Action plan
for the Establishment and Operationalization
of the Common Territorial Monitoring Framework in the
Republic of Macedonia

Draft
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1. Introduction - Common Territorial Monitoring Framework: Establishment of a
Monitoring Tool for Territorial Change Management

The Common Territorial Monitoring Framework is established in accordance with monitoring practices of partner states in this Project as a model for the improvement of the existing territorial monitoring system. It should provide the basis for reporting in respect of territorial attractiveness, using at the same time both common and specific indicators for each state. Figure 1 below gives a summarized description of this approach.

Figure 1: Features and possible functions of the Common Territorial Monitoring Framework

Common Territorial Monitoring Framework has two basic functions:

- Creating a shared framework between countries to monitor territorial trends (territorial capital and its assets) and
- Managing the process of relevant policy implementation (including monitoring the effects/outcomes).

Territorial monitoring implies a need for periodic assessment of territorial changes based on policies implemented and their use by various entities that finally generate some territorial changes.
This Action Plan has been prepared on the basis of several products jointly developed with the stakeholders including:

- Assessment of the current Territorial Monitoring System;
- The estimated common indicators for SEE and specific indicators for Macedonia;

The Action Plan focuses on three aspects that are key to achieving the expected outcomes of this Territorial Monitoring Framework:

1. **Supporting the organizational process** to establish a Common Territorial Monitoring Framework in each of the specific institutional contexts in terms of providing feedback on the monitoring outcomes under the ongoing/normal policy management.

2. **Identifying the needs for strengthening the capacity** for evaluation of outcomes and impact of policies related to territorial attractiveness at the trans-national and national levels.

3. **Determining the most appropriate modalities of reporting and communication**.

Figure 3 below presents the steps for the establishment and operationalization of a Common Territorial Monitoring Framework.

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1 This conceptual model is based on the so-called DPSIR model (driving forces / pressures / state / impact / responses) of the European Environment Agency, 1998, developed within the strategic environment impact assessment framework, but adapted and expanded in accordance with the territorial change factors.

This Action Plan addresses the four basic elements in accordance with the general features of CTMF resulting from Attract-SEE Project:

- **Challenges related to the legal framework**
- Is there a common coherent information system (regulated competencies, formats, time-frame, procedures)?
- Other limitations regarding the use of data.

- **Challenges related to the technological framework**
- Existence of adequate software, databases and standards - a critical issue is to provide interoperability between monitoring systems!
- CTMF by its concept can be a point of integration of monitoring systems.

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2CTMF is designed as a general model that should be adapted to the context, while, on the one hand, ensuring generation of comparable partner level results useful for territorial attractiveness assessment, and on the other hand, incorporating the Territorial Monitoring Framework into the existing operational monitoring frameworks of each of the partners in order to avoid overlap and ensure the highest utility value of existing information, as well as limit/focus the need for new data and information generation.
- **Challenges related to the financial framework**
- CTMF does not require many employees - because it is about the need to network institutions that generate relevant data.
- How much funds are allocated for sectoral monitoring systems - what are the needs?

- **Challenges related to the institutional framework**
- To strengthen both coordination and integration (it is about a frame) - organizational challenge? Need for some form of Steering Committee/Network or similar body that would undertake this responsibility.
- To create conditions for addressing the conflicting policy objectives.

The expected outcome of CTMF establishment is for the Framework to be tailored to the specific context of the country while providing comparable results that would be usable/useful for territorial attractiveness assessment at the trans-national level.

Figure 4 below presents sectoral monitoring systems adequate to establish a Territorial Monitoring System in the Republic of Macedonia.

**Figure 4: Possible elements of TMS in the RM**

![Diagram of Territorial Monitoring System in the RM]

- National spatial data infrastructure – Real Estate Cadastre
- MEPP - Environmental Information Center (central database)
- MEPP – Spatial Information System and National Biodiversity Information System
- State Statistical Office (regular statistical publications with numerical data and indicators)
The following is an elaboration of the needs to be addressed through appropriate actions regarding each of the elements of TMS in the RM (the needs assessment was based on the analysis of available and relevant materials and interviews conducted in the period of 27 - 30 May 2014, and based on the findings of the Third Workshop held on 12 June, 2014)

2.1 National Spatial Data Infrastructure - Real Estate Cadastre

Legal framework

In the coming 12 months, it is envisaged to prepare and adopt the relevant by-laws/regulations arising from the Law on National Spatial Data Infrastructure including:

- Rules on Meta-data;
- Interoperability Regulation (specifications and protocols for data exchange);
- Rules on Network Services;
- Agreements on Spatial Data Exchange; and
- Fee Lists.

The adoption of the Law on National Spatial Data Infrastructure enabled to reach a degree of harmonization with the EU INSPIRE Directive of approximately 55%. The adoption of relevant by-laws/regulations will increase the level of harmonization, but at the same time, it will create a challenge in terms of their implementation, and thus the need for additional technical assistance and financial resources, which could be addressed through this Action Plan or through an appropriate project.

Currently, the Agency for Real Estate Cadastre is finishing the procedure of hiring a business entity that would design the NSDI Geoportal. The next priority step is to determine precisely institutions’ responsibilities for each of the 32 sets of data, i.e. to establish a service network and build the necessary capacity for the optimal operation of the system. The preparation of the 32 sets of geospatial data will require additional technical and financial support.

In parallel with the NSDI establishment, the Real Estate Agency has begun a process of preparing a Study to appraise the value of real estate and land, including a price inventory. This appraisal serves the purpose of increasing the attractiveness of country’s territory and the Study recommendations can be translated into additional actions as part of this Action Plan.

Technological and financial framework

Responsibilities and activities envisaged by the Strategy and the Law on NSDI are projected in the State Budget, and additional funds, at least currently, are provided through the World Bank.

The Agency for Real Estate Cadastre as an institution responsible for establishing, maintaining and providing public access to the NSDI Geoportal, using funds from the World Bank has initiated a procedure to establish the NSDI Geoportal (the implementation is envisaged to finish in the second quarter of 2015). It is anticipated that meta-data shall be prepared according to standards: ISO 19115, ISO 19119 and 19135.

Currently, the Agency for Real Estate Cadastre is drafting the Rules on Meta-data using an international consultant. As part of this activity, a request was sent to the
Standardization Institute to incorporate ISO standards 19115, 19119 and 19135 in the national inventory of standards as a prerequisite for the applicability of this by-law.

Full digitization of data is envisaged for the period until the end of 2016, and for that purpose, additional funding and technical assistance is required.


Legal framework

The Law on Spatial and Urban Planning and the Law on Implementation of the Spatial Plan of the RM require amendments in order to provide specific new responsibilities for planning entities and other relevant information sources. Adjustment, processing and delivery of data is necessary according to the requirements of the Territorial Monitoring System of the Republic of Macedonia, and that means modification of the Rules on the Preparation of Annual Report on the RM Spatial Plan Implementation. This adjustment should help establish System maintenance activities and efficient dissemination of information for spatial development monitoring.

There is an evident need for periodic assessment of territorial changes based on policies implemented and their use by different entities that generate territorial changes.

It is deemed necessary to provide an obligation for a periodic (every 2 or 3 years) review of the RM's Spatial Plan based on information obtained from the Report/s on the Implementation of Macedonia's Spatial Plan, which would create conditions for territorial monitoring. In order to illustrate this claim and to design an appropriate new activity, a chart (Fig. 5) is presented regarding the inevitable way of managing the spatial planning process, i.e. sequencing the steps thereof:

Figure 5: Spatial planning process
The Annual Report on the Implementation of RM’s Spatial Plan lists the spatial status and should be integrated with the Environmental Status Report, which is separately sent to the European Environment Agency. In this context, a need has been identified to amend the Rules on Preparation of the Environmental Status Report and the Rules on Preparation of the Annual Report on the Implementation of RM’s Spatial Plan.

Also, a need for complex assessment of the status and specifics of Macedonia has been identified in order to draw arguments for amendments to the current Law on Spatial and Urban Planning, i.e., for enactment of a new Law that would establish a new System of Spatial and Urban Planning and change the methodology of preparation and adoption of Spatial and Urban Plans.

For better application of territorial monitoring, it is necessary to define arrangements of spatial data exchange at a closer (municipal) and wider (regional) territorial level.

Consequently, the above needs should be addressed through focused technical assistance and additional funding.

The Third National Workshop concluded the need for principled application of laws and regulations.

Technological and financial framework

In 2014, State’s budgetary allocation for spatial planning has been drastically reduced and does not enable the completion of started projects, or maintenance of the existing infrastructure. As a result, the Annual Report on the Implementation of RM’s 2013 Spatial Plan will not be prepared (MKD 3,500,000 are lacking), but there is certain knowledge that this need can be met by the preparation of a Three-year Report that as such will offer more complex and comprehensive overview of spatial changes.

For the realization of their current responsibilities and future duties with regard to territorial monitoring, the Department of Spatial Planning will have to procure new hardware and software, which implies delivery of appropriate training. To that end, conditions for the analysis of the Territorial Monitoring System architecture would be created in order to be able to build special equipment and procedures for the integration of data generated at the local level, which is noted as a weakness at this point. In fact, the priority needs recognized by local authorities and their addressing will be aimed at establishing the Territorial Monitoring System, and for each Local Unit it will serve the purpose of determining the level of territorial attractiveness of its territories, areas, or localities.

It is expected that in the name of cooperation between neighbors and stakeholders in the region, transfer of good practices from the countries in the region and those that have mutual common characteristics shall be performed. Capacity building at both national and local levels can envisage study visits of officials from Macedonia to the relevant countries and also training in this issue delivered by foreign experts, which requires adequate financial support.

There is an evident need for creating a professional team for strategic environment impact assessment (SEIA) with the aim to fully equip the existing specialized Unit at the Department of Spatial Planning.

2.3 Ministry of Environment and Physical Planning - Environmental Information Center (Central Database)
Legal framework

The Environmental Law (Art. 40) provides for the adoption of a Decree on the form, content, and manner of maintaining and managing environmental data.

The Annual Report on the Implementation of RM’s Spatial Plan that lists the spatial status should be integrated with the Environmental Status Report, which is separately sent to the European Environment Agency. Hence the need to amend the Rules on Preparation of the Environmental Status Report.

Technological and financial framework

A critical challenge is the lack of budget funds for the operation of the Environmental Information Center. To improve its hardware in the short term, approximately 50,000 Euro are needed, while for software procurement, about 30,000 Euro are needed.

Of particular importance is to integrate adequately the sub-elements of the national database of air, biodiversity and waste data into a fully functional central database.

The Information Center has initiated the preparation of a smaller project funded through the IPA Unit for Assistance and Preparation of Projects aimed at drafting a larger project for the establishment of an integrated central environmental database, whose application would be submitted for funding through IPA 2014 - 2020. In fact, the goal of this major project is to establish an integrated Macedonian National Environmental Information System (MNEIS). The project is estimated at approximately 2.5 million Euro.

The project would focus on the following:

- Conceptualization of system's architecture (data collection, data analysis);
- Identification of steps for system establishment;
- Definition of technical procedures for the integration of existing environmental data in the central database and effective data management;
- Definition of the central database system's structure.

The first priority activity is to make a comprehensive assessment of the existing databases and IT infrastructure, to assess the techniques, standards and procedures for data collection and data management, and the key organizational issues including the current situation with human resources and training needs. These findings would serve as a basis for the design of the Environmental Information System or more specifically, for the design of appropriate measures, time-frame, number and qualifications of human resources necessary, adequate organizational structure and the manner of funding, i.e. reaching a sustainable operation level of the System.

Other specific activities under this project are the following:

- Further development of the central database;
- Design of a "front end" application of the National Environmental Information System;
- Development of GIS module in MNEIS; and
- Integration of the existing data system in MNEIS.
2.4 Ministry of Environment and Physical Planning - Spatial Information System

Legal framework

A project proposal for standardization of geo-spatial data relating to the environment in terms of air and water status has been prepared, i.e. all data serving the purpose of the National Biodiversity Information System.

It should be emphasized that the primary responsibility and therefore liability for the operation of this system is given to the MEPP’s Environment Directorate. The role of the Spatial Information System (SIS) Unit is of technical nature, i.e. it is related to the generation of geo-spatial data including maps of Protected Areas. A key challenge in this context is the mapping of habitats of wild flora and fauna in the country based on the relevant EU Directives.

Another challenge faced by the SIS Unit is the delivery of adopted spatial plans in a PDF format that does not allow further analyses, interventions and modifications and hence the need for clarification of this procedural step.

Currently, the SIS Unit employs only two people, which is below the necessary minimum of human resources.

Technological and financial framework

There is a need for new hardware to achieve the elemental technology standard, compatible software (to prepare and issue spatial planning requirements) and adequate training and specialization. The budget for these activities would be approximately 50,000 Euro.

The administration of the National Biodiversity Information System web-portal and the preparation of GIS portal (containing meta-data) require additional 15,000-20,000 Euro. In this way, better reporting and data access would be enabled.

2.5 State Statistical Office (Regular Statistical Publications with Numerical Data and Indicators)

Technological and financial framework

The medium-term need to strengthen the State Statistical Office's institutional capacity is emphasized, or more specifically:

- Achieve sustainability and improve the capacity of human and technical resources;
- Strengthen the capacity for workflow management;
- Strengthen the capacity for EU membership negotiations; and
- Rational use of available funds, including the ones from Pre-Accession Funds.

The SSO’s Strategic Plan for the achievement of planned priorities and objectives defines the following programs: Sectoral Statistics; Statistical Infrastructure Upgrade; Improvement of Collaboration with Users; and Strengthening the Coordination of the National Statistical System. The implementation of all programs requires adequate human and financial resources. The Statistical Infrastructure Upgrade Program is singled out as a key priority.

The 2014 Budget of the State Statistical Office amounts to approximately 3.18 million Euro.

In addition to the actions related to the operation of existing TMS elements in the RM, it is advised that the Ministry of Local Self-Government update the database of municipalities and the Ministry
of Transport and Communications create a database of detailed urban plans adopted by Municipal Councils. Also, the Ministry of Environment should initiate the creation of a database of geological diversity, taking into account the exceptional geological wealth which is a positive factor of territorial attractiveness. A special challenge is to continue with the activities for the establishment of an appropriate legal and institutional framework in order to reduce the adverse climate change effects.

2.6 Institutional Framework for the Coordination of the Establishment and Operationalization of the Common Territorial Monitoring Framework in the Republic of Macedonia

The recently adopted Law on National Spatial Data Infrastructure (NSDI) of the RM (February, 2014) lays the foundations of the policy coordination process regarding the creation of an adequate Territorial Monitoring Framework/Territorial Monitoring System. It also presents the INSPIRE Directive transposition into the national legislation, and the establishment, maintenance and management of the NSDI is done in accordance with the NSDI Strategy.

Under this Law, a body directly responsible for the establishment and management of NSDI is the NSDI Council (to be established by the end of July, 2014) headed by the Deputy Prime Minister for Economic Affairs (who also chairs the National Council for Sustainable Development and the National Council for Regional Development). The NSDI Council has an executive role that involves establishing an NSDI policy, mediating the communication with the responsible Minister, making strategic decisions on NSDI, as well as overall streamlining of activities by ensuring the necessary resources on the part of relevant stakeholders, as part of its Annual Implementation Plan.

NSDI Council’s Membership consists of representatives of the following key stakeholders:

1) Ministry of Justice;
2) Ministry of Defence;
3) Ministry of Interior;
4) Ministry of Economy;
5) Ministry of Agriculture, Forestry and Water Management;
6) Ministry of Local Self-Government;
7) Ministry of Culture;
8) Ministry of Transport and Communications;
9) Ministry of Environment and Physical Planning;
10) Ministry of Information Society and Administration;
11) Secretariat for Implementation of the Ohrid Framework Agreement;
12) State Statistical Office;
13) Agency for Real Estate Cadastre;
14) Agency for Spatial Planning;
15) Central Registry of the Republic of Macedonia;
16) Center for Crisis Management;
17) City of Skopje; and
18) Economic Chamber of the Republic of Macedonia (Association of Utilities or Association of Information and Communication Technologies).

The NSDI Committee is an NSDI Task Force whose role is to manage the available resources to be used efficiently and effectively for the purpose of achieving the NSDI vision, mission, objectives, and policies. This body is also responsible for the NSDI Management Unit, and the NSDI Committee coordinator is also a member of the NSDI Council. The Committee is responsible for coordinating and monitoring the implementation of the Annual Program for NSDI Strategy Implementation.

NSDI Working Groups carry out research, offer expertise and have an advisory role that includes providing recommendations in order to support the NSDI Council in the following areas:

1. Institutional and legal issues;
2. Technological issues;
3. Communication and capacity building; and
4. Business model.

Spatial planning experts play an important role in NSDI Working Groups.

It is possible for the establishment of the TMF/TMS to engage the Working Group on Institutional and Legal Issues or upon NSDI Committee’s decision, to create a separate Working Group.

Due to the need for intensive local action in the establishment of the TMF/TMS, it is advisable to strengthen the role of the Association of Local Government Units in Macedonia - ZELS, in a manner that would ensure the participation of ZELS in the work of NSDI Council, NSDI Committee and Working Groups. To accomplish this new role, ZELS will need adequate technical and financial support.

The Agency for Real Estate Cadastre performs a Secretariat function for the above bodies.

The Office of the Deputy Prime Minister for Economic Affairs is best positioned to lead the coordination of the process for CTMF establishment in the RM.

Charing the NSDI Council, the Sustainable Development Council and Regional Development Council enables coordination of:

- Technical and technological interventions (use of spatial information and data) in terms of the Territorial Monitoring System/Framework through the NSDI Council;
- Policy intervention to adjust/improve/harmonize and resolve the conflicts between policy objectives in order to avoid conflicting territorial effects, through the Council for Sustainable Development;
- Top-down policy streamlining, i.e. towards regional and local levels of government, through the Council for Regional Development.
The NSDI Council is quite suited to act as a focal point and participate in the Common Framework between partner countries, in terms of reading and recognizing the main territorial trends in different perspectives adequate to the territorial capital dimension.

Councils for Regional Development (established in accordance with the Law on Balanced Regional Development) can be considered as "administrative bodies" for territorial development of Planning Regions and municipalities, and as entities for building both "horizontal" and "vertical" cooperation within the policy coordinationsystem.

If this vertical arrangement is ensured, then coordination and realization of integrated spatial development will be enabled across different policy levels. Planning Region Councils are also well positioned to deal with issues related to spatial planning in a transboundary context.

If this arrangement is set up, it will be necessary for the employees in the Office of Deputy Prime Minister for Economic Affairs to acquire appropriate knowledge and skills through the delivery of comprehensive training and other forms of technical and financial support.

2.7 Project Proposals for the Period until 2020

According to our observations, it would be most adequate for the coming projects to further be closely related to the objectives of the EU Territorial Agenda including:
• Strengthening territorial cohesion;
• Ensuring sustainability and sustainable energy;
• Intercepting/preventing climate change;
• Ensuring safe food;
• Addressing the challenges related to biological diversity protection; and
• Promoting urban regeneration.

During the Third Workshop, the commitment to streamline policies top-down, towards both Planning Regions and municipalities was confirmed, since in a decentralized political system, the sub-national local authorities are best placed to implement concrete measures and activities for the preservation and further development of territorial capital. One of the next projects could, in an integrated manner, investigate the needs of, and offer solutions to the priority needs of local authorities organized in the Association of Local Government Units of Macedonia - ZELS, in order to increase the territorial attractiveness of their territories, areas or localities.

With regard to the Spatial Data Infrastructure and Territorial Monitoring System, development of highly specialized skills in the responsible national and sub-national institutions is required. Therefore, one of the projects or project components could be an integrated program for capacity development that would consist of purposeful training modules focused on the transfer of advanced knowledge and skills for generation and management of spatial data and other relevant data. In this sense, the issues of vertical and horizontal coordination and interoperability could be addressed.

A specific component of one such project could be focused on geo-spatial and relevant numerical data producers, i.e. their needs, in order to create methods for effective and efficient overcoming of drawbacks through the application of best practices. To that end, measuring the sustainability and accountability of investments in sophisticated geo-spatial monitoring systems is of utmost importance.

Another component could address the challenge of using available geo-spatial data for better governance/management. There is a need to raise awareness of data users, i.e. decision makers and stakeholders, about the value of geo-spatial data in public policy-making and process coordination.

The creation of innovative public-private partnerships and partnerships with civil society and the academia/research sector can spur development, maintenance and management of specific Territorial Monitoring System aspects that are closely linked with public services. In several national institutions, pilot regions and/or municipalities, by an overview of geo-spatial indicators, social public audit can be designed and enabled. In addition, purposeful geo-spatial data sets can be produced in order to help the development of the private sector and its economic activities.
All these initiatives could be upgraded by intensive networking and creation of easily accessible knowledge sharing platforms based on ICT application.

One more project could support the process of further transposition of the INSPIRE Directive into the national legislation.

Another topic that deserves to be addressed through a specific project is the environmental capital, because of its extraordinary importance to the territorial attractiveness. This territorial capital asset is "most problematic" in Macedonia due to the pressures created by the economic development, including the development of the sectors of tourism, energy and industry. The deterioration of the environment status can also accelerate the population’s migration, both internal and external one. The situation with the environmental capital is not much different from other SEE countries, so the exchange of good practices and lessons learned can be very useful in this regard.