D.T2.6.1: REPORT ON ADAPTATION PLANS OF DSS IN THE PROJECT FUAS

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Content

1. Introduction

In the LUMAT project, adaptation plans for Decision Support Services (DSS) will be created in the pilot FUAs as a part of the Action Plans for integrated environmental management. Since adaptation is to take place in existing administrational structures, the LUMAT partners were asked to report on the existing circumstances. The following questions are answered for each LUMAT partner region:

1. **Current IT-situation in the Project-FUA** - what type of IT-system is currently used by stakeholders in the FUA area?
2. **LUMAT adaptation** - how will the LUMAT Decision Support System be integrated in this IT-system and be used by stakeholders?
3. **Future perspective** - how are the needs of stakeholders addressed? How are they served by the new solution?

The responses to these questions form the content of this deliverable and are explained in the following sections.

1.1. Austria - FUA Voitsberg

All communities in the Lipizzanerheimat have access to GIS Styria. On the one hand, data can be downloaded via this GIS Styria, on the other hand, it is at the same time the GIS platform for the data transfer by specialized agencies/organizations/ institutions, such as for example spatial planners. In the 5 communities themselves, however, the data management (data processing, specific data analysis, representations, etc.) is carried out by the responsible spatial planner (civil engineer, 3 different spatial planners are responsible for the 5 municipalities). The access to GIS Styria by other stakeholders also runs through a defined interface, data format is usually the shapefile format. In the future, the new "Urban Regional Spatial Management (SRFM)" (this will be launched in early 2019) will provide a coordinated approach.

Following its acceptance by the REV, the LUMAT Decision Support System will become part of an integrated environmental and land use management system based on the GIS Styria, and will be supplemented with specific databases (such as threats) and specific queries for the Lipizzanerheimat. Use by other stakeholders is clarified via the REV.

The continuation of the topics developed in LUMAT after the end of the project should take place via the "Urban Regional Space Management (SRFM)" - on the one hand the municipalities can access a service, on the other hand there is also a competent point of contact for all stakeholders.

1.2. Czech Republic - Ostrava FUA

The Regional Authority of the Moravian-Silesian Region currently uses an IT-system based on GIS platform for land-use management in the FUA Ostrava and the rest of the region.

LUMAT Czech republic is going to update this system with LUMAT information (DSS-layer of brownfields with all relevant information) to upgrade the existing system into an “integrated environmental and land-use management” system, to make brownfield sites more visible and to work with them efficiently in future planning. The first step is a stakeholder agreement on environmental management and cooperation between its departments (e.g. regional development, master planning and environment). The second step is collection of all important up-to-date information on brownfields in the region. The third step is the insertion of brownfield information into the map layer and its interconnection with the IT-system of the Regional Authority.

Regional land use IT-platform is available online and accessible to the public. Through these activities the LUMAT information can reach all of the different stakeholders in the FUA Ostrava and the whole region and it may serve as a decision support system and an evaluation of ecosystem services in many different situations and aspects. The work was carried out through a continual dialog with the Regional Authority.

1.3. Germany - FUA Green Ring Leipzig

The City administration of Leipzig and Green Ring of Leipzig currently both have access to an IT-system supported by GIS application for land use management in the Green Ring. LUMAT Germany is updating this system with LUMAT information (threats, Decision Support System, Ecosystem Services) to renew the existing system into an “integrated environmental and land use management” system. The first step for this was to reach a stakeholder agreement on environmental management, including goals and the threats that are important to consider for evaluation. The second step is the recognition of the current IT-system that is being used by decision-makers. The third step consists of the gathering of LUMAT information in the pilot area. The LUMAT information on soil threats and environmental management is to be integrated with one another so that important conclusions can be made on the basis of intersecting threats and soil information. Through the activities the LUMAT information will reach a wide range of the different stakeholders in the territory of the GRL (which is to ensure the integration into the processes of the GRL). The integration of information serves as a Decision Support System for integrated environmental management and allows for an initial evaluation of ecological system services. The work was carried out through a consequent and continual dialog process in the GRL.

1.4. Italy - FUA Chierese-Carmagnolese

The Italian FUA is part of the Metropolitan area of Turin and it is composed by 22 municipalities. Currently, data collection and management of the whole area is operated by the LUMAT partners Città Metropolitana di Torino. All CMTo's system is based on GIS technology. Local spatial data are collected and managed by each municipality by the use of individual IT system, which are commonly CAD systems.

Through the LUMAT project, all the 22 municipalities will have the possibility to access to a unique GIS database which includes all environmental spatial data of the whole FUA. The unique database is uploaded in InViTo, the web map-based platform which is both GIS tool and sDSS. Through the use of InViTo, the municipalities of the Italian FUA can access to all environmental spatial data and work with this information in order to build scenarios, evaluate risks and opportunities, and take decisions.

Local technicians have been trained on the use of InViTo in order to make them to use the tool.

For the near future, a new version of the tool is expected with new improvements based upon the feedback of local stakeholders and the LUMAT partnership.

1.5. Poland - FUA Ruda Slaska

In accordance to the Geodetic and Cartographic Law Act, each FUA member manages county geodetic and cartographic resource. On the basis of this resources each county has developed spatial information system, which is usually supplemented with county/city specific data. Together the city spatial information systems constitute loosely linked system of FUA, which serve as a platform for cooperation within FUA members including projects like LUMAT.

The LUMAT Decision Support System take use of this FUA system in terms of available spatial and non-spatial data, projects and stakeholders coming mainly from cities belonging to the FUA. LUMAT DSS integrates data dispersed among city spatial information systems and integrates them within dual system composed of the HORTUS Company and IETU. The first uses CAD software (ARCADIA) for landscape design and the second ArcGIS and qgis software.

In the case of the LUMAT project, solutions developed with help of HORTUS, IETU and all involved stakeholders were transferred to and integrated with FUA system operated by IETU team. Based on the above data, the implementation of InViTo for Polish FUA has been realised. The InViTo system serves as a communication platform between stakeholders and the general public. In the future this system will be supplemented with data which is deemed important for the cities.

1.6. Slovakia - FUA Trnava

The city of Trnava, as a major stakeholder in the FUA, is currently using two main IT-systems for internal purposes: Bentley Microstation and Cora Geo WebGIS. During the LUMAT project the LUMAT partners have been using the InViTo tool to illustrate the Slovakian Action Plan.

During the trainings for the public, the LUMAT partners have introduced the InViTo tool to other stakeholders in FUA Trnava. It is planned to use this tool as Decision Support System for decision-making in the FUA organisation (ZOMOT). InViTo will not be integrated in terms of being part of other software application, but the goal is to keep it as a publicly accessible autonomous system.

InViTo has been used up to now mostly for the depiction of land use conflict areas. After adding more relevant information-bearing layers, the goal will be to use the application for setting priority areas to be solved within the FUA and for decision-making during other integrated projects.

1.7. Slovenia - FUA Kranj

Within the FUA Kranj, a majority of municipalities are using the GIS platform PISO, the Spatial Information System for Municipalities (Prostorski informacijski sistem občin, https://www.geoprostor.net/PisoPortal/Default.aspx). The City of Kranj is the only municipality within the FUA Kranj using different GIS environment, the iObčina GIS platform (https://gis.iobcina.si/gisapp/Default.aspx?a=kranj). The third important platform for the FUA Kranj is a national database of brownfield sites (http://crp.gis.si/bf_map). Despite different platforms, all data is available also in ESRI environment as shp format and it was collected and used in the analytical part of the Action plan for the FUA Kranj.

The main DSS tool used in the FUA Kranj was Invito GIS tool. With the Invito GIS tool, we were able to integrate all data from different GIS data sources mentioned above. Integrated data with graphical representation was used to better communicate proposed actions with stakeholders. The LUMATO tool was presented to local authorities within the FUA Kranj as a possible additional DSS tool which can be integrated with their existing GIS environment.

2. Conclusion

The existing IT-situation in the FUA areas is important to study so that the partners are able to plan for the continual use of the information created in the LUMAT project also in the future. In this deliverable, it has been established that the LUMAT partners often utilize GIS applications for the analysis of environmental information. These systems are sometimes inter-municipal in structure and have shared access. Presenting LUMAT information on such servers will speed up the integration of LUMAT results on the FUA level. In other FUA areas, the integration will have to take place in a separate step, and the inclusion of threat information is taking place by the initiative of the partners. In either case, care has been taken to ensure that the type of information gathered and created by LUMAT is also adapted for use in the partners regions by the stakeholders.