full implementation of the Directive by end of 2013.

The institutions involved within the NSDI are determined by the Law Nr. 72/2012, dated 28.06.2012 "For organization and functioning of the national infrastructure for the Geospatial Data in the Republic of Albania" and by the Strategy for the



NSDI establishment in the Albania which was adopted by the Government with Ministers Council by Decision Nr. 144, dated 22./02./2012:

The Ministry of Innovation and ICT (<http://www.mitik.gov.al/mitik/english/index.php>) is the competent line Ministry. The (future) State Authority for Geospatial Information (ASIG), the Board for Geospatial Information (BIG) to be set up and all existing public authorities are in charge of gathering, processing, updating of the Geo-spatial Information according to the Law, namely:

- Immovable Property Registration Office;
- Ministry of Agency of Legalization, Urbanization and Integration of Zones with Informal Building (ALUIZNI)
- The National Agency of Information Society
- The National Territory Planning Agency
- Polytechnic University of Tirana
- Faculty of Geology and Mine Mining in the University of Tirana
- Geographic Military Institute (IGJU);
- Ministry of Public Works and Transports
- Ministry of Agriculture and Food
- Ministry of Environment
- INSTAT
- Local Authorities: Tirana Municipality, Durrresi, Elbasan, Korca, Fier, Shkodra, Vlora Municipalities, etc.
- Researching Institutions: Geosciences' Institute; Water Environment and Energy Institute;

### 6.2.3 Bosnia and Herzegovina

Summary:

#### a) Bosnia and Herzegovina – Federation of Bosnia and Herzegovina (FBiH)

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i></p> <p><u>Answer:</u> Not yet, but round table has been held and an expert team for SDI in the FBiH has been formed. Both an NSDI strategy and an NSDI law are planned to be elaborated</p>
<b><u>Legal framework</u></b>	<p><i>Has a legal basis for NSDI establishment been created?</i></p> <p><u>Answer:</u> Not yet.</p>
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i></p> <p><u>Answer:</u> Not yet, but an expert team for SDI has been formed, as mentioned above.</p>



**b) Bosnia and Herzegovina – Republic of Srpska (RS)**

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i></p> <p><u>Answer:</u> No strategy document on NSDI has been developed yet. Below quoted law only mentions “medium-term working programme” to be elaborated, but does not mention an overall NSDI strategy.</p>
<b><u>Legal framework</u></b>	<p><i>Has a legal basis for NSDI establishment been created?</i></p> <p><u>Answer:</u> The new Law on Survey and Cadastre in the Republic of Srpska creates a basis for NSDI, through defining the basic elements of the Spatial Data Infrastructure of the Republic of Srpska (= “IGPRS”, Art. 158 – 166 of the law).</p>
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i></p> <p><u>Answer:</u> The Government of Republic of Srpska appointed the IGPRS Council (National Council for the SDI) in April 2012 and defined its management as defined in Art. 165 of the Law on Survey and Cadastre.</p>

**a) FEDERATION OF BOSNA AND HERZEGOVINA (FBiH)**

To date is that there is no legislation and system for application of Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) in Federation of Bosnia and Herzegovina.

However first steps towards NSDI have already been made, as presented during the INSPIRE Forum in September 2012, namely

- On 21 June, 2011 a round table, including international participants, has been held on the issue of NSDI for FBiH
- In December 2011 an expert team for SDI in the FBiH has been formed, and both an NSDI strategy and an NSDI law are planned to be elaborated

**b) REPUBLIC OF SRPSKA (RS)**

The Republic of Srpska has provided the filled in additional questionnaire with information regarding the legal framework for the implementation of Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). As a further source of information the 5<sup>th</sup> Regional Study on Cadastre and Spatial Data Infrastructure has been used.

The new Law on Survey and Cadastre in the Republic of Srpska creates a basis for implementation of the Directive, through defining the basic elements of the Spatial Data Infrastructure of the Republic of Srpska (“IGPRS”, Art. 158 – 166 of the law), such as:

- IGPRS stakeholders (public administration institutions, public enterprises, legal persons),
- IGPRS establishment, maintenance and usage,
- IGPRS platform standards (INSPIRE and other standards),
- IGPRS content (metadata, services, sets of geodata),
- the role of the Bureau for Geodetic and Property Relations of Republic of Srpska (RGURS) in IGPRS: RGURS establishes, maintains and manages the IGPRS Geoportal,





- IGPRS bodies –IGPRS Council and IGPRS working groups.

The Government of Republic Srpska appointed the IGPRS Council in April 2012 and defined its management: President is the Director of the Bureau for Geodetic and Property Relations of Republic of Srpska (RGURS) and there are further nine members from responsible ministries.

The IGPRS Council:

- proposes subjects, criteria and norms for establishment and maintenance of IGPRS, midterm work plans, sources and financing ways for IGPRS,
- defines responsible subjects for certain IGPRS topic,
- harmonizes activities of IGPRS subjects,
- executes control of establishment and functioning of IGPRS,
- adopts documents regulating its work,
- establishes IGPRS working groups for execution of specific professional jobs and
- informs the Government, IGPRS stakeholders and public about activities related to establishment and functioning of IGPRS.

As regards the practical implementation of the Directive, Republic of Srpska reported that the development of the NSDI in the Republic of Srpska has just started. The National Council for the SDI has just been formed and commissions and bodies still need to be established.

There are internal rules and procedures for quality control within the institution that are also applicable to spatial data. The applicable legislation in the Republic of Srpska defines these procedures and they exist independently from the implementation and development of the NSDI. The National Council and the bodies that will be established will clearly define which of these internal procedures and rules can remain and which must be reviewed in order to define the new procedures. Currently the RGURS determined the quality assurance procedures for its registers based on the internal instructions. Few years ago, it also implemented the control of positional accuracy of GPS measurements used in maintaining the data of the land and property register. Additional quality control is provided by using and exchanging the data and the interconnection of data in various registers, in case discrepancies are determined, so they are harmonised and eliminated subsequently.

#### 6.2.4 Croatia

Summary:

<p><b><u>Policy level</u></b></p>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i>  <b>Answer:</b> No NSDI strategy developed yet, but preparatory works are in place (e.g. comprehensive studies carried out). Elaboration planned for 2013.</p>
<p><b><u>Legal framework</u></b></p>	<p><i>Has a legal basis for NSDI establishment been created?</i>  <b>Answer:</b> Legal basis exists already in the current Law on State Survey and Real Estate Cadastre (LSSREC, Art. 84 – 94).</p>



	However entirely new NSDI law planned to be enacted before EU accession (draft text already available)
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i></p> <p><b>Answer:</b> NSDI Council, the NSDI Board and working groups have been set up based on the current law.</p>

Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) is partially transposed in Croatia by the Law on State Survey and Real Estate Cadastre (Official Gazette "Narodne novine" 16/2007; 124//2010), hereafter "LSSREC".

Remaining issues are planned to be transposed by the date of the accession, i.e. before 1 July 2013. A draft new Croatian NSDI law is available as an internal draft prepared by a working group.

Croatian NSDI bodies according to the legislation currently in force comprise the NSDI Council, the NSDI Board and working groups. Based on LSSREC in 2007 the State Geodetic Administration (SGA) has been designated as the NSDI Secretariat. SGA is the national contact point and the leading government body responsible for NSDI implementation, also acting as a secretariat of the NSDI Council. The other institutions involved in the NSDI process are:

- state administration bodies (government bodies, ministries, central government offices, government agencies and government offices in the counties, all responsible for the immediate implementation of laws and bylaws and funded by state budget – treasury)
- regional and local self-government bodies (municipalities, cities and counties perform tasks that are directly related to the needs of citizens, from physical planning to consumer protection, have different sources of financing)
- public systems wholly or majority owned by the state (e.g. companies established to provide utilities and other services)
- physical and natural persons licensed by respective authorities and public systems to provide spatial data management.

As regards the measures taken to facilitate the sharing of spatial data sets and services between public authorities the Croatian authorities reported that a proposal for general framework agreement with terms and conditions has been prepared and put forward to stakeholders for comments.

Recently agreements on co-financing between SGA and local/regional government have been developed. Besides financing of the creation of new data, those agreements provide for data sharing of newly created and already existing products.

Basically, data sharing arrangements which have been or are being created between public authorities are limited to non-commercial purposes, and intellectual property rights (IPRs) remain with SGA.

The establishment of the metadata catalogue is on-going. Steps were undertaken for the implementation of all major provisions of the Directive. Alignment is expected to be achieved by the date of accession and full implementation by 2020 as required by the Directive.



### 6.2.5 Kosovo\*

Summary:

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i>  <b>Answer:</b> No NSDI strategy developed so far.</p>
<b><u>Legal framework</u></b>	<p><i>Has a legal basis for NSDI establishment been created?</i>  <b>Answer:</b> Art. 23 of the new Kosovo Cadastre Law defines the responsibility of the Kosovo Cadastre Agency for coordination and creation of National Spatial Data Infrastructure. From the management of the Kosovo Cadastral Agency the project received the information that the elaboration of a stand-alone NSDI law is planned for 2013.</p>
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i>  <b>Answer:</b> A first meeting of the Inter-Ministerial Land Administration Committee has been held in 2012 on the issue of NSDI and a further meeting is planned for March 2013. Co-ordination mechanisms expected to be further defined in the planned NSDI law.</p>

Kosovo\* has recently adopted a completely new Law on Cadastre, which contains a definition of NSDI and a specific article on NSDI (Art. 23) which is a first step towards transposition of the INSPIRE Directive 2007/2/EC. From the management of the Kosovo Cadastral Agency we received information that the elaboration of a stand-alone NSDI law is planned for 2013.

As regards the implementation in Kosovo the following institutions are involved in the NSDI development: Ministry of Environment and Spatial Planning (MESP), Ministry of Agriculture, Ministry of Public Administration, Prime Minister's Office, Kosovo Privatisation Agency, Kosovo Property Agency, Ministry of Finance. A first meeting of the Inter-Ministerial Land Administration Committee has been held in 2012 and a further meeting is planned for March 2013 on the issue of NSDI.

As regards measures aiming at facilitating the sharing of spatial data sets and services Kosovo's national authorities reported the following: the data are being shared on hard copies and CD. There is a LAN connection with the Kosovo Property Agency and Municipal Cadastral Offices for data sharing. The data sharing is being created within the various stakeholders, part of the Inter-Ministerial Committee for Land Administration, respectively MESP, Ministry of Agriculture, Ministry of Administration and Local Governance, Prime Minister's Office, Kosovo Privatization Agency, Kosovo Property Agency, Ministry of Finance. The use of the spatial data is regulated by the Law, bylaws and Memoranda of Understanding.

Kosovo has set 2014 as a deadline for full implementation of the Directive, which is a very ambitious target.



## 6.2.6 The Former Yugoslav Republic of Macedonia

### Summary:

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an NSDI strategy been developed?</i></p> <p><b>Answer:</b> The Government recently approved the NSDI Strategy for Macedonia which clearly defines the institutional framework for the national NSDI.</p>
<b><u>Legal framework</u></b>	<p><i>Has a legal basis for NSDI establishment been created?</i></p> <p><b>Answer:</b> The current Law on real Estate Cadastre (Art. 185 – 189) contains basic provisions on NSDI and INSPIRE implementation. In October 2012 a working group has been formed with the task to provide a text of a draft NSDI law within one year's time.</p>
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i></p> <p><b>Answer:</b> The governance model as defined in the new NSDI strategy, including an NSDI council, is currently in the process of being set up.</p>

Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) has not been fully transposed yet in Macedonia. The transposition is planned for the end of 2014 by adoption of a new NSDI law. However, several legal measures are implemented in the country already now, e.g. in the current Law on real Estate Cadastre (Art. 185 – 189).

Macedonian authorities provided the following information:

As regards the institutions involved within NSDI and their roles and responsibilities the recently adopted NSDI Strategy for Macedonia has defined a clear institutional framework for the national NSDI. The role of the stakeholders will be defined in full detail in the new Law on NSDI.

The following institutions are involved in the NSDI:

- Agency for Real Estate Cadastre
- Agency for Spatial Planning
- Central Registry
- Centre for Crisis Management
- City of Skopje
- Ministry of Agriculture, Forestry and Water Supply
- Ministry of Culture
- Ministry of Defence
- Ministry of Economic Development
- Ministry of Environment and Physical Planning
- Ministry of Information Society and administration
- Ministry of Interior
- Ministry of Self Government



- Ministry of Transport and Communications
- State Statistical Office
- Representative from the academic sector
- Representative body for Public Utilities (such as: electricity company, water supply company)
- Representative from the private sector (e.g. software vendors, data/service providers, and value adding companies)
- Association of the Local Self-Government Units

According to the NSDI strategy the following governance model is applied:

- The responsible Minister supports the work of the NSDI Council.
- The NSDI Council has an executive role in the overall steering of the activities related to the Macedonian NSDI and execution of the activities related to the INSPIRE Directive. The Council consists of representatives from the above mentioned institutions.
- The NSDI Committee acts as an operative NSDI group
- An NSDI Management Unit (could also be a new Agency) will be established
- 4 NSDI Working Groups have been defined: a WG for Institutional and Legal Issues, one for Technological Issues, one for Communication and Capacity Building and a working group on the Business Model

As regards the measures taken to facilitate the sharing of spatial data sets and services between public authorities, the authorities of the former Yugoslav Republic of Macedonia reported that an internal draft NSDI Law exists and a working group has been established to elaborate an official proposal until fall 2013. This law will form the legal basis for the implementation of the NSDI Strategy. A Draft Agreement for sharing of data from the public sector has been produced. Furthermore the approach for licensing of data and for data recurrent use has been defined.

In order to promote the cooperation with the stakeholders a communication plan for the method and model of communication between the NSDI stakeholders has been developed. Workshops for outreach and awareness rising are planned to be held.

### 6.2.7 Montenegro

#### Summary:

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i></p> <p><b>Answer:</b> No strategy for NSDI establishment in the sense of a policy document has been elaborated in Montenegro so far. Below quoted law mentions a “medium-term program of works on NSDI”, but no NSDI strategy as such.</p>
----------------------------	---



<b><u>Legal framework</u></b>	<p><i>Has a legal basis for NSDI establishment been created?</i>  <u>Answer:</u> Basic articles on NSDI and INSPIRE implementation have been introduced recently by the adoption of amendments to the Law on State Surveying and Cadastre of Immovable Property (new articles 156a to 156z)</p>
<b><u>Institutional level</u></b>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i>  <u>Answer:</u> Pursuant to the above law the Council for National Geospatial Data Infrastructure is the competent authority for the implementation of the INSPIRE Directive. The Council, however, has not yet been established by the deadline defined in the Law.</p>

Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) has been partially transposed in Montenegro by the adoption of amendments to the Law on State Surveying and Cadastre of Immovable Property (Official Gazette of Montenegro, No 29/07 of 22 May 2007; Official Gazette of Montenegro, No 73/10 of 10 December 2010, 32/11 of 1 July 2011, 40/11 of 8 August 2011). Below some of the issues that remain uncovered or unresolved in Montenegrin legislation:

- Not yet clarified which data sets in Albania fall under Annexes I-III of the INSPIRE Directive, which also leads to difficulties with implementing Article 5(1) of the Directive (Creation of Metadata)
- Rules on interoperability of spatial data sets and services (Chapter III of the Directive)
- Application of the possibility of derogation (Article 4(6) of the Directive)
- The implementation of the Directive's requirements regarding the network services (Art. 11 of the Directive)
- The data sharing requirements under Article 17 of the Directive

Pursuant to the above law the Council of the National Geospatial Data Infrastructure is designated as the competent authority for the implementation of the INSPIRE Directive. The Council, however, has not been established by the deadline defined in the Law. Competent authorities holding spatial data sets complying with the conditions under Article 4(1) of the Directive have been identified for most of the themes under Annexes I-III of the Directive. The implementing rules for establishing the metadata sets still need to be adopted. Although major efforts have already been made for implementation of the INSPIRE Directive, the country has not yet defined a final date for full alignment.

### 6.2.8 Serbia

Summary:

<b><u>Policy level</u></b>	<p><i>Has a strategic policy level document, such as an SDI strategy been developed?</i>  <u>Answer:</u> NSDI Strategy and NSDI Medium term programme provide for a plan for achieving compliance with the INSPIRE Directive requirements.</p>
----------------------------	--



<p><b><u>Legal framework</u></b></p>	<p><i>Has a legal basis for NSDI establishment been created?</i>  <u>Answer:</u> The Serbian “Law on State Survey and Cadastre” contains a chapter on “National Infrastructure of Geospatial Data” (Art 159 – 165). Elaboration of a stand-alone NSDI law is planned for 2013.</p>
<p><b><u>Institutional level</u></b></p>	<p><i>Has a co-ordination body or other co-ordination mechanism been established to steer the NSDI process?</i>  <u>Answer:</u> The bodies for the implementation of INSPIRE policy and legislation in Serbia are the NSDI Council and the NSDI working groups, which were established according to the above mentioned “Law on State Survey and Cadastre”.</p>

Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) has been partially transposed in Serbia with the Law on State Survey and Cadastre (“Official gazette of the Republic of Serbia“, No. 72/09, 18/10). The analysis of the situation shows that there are several key provisions that remain to be transposed in Serbian legislation and some of the most important gaps could be summarised as follows:

- Several of the definitions of the Directive
- Decision whether the derogation option under Article 4(6) of the Directive should be applied
- Serbian legislation not harmonized with list of topics of Annexes I-III of the Directive, which also leads to the problem of implementing Article 5(1) of the Directive (Creation of Metadata)
- Provisions on interoperability of spatial data sets and services under Chapter III of the Directive
- The implementation of the Directive’s requirements regarding the network services
- The data sharing requirements of the Directive are not fully reflected

The bodies for the implementation of INSPIRE policy and legislation in Serbia are the NSDI Council and the NSDI working groups, which were established according to the Law on State Survey and Cadastre. The latter also defined their roles and responsibilities. In general, the main role of these bodies is to create a new NSDI policy and to propose adequate measures to the Government, so that policy can be implemented.

The NSDI Council has been established by the Serbian Government in 2010. The NSDI Council has already decided on the competencies and the selection of members of the working groups. The working group for cooperation, the working group for legal framework and the working group for technical framework were established in 2011.

The requirements of the Directive regarding the implementation rules for the interoperability and harmonisation of spatial data are already in course of implementation or planning: NSDI Strategy and NSDI Medium term programme provide for a plan for achieving compliance with the INSPIRE Directive requirements:

- 2012-2013: comparing data models for RGA’s and stakeholders’ data sets with INSPIRE data specifications for selected themes



- 2014-2015: implementation of INSPIRE data specification and services for newly collected spatial data sets for Annex I

The Initial geo-portal ([www.geosrbija.rs](http://www.geosrbija.rs)) as a tool for discovery and view of distributed spatial data and services under NSDI was launched in November 2009.

A national geo-portal with network services will be developed and implemented in 2012-2015.

According to the Serbian Law on state survey and cadastre, NSDI stakeholders are public authorities, the Autonomous Province of Vojvodina and the local governments, public companies and legal entities entrusted with geo-data management within the scope of public tasks. The roles and responsibilities of NSDI stakeholders are defined by the current law, e.g.:

- stakeholders are obliged to describe their spatial data sets in the form of metadata,
- the Republic Geodetic Authority (RGA) is managing the National geo-portal

The roles and responsibilities of NSDI stakeholders will be further determined by the new NSDI law planned to be elaborated in 2013 and by-laws by which the INSPIRE Directive will be completely transposed in the Serbian legal system. Full implementation is planned to be achieved in 2020.

### 6.3 Recommendations regarding updating and further improvement of regional SDI related to the requirements of the INSPIRE Directive and its institutional and organisational set-up (Act. 1.2)

#### 6.3.1 Recommendations on the regional level

##### Recommendation 1.1: Development of a “Memorandum of Understanding on Spatial Infrastructure in the Western Balkans” and the related establishment of regional organisational body

Description	<p>A “<b>Memorandum of Understanding (MoU) on Spatial Infrastructure in the Western Balkans</b>” should be concluded among the countries of the region as an inter-institutional agreement. It should:</p> <ul style="list-style-type: none"> <li>➤ Place the existing “Regional Cooperation on Cadastre and Spatial Infrastructure (RCS)” in an institutionalized context and formulate clear visions and goals of the co-operation,</li> <li>➤ Define basic features of a “Regional SDI in the Western Balkans”,</li> <li>➤ Define common principles of such a regional SDI, based on the INSPIRE principles, but concentrating on the most important features, leaving away all elements which are not necessary at the moment (“INSPIRE light”),</li> <li>➤ Define a limited number of topics addressing the most important needs of the region. Besides basic information similar to Annex 1 of the INSPIRE Directive such topics could e.g. be:</li> </ul>
-------------	--





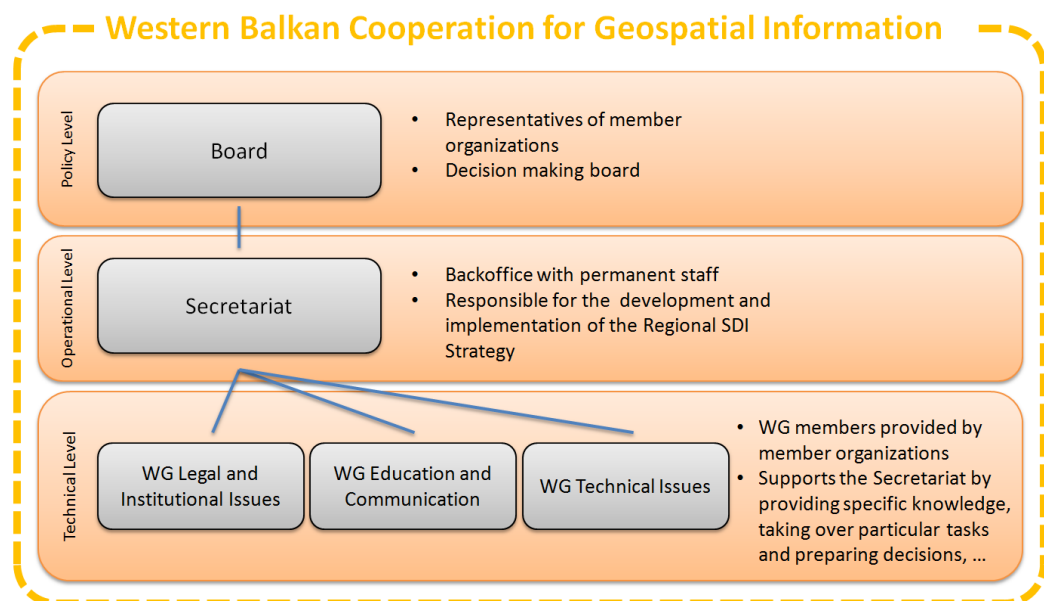
	<ul style="list-style-type: none"> <li>✓ data relevant for industrial accident prevention and information</li> <li>✓ floods prevention and emergency response</li> <li>✓ forest fire and other natural disaster prevention</li> </ul> <ul style="list-style-type: none"> <li>➤ Define rules on alignment of data sharing policies in/of the region,</li> <li>➤ Establish a common INSPIRE language of the region,</li> <li>➤ Provide guidelines for the signatories of the MoU to facilitate implementation of the jointly agreed work packages and data infrastructure principles,</li> <li>➤ Establish a joint access point (regional portal), e.g. like the EU INSPIRE portal.</li> </ul> <p><b>Establishment of a PERMANENT REGIONAL SECRETARIAT:</b> As an operational unit a Permanent Regional Secretariat should be established with the above MoU. Its tasks should comprise</p> <ul style="list-style-type: none"> <li>➤ Organisation of meetings, communication (incl. maintenance of a regional geoinformation website),</li> <li>➤ Support to the working groups (see below 1.3 and 1.4.)</li> <li>➤ Content related work.</li> </ul> <p>The secretariat would be located in one of the major cities of the region and have in the beginning 2 – 3 persons permanent staff.</p> <p><b>Establishment of a REGIONAL BOARD:</b> In combination with the Permanent Regional Secretariat which acts on operational level the Regional Board is responsible for controlling the activities of the secretariat and decision making.</p> <ul style="list-style-type: none"> <li>➤ A Board with representatives of each member organization</li> <li>➤ Frequently and occasional meetings</li> <li>➤ Decisions on financial, staff and thematic issues which exceed the authority of the secretariat</li> </ul>
<b><u>Addressed problem</u></b>	This recommendation addresses the need of a regional spatial data infrastructure already before and independently from EU accession and the accession related legal INSPIRE implementation obligations. The features of the regional SDI should be realistic and not overambitious and concentrate on core SDI elements.
<b><u>Target Group</u></b>	Primarily the organisations currently leading the INSPIRE process at national level in their respective country (= main beneficiaries of the INSPIRATION project).
<b><u>Expected Impact</u></b>	<ul style="list-style-type: none"> <li>➤ Creation of regional services which currently do not exist. -&gt; Boost the economic development of each individual country and the whole region.</li> <li>➤ Support full INSPIRE implementation to be achieved at a later stage in the sense of a gradual approach (“INSPIRE light” -&gt; full INSPIRE implementation)</li> </ul>
<b><u>Risks resp. Problems</u></b>	<ul style="list-style-type: none"> <li>➤ No support from the political/ governmental level in the individual countries,</li> <li>➤ Too few participating countries to ensure effective usability of the infrastructure for regional purposes, e.g. regional capital investment projects.</li> </ul>



	<ul style="list-style-type: none"> <li>➤ Participation is unbalanced, e.g. SDI stakeholders from certain countries are not sufficiently providing input for the establishment of the regional spatial infrastructure.</li> <li>➤ Sustainable funding is not ensured.</li> </ul>
<b>Funding</b>	Define funding mechanisms as a combination of (a) financial contributions of member states and (b) financing from donors, like EU, Worldbank and bilateral co-operation already in the Convention text
<b>Milestones</b>	<ul style="list-style-type: none"> <li>➤ Passing principle conclusions and decision to develop a draft text for the Memorandum of Understanding (MoU) in the next regional meeting of the INSPIRATION project (in Tirana in March 2013).</li> <li>➤ Readiness of one of the Beneficiary countries to take the lead role, including hosting of the Permanent Regional Secretariat</li> <li>➤ Prepare a draft text of the MoU to be discussed in the regional meeting in Skopje in April 2013.</li> <li>➤ Taking decision on signature of the MoU in the conclusions of the next regional cadastral conference in 2013</li> <li>➤ Signing of the MoU at the final Project Conference in October 2013 in Sarajevo</li> </ul>
<b>Success criteria</b>	<ul style="list-style-type: none"> <li>➤ Taking of measures as outlined under milestones</li> <li>➤ Once the MoU is signed: Degree of effective contributions from individual countries to ensure practical results and usability of the regional spatial infrastructure.</li> </ul>

The following figure describes the scenario for a regional cooperation as proposed by recommendation 1.1 and 1.2 and the relations between the three working levels.

**Figure 2: Scenario for a regional cooperation**



## Recommendation 1.2: Permanent Regional Working Groups

<b>Description</b>	
	<p>This recommendation proposes the establishment of three permanent working groups on different issues related to NSDI. In general, these working groups can work independently and separated from any organisational body, as proposed in recommendation 1.1. For that reason they are proposed as an independent recommendation, even if they are on a technical level part of the proposed scenario for a regional cooperation (MoU). In combination with the organisational set up as outlined in recommendation 1.1, the working groups shall provide support and assistance to the secretary and carry out concrete tasks.</p> <p>The <b><u>Permanent regional WG on legal and institutional aspects of SDI</u></b> should serve as a platform for exchange of experience regarding development and upgrading of the institutional set up and the legal framework in the countries of the region with the aim to support both the creation of a basic “Regional SDI in the Western Balkans” (see recommendation 1) and later INSPIRE compliance. It should:</p> <ul style="list-style-type: none"><li>➤ Carry out concrete tasks related to the definition of common principles of the “Regional SDI” (“INSPIRE light”, see above recommendation 1),</li><li>➤ Carry out concrete tasks related to the definition of topics to be included in “Regional SDI”, the rules on alignment of data sharing policies in/of the region, the definition of a common INSPIRE language of the region and other issues mentioned in recommendation 1,</li><li>➤ Perform further tasks agreed by the “Regional Cooperation on Cadastre and Spatial Infrastructure (RCS)”.</li></ul> <p>The <b><u>Permanent regional WG on Capacity Building and Communication</u></b> for SDI should</p> <ul style="list-style-type: none"><li>➤ Steer and facilitate the “Regional SDI Excellence Network” suggested under <u>Activity 2</u> of the project (please refer to separate report) and the other proposed regional activities related to capacity building and knowledge transfer,</li><li>➤ Facilitates the establishment of the regional NSDI Forum, suggested under <u>Activity 3</u> of the project (please refer to separate report) and guide all other proposed regional communication and awareness raising activities,</li><li>➤ Platform for joint public relation work and exchange of knowledge.</li></ul> <p>The <b><u>Permanent regional WG on Technical Issues</u></b> for SDI should:</p> <ul style="list-style-type: none"><li>➤ Facilitate process of development of technical specifications (e.g. metadata profile and service specifications) on regional level,</li><li>➤ Support the secretariat as well as individual members regarding technical knowledge on specification, harmonisation and implementation.</li></ul>

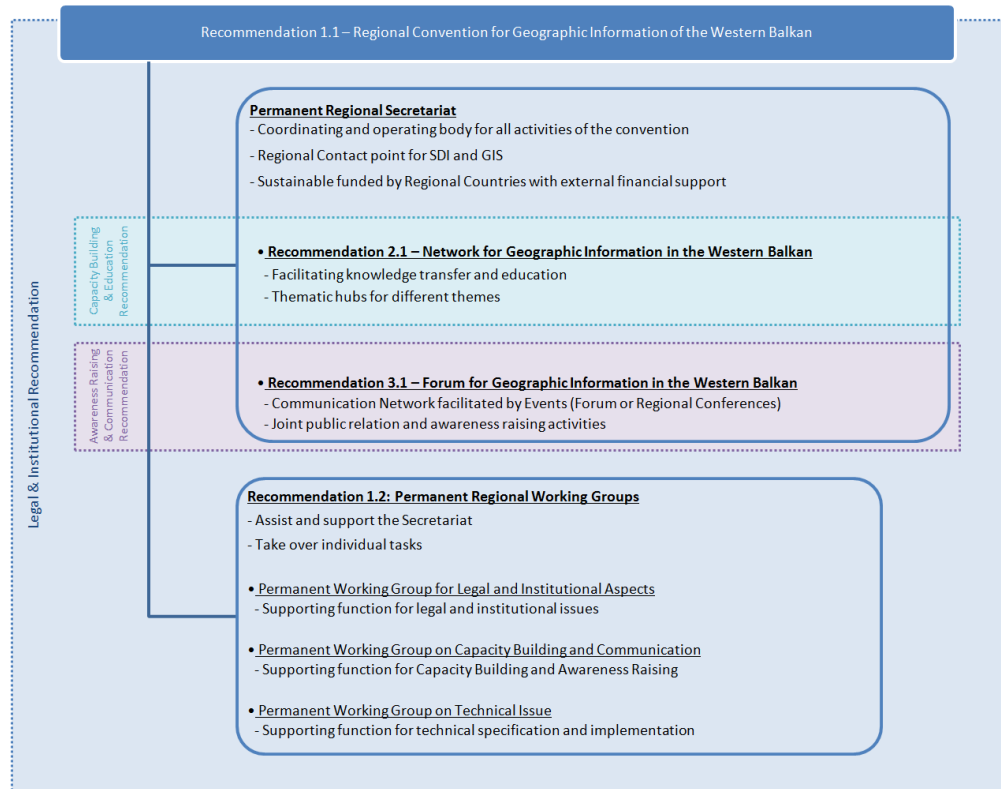


<b><u>Addressed problem</u></b>	This recommendation addresses the need of an operational body on regional level to implement joint initiatives regarding institutional and legal aspects, capacity building, communication and technical specification and implementation of the countries of the region.
<b><u>Target Group</u></b>	Potentially all SDI stakeholders in the region, but primarily and as a first step the organisations currently leading the INSPIRE process at national level in their respective country being represented in the “Regional Cooperation on Cadastre and Spatial Infrastructure (RCS)”
<b><u>Expected Impact</u></b>	<ul style="list-style-type: none"> <li>➤ Existence of an operational body who can implement concrete tasks on regional level, such as the creation of the foundations for regional SDI,</li> <li>➤ Support for other issues related to INSPIRE implementation in the region,</li> <li>➤ Existence of an operational body who can implement concrete tasks on regional level such as the “Regional SDI Excellence Network” (see recommendations in the report under Activity 2 of the project),</li> <li>➤ Support for other issues related to capacity building and communication for INSPIRE in the region,</li> <li>➤ Existence of an operational body regarding technical specification and implementation.</li> </ul>
<b><u>Risks resp. Problems</u></b>	<p>Similar risks as for recommendation no 1, namely</p> <ul style="list-style-type: none"> <li>➤ No support from the political/ governmental level in the individual countries,</li> <li>➤ Participation is unbalanced, e.g. SDI stakeholders from certain countries are not sufficiently providing input for the establishment of the regional spatial infrastructure,</li> <li>➤ Sustainable funding is not ensured.</li> </ul>
<b><u>Funding</u></b>	<ul style="list-style-type: none"> <li>➤ A funding mechanism under the “Memorandum of Understanding (MoU) on Spatial Infrastructure in the Western Balkans should be defined.</li> <li>➤ Alternatively costs for meetings (including travel and hotel costs for participants) should come from the individual participating countries (ad hoc funding).</li> </ul>
<b><u>Milestones</u></b>	<ul style="list-style-type: none"> <li>➤ Decision at the level of the “Regional Cooperation on Cadastre and Spatial Infrastructure (RCS)” to establish the working group, including a clear mandate,</li> <li>➤ Selection of WG members and definition of rules of procedure,</li> <li>➤ Elaboration of an annual workplan with milestones what to achieve each year,</li> <li>➤ Meetings take place and work packages are carried out between the meetings.</li> </ul>
<b><u>Success criteria</u></b>	<ul style="list-style-type: none"> <li>➤ Taking of measures as outlined under milestones,</li> <li>➤ Level of achievement of the goals of annual workplan by the WG,</li> <li>➤ Securing of necessary funding for holding of meetings, etc.</li> </ul>



The figure below describes how recommendations under activities 2.2 and 3.3 of the project (Regional Network and Regional Forum) are linked to the tasks and responsibilities of the secretariat as operational core unit of the proposed MoU.

**Figure 3: Link between recommendations and the secretariat's tasks**



### 6.3.2 Recommendations on the level of the individual countries

Recommendations on the national level are divided between

- Policy level recommendations
- Institutional recommendations
- Legal recommendations

This report addresses national level issues in a general way, highlighting aspects relevant for all seven beneficiary countries. Detailed recommendations per individual country will be elaborated in 2013 (Act. 1.3 of the project)

#### Recommendation 1.3: Development of NSDI Strategies (policy level)

<b>Description</b>	A sustainable implementation path is needed so stakeholders move from the current state of scattered and unconnected collections of spatial data to an integrated and harmonised infrastructure for sharing spatial data.
--------------------	---



	<p>Core elements of this recommendation are:</p> <ul style="list-style-type: none"> <li>• Mission and vision</li> <li>• Institutional framework</li> <li>• Legal framework</li> <li>• Interoperability infrastructure</li> <li>• Outreach and capacity building</li> <li>• Implementation management</li> <li>• Masterplan with planning of time and resources required for SDI including definition of relevant stakeholders and their roles in the process</li> <li>• Include key stakeholders in elaboration of the strategy by establishing committees and working groups as appropriate</li> <li>• This recommendation is only applicable for those countries which do not have an NSDI Strategy yet.</li> </ul>
<b><u>Addressed problem</u></b>	The objectives of an NSDI Strategy is to transform the way spatial data is shared within a country so it can better underpin social and economic development to the benefit of all.
<b><u>Target Group</u></b>	A NSDI strategy has a broad target audience. Readers should include policy-makers, those who will have to implement the NSDI and anyone else who needs or wants to know what is planned and why, including academic and business sector.
<b><u>Expected Impact</u></b>	Provision of a clear vision and related time planning for implementation / incubation of national SDIs. The strategies should focus on spatial data and services. The main components of the strategy should look at aspects such as the financial, governance, technological and legal environment that have to be developed in order to create the NSDI infrastructure and to allow its benefits to be used.
<b><u>Risks resp. Problems</u></b>	<ul style="list-style-type: none"> <li>• Lack of support from the political/ governmental level in the individual country for strategy development,</li> <li>• Lack of resources for elaboration and implementation of the strategy,</li> <li>• No or weak implementation of the strategy, once it has been elaborated and passed.</li> </ul>
<b><u>Funding</u></b>	<ul style="list-style-type: none"> <li>• Governmental funds</li> <li>• Funds from international and bilateral projects</li> </ul>
<b><u>Milestones</u></b>	<ul style="list-style-type: none"> <li>• Political decision</li> <li>• Elaboration of strategy</li> <li>• Implementation of the strategy step by step</li> <li>• Review and adaption of the strategy (policy cycle)</li> </ul>
<b><u>Success criteria</u></b>	<ul style="list-style-type: none"> <li>• Setting the right priorities in the strategy</li> <li>• Realistic goals</li> <li>• Securing of necessary funding.</li> </ul>



**Recommendation 1.4: Setting up of an NSDI Council and other institutional elements needed for implementation of NSDI (institutional level)**

<p><b>Description</b></p>	<p>The NSDI council or other permanent forum should steer the continuous shaping of national SDI policy. The council should perform an executive role in establishing NSDI policy, liaising with the responsible Minister, providing strategic NSDI decision-making and the overall steering of NSDI activities.</p> <p>The purpose of an NSDI Council is to provide leadership and strategic direction for the implementation of the NSDI and actions relating to the INSPIRE Directive in the respective country. Clear tasks and agenda, including time planning for the SDI council should be developed. The NSDI Council should ensure that the necessary resources are committed from the required stakeholders as part of an annual NSDI work plan.</p> <p>Members of the Council should be representatives of the key NSDI stakeholders of the country.</p> <p>This recommendation is only applicable for those countries which do not have set up a NSDI Council yet. Countries having already established an SDI council should check whether the existing one should be strengthened (e.g. enlarged in case some relevant stakeholders are missing)</p>
<p><b>Addressed problem</b></p>	<p>This recommendation addresses the need of an operational body to steer the process of NSDI implementation. The NSDI Council is one of the key institutional requirements for setting up an NSDI, but not the only one. A further core element are NSDI working groups, to be set up regarding:</p> <ol style="list-style-type: none"> <li>1. Institutional and legal issues – including the governance framework, its organisation and coordination;</li> <li>2. Technological issues – Covering subjects such as standards, interoperability, metadata, services, information technology, network architecture, and applications;</li> <li>3. Communications and Capacity Building – to include PR, communications between stakeholders, networking, best practice, capacity building, training and development;</li> <li>4. Theme management – to identify relevant spatial data themes, available spatial datasets, spatial data providers (What is needed? Who owns it? Who needs to provide it? What needs to be done to provide it, e.g. merging to achieve full coverage?)</li> </ol>
<p><b>Target Group</b></p>	<ul style="list-style-type: none"> <li>• Governmental level (political level, decision makers)</li> <li>• Organisations currently leading the INSPIRE process at national level in their respective country (mostly cadastre agencies)</li> </ul>
<p><b>Expected Impact</b></p>	<ul style="list-style-type: none"> <li>• Existence of a steering and operational body who can implement concrete tasks as defined in the national NSDI strategies,</li> <li>• Prerequisite for successful implementation of NSDI strategies.</li> </ul>
<p><b>Risks resp. Problems</b></p>	<ul style="list-style-type: none"> <li>• No support from the political/ governmental level in the individual countries</li> </ul>



	<ul style="list-style-type: none"> <li>• Participation of NSDI stakeholders is unbalanced, e.g. SDI stakeholders from certain sectors (e.g. certain Ministries, governmental agencies) do not sufficiently provide input,</li> <li>• Sustainable funding is not ensured.</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Governmental funds,</li> <li>• Funds from international and bilateral projects.</li> </ul>
<b>Milestones</b>	<ul style="list-style-type: none"> <li>• Decision to set up a NSDI Council taken (ideally based on an NSDI strategy).</li> <li>• NSDI council operational (member appointed, meetings take place).</li> <li>• Workplan in the process of being carried out and first results (e.g. agreements on key issues) achieved.</li> </ul>
<b>Success criteria</b>	<ul style="list-style-type: none"> <li>• All important NSDI stakeholders are on board and composition of NSDI council reflects the real situation in the country in the sense of decision making powers;</li> <li>• Realistic (i.e. not overambitious) workplan;</li> <li>• Securing of necessary funding.</li> </ul>

**Recommendation 1.5: Enact new or upgrade existing legal frameworks on SDI with a view to future INSPIRE compliance**

<b>Description</b>	<p>Enact an <u>NSDI law</u> or an <u>NSDI chapter in existing legislation</u>. This legislation should stipulate competences for and establishment and maintenance of the NSDI, and include chapters to cover the following items:</p> <ul style="list-style-type: none"> <li>• General Provisions</li> <li>• Metadata</li> <li>• Interoperability of spatial data and services</li> <li>• Network services</li> <li>• Data Sharing</li> <li>• Governance</li> <li>• Funding</li> <li>• Final Provisions</li> </ul> <p>Besides this legislation a <u>Public Sector Data Sharing Agreement</u> for data use could be created with the objective of promoting the efficient collection, processing, exchange and sharing of spatial data. Furthermore the issue of <u>licensing</u> needs to be addressed in an appropriate way.</p>
<b>Addressed problem</b>	<p>This recommendation addresses the need of a clear legal framework for each of the countries of the region, comprising both legislative framework and appropriate contractual arrangements between NSDI stakeholders where needed.</p>
<b>Target Group</b>	<p>Organisations currently leading the NSDI and INSPIRE process at national level in their respective country should steer the processes related to legal issues with a view to an open data government policy. However both the legislative framework and the contractual arrangements need to be developed in a participatory process involving all NSDI stakeholders.</p>





<p><b><u>Expected Impact</u></b></p>	<ul style="list-style-type: none"> <li>• Existence of a clear legal framework will speed up NSDI and INSPIRE implementation, as clear rules will make it easier for NSDI stakeholders to join (e.g. offering a harmonized schema, which clearly informs about what is being offered under which conditions as e.g. Creative Commons provides it. This means that the individual business models of the organizations could almost remain and NSDI community would concentrate on improving the communication (and eventually the enforcement) of the respective Terms of Use.</li> <li>• Important element for speeding up of EU accession process,</li> <li>• More legal security for data providers,</li> <li>• Contribution to economic development.</li> </ul>
<p><b><u>Risks resp. Problems</u></b></p>	<ul style="list-style-type: none"> <li>• No resources or no willingness to prepare the draft law and the draft data sharing agreement,</li> <li>• No support from the political/ governmental level in the individual countries -&gt; draft law is not enacted,</li> <li>• Law is enacted but not implemented, e.g. due to lack of commitment or funding.</li> </ul>
<p><b><u>Funding</u></b></p>	<p>Development of the legal framework is not very cost intensive, however a minimum of personnel and other resources is needed Funding from government budget or via an international project</p>
<p><b><u>Milestones</u></b></p>	<ul style="list-style-type: none"> <li>• Elaboration of a draft law and draft data sharing agreement by a working group,</li> <li>• Stakeholder Consultation,</li> <li>• Advanced version ready for governmental and parliamentary decision making process (law only),</li> <li>• Law enacted and implemented,</li> <li>• Data sharing agreement signed by stakeholders and applied.</li> </ul>
<p><b><u>Success criteria</u></b></p>	<ul style="list-style-type: none"> <li>• Political will/ prioritising at political level,</li> <li>• Legal framework reflecting good EU and regional practice,</li> <li>• Commitment of lead institution (“competent body”) to steer the process.</li> </ul>



## 7 ANNEX: NATIONAL COUNTRY PROFILES

This Annex comprises National Country Profiles for the seven Beneficiary Countries.

Each National Country Profile consists of:

- Additional Questionnaire
- Table of Concordance (ToC)
- Implementation Questionnaire (IQ)

