Interreg
CENTRAL EUROPE

LUMAT

European Union
European Regional
Development Fund

IMPLEMENTATION OF SUSTAINABLE LAND USE IN INTEGRATED ENVIRONMENTAL MANAGEMENT OF FUNCTIONAL URBAN AREAS

LUMAT NEWSLETTER #6

YEAR 3 | JULY 2019

MAY 2016 - JULY 2019

www.interreg-central.eu/LUMAT.html

Cooperation in land management for more livable places

LUMAT PROJECT YEAR 3

WHAT'S GOING ON

The present edition of the project newsletter is the last one. We have still few months to finalize all the work of LUMAT. But most of the project results have already been presented at the final conference in Katowice in April 2019. We have shown how to integrate environmental land management strategies and instruments into functional urban areas development.

The action plans elaborated for 7 pilot regions have presented examples of integrated land management strategies which are applied in various types of functional urban areas typical for Central European countries. There are: large metropolis, big city with green areas but also many brownfields still existing, post-industrial region with degraded sites requiring risk management program.

But there are also smaller cities surrounded with communities which altogether create a functional area which also needs a strategy for sustainable land management. There is also a group of three cities which constitutes a pilot functional urban area as a part of the large agglomeration.

We do hope that all the LUMAT outputs, including also pilot actions, training materials and final recommendations to policy makers will support significantly the process of improving integrated land management in functional urban areas of Europe.

Anna Starzewska-Sikorska
Project Coordinator
Institute for Ecology of Industrial Areas (IETU)

NUMBERS AND FACTS

200 PEOPLE ATTENDING THE FINAL CONFERENCE IN KATOWICE

1 PROMOTIONAL VIDEO

3 MONOGRAPHIC PUBLICATION ON LUMAT

7 LETTERS OF COMMITMENT SIGNED IN THE PARTNER COUNTRIES

63K SQM OF LAND REMEDIATED RETURNED TO PUBLIC USE IN RUDA SLASKA

30K SQM OF LAND REMEDIATED RETURNED TO PUBLIC USE IN TRNAVA

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NEWS
FROM THE PROJECT

FINAL MEETING REPORT FROM KATOWICE

15-16|04|19

POLAND

Towards the Integrated Environmental Land Management in Central Europe - LUMAT Final Conference, held on April 15-16, 2019 at the MuzeumŚląskie in Katowice. The conference brought together a group of regional and local public authorities, leading scientists and practitioners interested in Integrated Environmental Land Management in Functional Urban Areas (FUAs).

Modern cities, especially in Central Europe, face many challenges such as urban sprawl, soil sealing, brownfields or the necessity of protection of natural spontaneous species occurring on degraded areas. Additionally, the cities' administration borders do not reflect physical, social, environmental or cultural links in cities. Therefore, functional urban areas are created (FUAs) which constitute spatially continuous settlement systems made up of separate administrative units, containing urban compact area with surroundings functionally connected with the urban core.

"Solving of FUAs' problems is challenging for the cities' administration as functional urban areas do not constitute formal administrative units. Apart from the necessity for integrated planning and implementation of various activities they require also forming partnerships including subjects on various governance levels for the implementation of these actions" - emphasized dr. Anna Starzewska-Sikorska, the project coordinator.

The final conference of LUMAT **'Towards the Integrated Environmental Land Management in Central Europe'** focused on presenting and evaluation of the project results. It was also an opportunity for discussion on the present issues in land management by looking at the land as an environmental resource. Among the participants of the conference were representatives of the Marshal Office of the Silesian Voivodeship, Metropolis GZM, local public authorities, universities, research institutes, infrastructure and service providers,

OPENING BY DEPUTY MAYOR OF RUDAŚLĄSKA - MICHAŁPIEROŃCZYK AND IETU'S DIRECTOR - JAN SKOWRONEK

15-16|06|19

POLAND

Continued from previous page

business support organizations and citizens. The program of the conference was highly diverse thus the conference was attended by more than 100 people. About 200 people took part in the 2-days conference.

The conference program consisted of an opening session and 2 thematic sessions:
1. EU projects vs European policy related to land resources management;
2. LUMAT project solutions – presentation of action plans for functional urban areas.

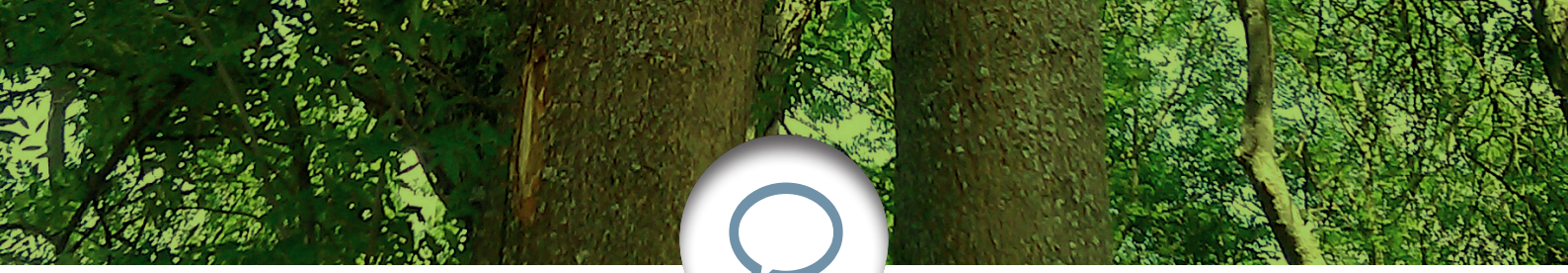
The opening session included e.g. presentation of the INTERREG Programme for Central Europe by Project Officer, Deputy Head of Evaluation and Monitoring Unit - Christophe Ebermann and general objectives of LUMAT project by the Project Coordinator Anna Starzewska-Sikorska, IETU.

Each thematic session included a panel discussion. Morning discussion panel 'Challenges for European Policy concerning land resources management and climate changes' - moderated by the project coordinator Anna Starzewska-Sikorska (IETU) - brought together representatives of Polish, German and Slovenian Ministries, climate change adaptation experts and architects. In the afternoon discussion, during the panel 'What problems still need to be solved, what issues should the future projects concern in the field of sustainable management of land in functional urban areas?' the project partners illustrated their experiences obtained during the implementation of the LUMAT project.

On the second day of the conference, the visits took place to the MuzeumŚląskie at the exhibitions **"The light of history. Upper Silesia over the ages"** and **"Rajza through the museum".** At the end of the conference, the participants went to Ruda Śląska to visit a zinc spoil heap – mount Antonia. The heap has been regenerated to be secure and used for recreational purposes.

IETU - LP

VISIT ON MOUNT ANTONIA, DISCUSSION WITH PROF. KRZYSZTOF ROSTAŃSKI – AUTHOR OF THE INVESTMENT DOCUMENTATION



NEWS
FROM THE PARTNERS

INNOVATIVE APPROACH TO BROWNFIELDS IN MORAVIAN-SILESIAN REGION

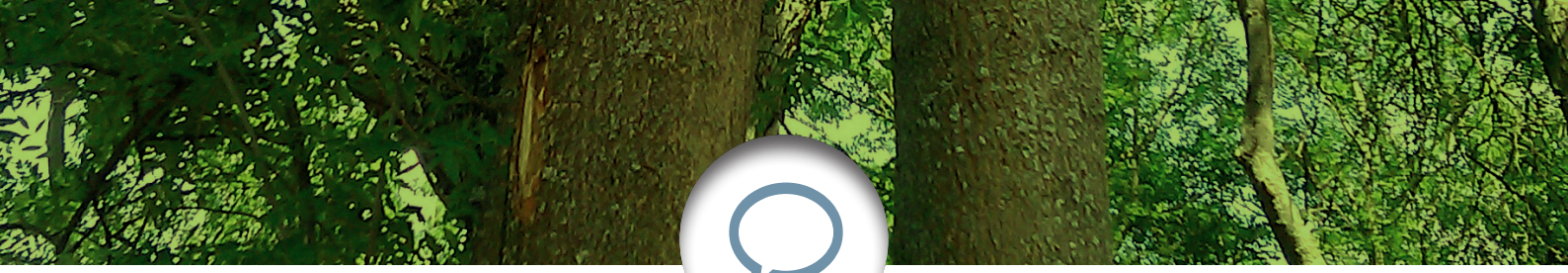
26|02|19

CZECH REPUBLIC

Redevelopment of areas known as brownfields is one of the pillars of environmental management in the Moravian-Silesian Region. As part of the LUMAT project (CE 89 – Implementation of Sustainable Land Use in Integrated Environmental Management of Functional Urban Areas), **an informal platform consisting of regional stakeholders who are interested in brownfield regeneration has been established in the Moravian-Silesian Region since 2017**. Many members of this platform have worked together to prepare an Action Plan for Brownfield Revitalisation and have also participated in workshops and training sessions organized by project partners.

MSID (Moravian-Silesian Investment and Development, a.s.), as a coordinator of these activities, prepared **a unique event on February 26, 2019, which can be called "Stakeholders in the Region present their sites"**. The Ministry of Industry and Trade (MIT), in cooperation with other organizations, is preparing a **new financial instrument to support brownfield regeneration for subsequent business use**. The output should be the installation of industrial zones on former brownfields, which would lead to a reduction of the "greenfield" development.

In order to get a better understanding and insight into the brownfields in our region, **the MIT asked the regional brownfield database administrator - MSID** to present the current



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26|02|19

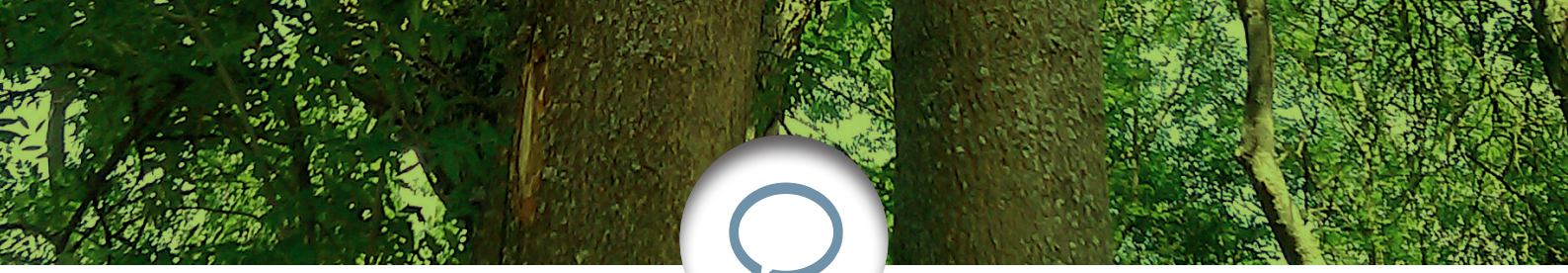
CZECH REPUBLIC

state of brownfields in the region and to arrange a visit to several selected sites in the city of Ostrava.

It is always "better to see something once than to hear about it a thousand times", that is why MSID in cooperation with the IURS has prepared an excursion to brownfields in Ostrava in the presence of their owners, administrators or future investors. **A total of 7 sites were visited in one day**, from contaminated sites through already rehabilitated, re-used, or at the very beginning of their revitalisation, with buildings or after demolitions, to areas with cultural monuments. The representative of the MIT had the opportunity to discuss future plans of the investment, about the expected volume off unnecessary for the investment, about the time frame necessary for the revitalization of individual sites. The MIT representative presented a framework of financial instrument that will be officially launched in 2020 and answered the landowner´s questions.

MSID will continue to monitor the financial instrument development, assist the MIT in any further consultation and instrument promotion. MSID will provide current information to the stakeholders in the region or assist them in using this instrument. The common goal is **to re-use brownfields as much as possible for sustainable development of land management.**

MSID - PP10



LUMATO MEETING IN BÄRNBACH, AUSTRIA

23-25|01|19

AUSTRIA

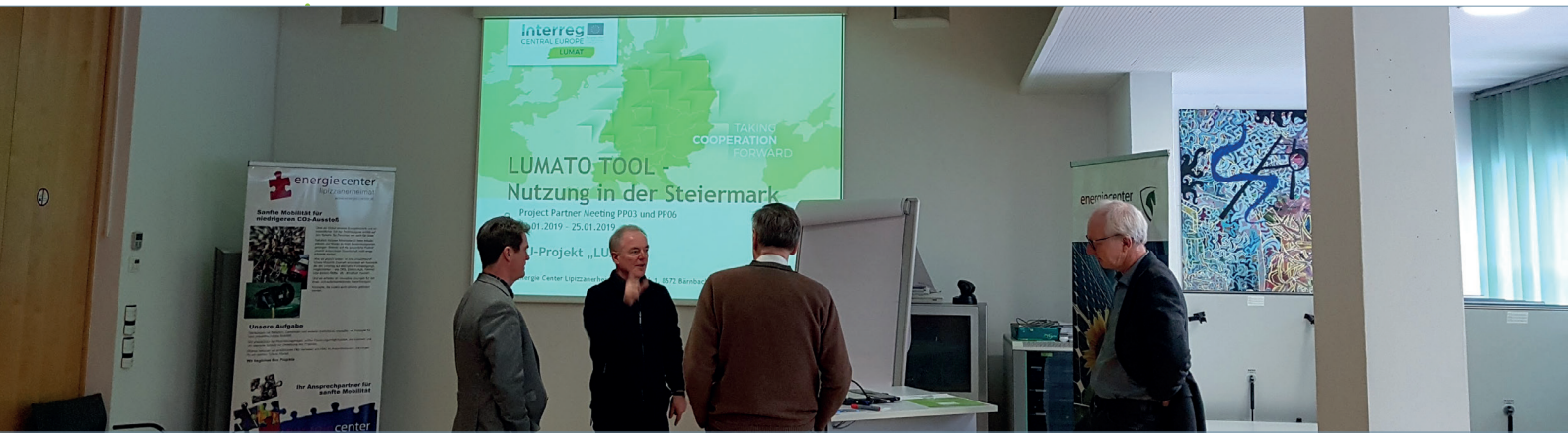
The LUMAT partners from the Saxon State Office for Environment, Agriculture and Geology met with the Austrian LUMAT partners from the EC Energy Centre Lipizzaner Heimat to discuss the international LUMATO approach. Both the German and Austrian cases are dealing with the loss of soil resources from urban sprawl and the necessity of climate adaptation measures to be addressed by sustainable land management.
The partners of the two countries came together during the meeting to discuss the opportunities to improve ecosystem services with measures in LUMATO.

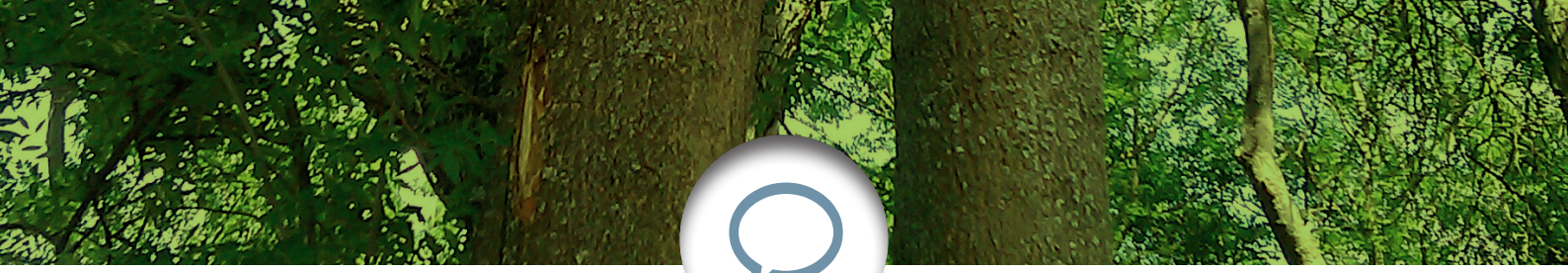
The meeting took place at the end of January 2019 in Bärnbach, Austria. Available spatial data for the Austrian pilot region was gathered for the meeting and compared to the data available in the German case. Soil threats such as brownfields,urban sprawl, flooding hazards and others were collectively discussed. One result of the meeting was that the types of data which were collected in the German project FUA (data from various sources, departments and territorial levels) was found to also be available for use in the Austrian FUA. This was an important step to ensure that the content may serve the goals of integrated environmental management.

The adaptability of the LUMATO approach to various political goals was tested. For example, the Austrian partners underscored the existing political goals that are desired in the Styria region and specifically the FUA pilot area. The opportunities to support such goals with LUMATO, e.g. such as the further evaluation of post-mining area re-use, were discussed and documented.

In general, the meeting showed the adaptability of the LUMATO tool in Central Europe. The tool approach is able to integrate various data types into a standardized grid format to make stakeholders aware of existing threats related to land and soil. This supports the high priority goals of sustainable city and regional planning. The meeting concluded with the creation of LUMATO layers for the Austrian partner for the integrated environmental management in the region.

LFULG - PP3





ENVIRONMENTAL MANAGEMENT: LET'S PLAY!

CZECH REPUBLIC

Within the framework of the LUMAT project, the Czech team members dealt with the idea of making the teaching more attractive and the active involvement of the participants in the course.

Within several previous projects, the creation of a game that forces stakeholders - the ones concerned by the issue - has been proven to informally discuss issues in a broader context.

The inspiration was brownfield quartet - card game about brownfields, which was produced by partner SPECTRA in previous projects and which is often used for educational events.

Two types of games were decided after the working group meeting:

- **First type**: simple, with a minimum of language barrier issues that players can play independently without instructor intervention or teacher.
- **Second type:** was to be more focused on the dialogue between the coach and the workshop participants. For successfully play, the knowledge of local realities is necessary.

FIRST TYPE - LANDUSINO

The first step was to select a suitable basic game that had to be easy to play without requiring too complex rules. In order to be usable in different language versions and to give the teacher the opportunity to discuss the issue and at the same time to allow play without the intervention of a teacher. These parameters were met very well by the domino.

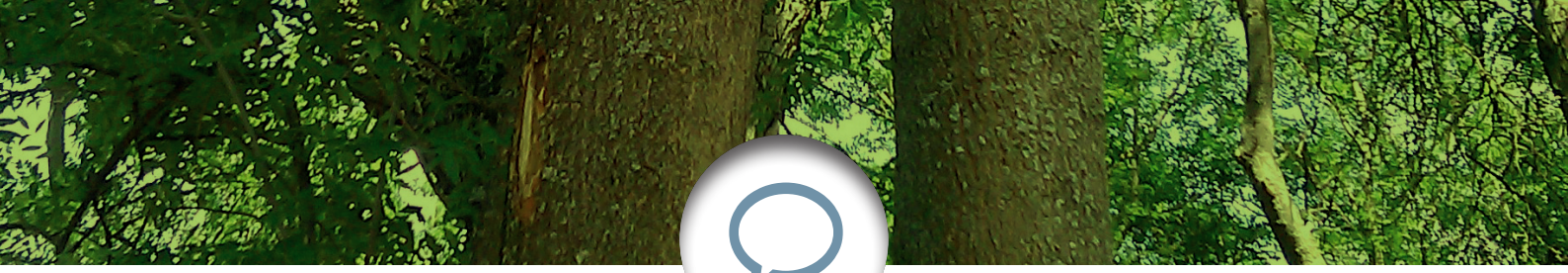
The aim of the game is to discuss and show the complexity of the land use problems. The game is built on domino rules. Individual parts of domino cubes including symbols of the main problem areas:

- agriculture
- green space
- industrial zone
- problems with water
- problems for ecosystems
- empty field - open to discuss the missing aspects

The task of the teacher is to discuss individual problems, verify if the participants of the training understand the whole complex of problems.

SECOND TYPE - BROWNFIELDS STORY GAME

The game is designed for two or more players. At the beginning of the game, a player who has the function of "arbiter" / "storyteller" is selected (usually storyteller is a person which is a teacher). Main task of game is the evaluation about the knowledge get from training. The players have to



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CZECH REPUBLIC

have a knowledge (based on training) about brownfield development, any consequences, problems weaknesses or opportunities for brownfield redevelopment. Players view the photo of the object, the situation shown in the photo. The players' task is to guess the story that is related to the topic in the picture. On the reverse side of the card, (on the other side of the photo), a “real story” is described. If the player guesses the topic and the main part of the story, gains a point. The player with the most points wins a title: “Brownfield story expert”.

This game was created to study brownfield issues and other related issues. The main task of the players is not to collect points, but to learn different stories that at least explain and describe the situations. To better understand environmental management in FUA. Photos and stories in pilot game do not show any specific place or story, they are merely illustrative cases to protect third parties. For trainer is recommendation to prepare their own cards with real stories in FUAs.

Brownfields Story Game is now available only in Czech language. For the purposes of the project, only one set was produced from both games. These games were made using own hands, dominoes cubes, printers. It was not made in multiple pieces or marketed. The photos used are either from IURS member databases or from the Internet (all the images used being released for use without copyright).

The actual games were tested on students of the Technical University in Ostrava as part of their regular education. At first, Landusino was accepted as a child's play. However, after the intervention of the teacher, the students mastered the content of the game very well and discussed various possible links and problems for different types of use. The “Brownfields story” required a much greater input from the teacher, who checked the relevance of the answers. However, after the first round, the students were able to play the game independently and gradually enter the stories. To increase the effect, it would be useful to include several specific stories from the territory.

In fact, both games test participants' training and their understanding of the problem. A teacher in a non-official form, without the need for examinations, can verify that the content of the training has been understood or supplemented with what was not fully understood. Games are not primarily intended for commercial purposes.

IURS - PP9

PILOT ACTIONS AND INVESTMENTS

All the project partners were involved in pilot actions implementation using the common transnational concept developed in the framework of Action Plans, due to specificity of each of the 7 pilot areas. The stories of the 7 action plans have been told during the publications of this newsletter (the last one, Ostrava FUA, is presented in this issue).

Pilot actions demonstrate the implementation of integrated environmental land management based on different actions such as site revitalization plans, business plans for restructuring areas with environmental requirements, mine water use for heating greenhouses.

All these pilot actions are mainly addressed to the inhabitants of these regions who will have better living conditions and standard thanks to improvement of aesthetics, quality and safety of places where they live, work and rest. During the development phase, the target groups were involved giving the possibility to express comments and ideas on the project partly on municipalities website, partly by information events organized in the regions. Also the local and regional public authorities have the possibilities to see the actions which are examples of improving environmental land management and show the implementation of the developed Action Plans.

In the foreground, these pilot actions have a strong demonstration character, showing possibilities and solutions that are transferable and replicable in other areas. Another important reason concerns the experiences made thereby relating to all aspects of the common approach, the acceptance of the actions within the regions and the sustainability of the results.

Physically visible results of the project are pilot actions in form of two investments financed by LUMAT project: they are located in Slovakia and Poland:

- The investment in Slovakia involves restoration of a neglected natural park for sport and recreation zone in location Štrky in Trnava, aiming at securing overall rehabilitation of currently abandoned area of Štrky. This overall rehabilitation opens up this area for broad public of Trnava City and Trnava FUA offering possibilities for sport, leisure and relax activities in a natural environment.

- The investment in Poland consists in the rehabilitation of the brownfield site located in the middle of the Ruda Śląska city. The investment creates an available open space of a natural, “half-wild” character; this place will become the walking and biking route connection of two districts as key element of the peri-urban infrastructure.

A special issue of our Newsletter will be dedicated to the remarkable transformation into more liveable places made possible thanks to the support of LUMAT.

PILOT ACTIONS

OSTRAVA (CZ)

FUA Ostrava is a part of the Moravian-Silesian Region and is one of the most industrially affected regions in the Czech Republic. Historically it was mentioned as a coal and steel region. Today it is a region that is recovering from the negative impact of the transformation of heavy industry and is trying to be perceived as a SMART region. FUA Ostrava is composed of 163 municipalities and forms a significantly polycentric agglomeration.

MORAVIAN-SILESIAN REGION

Problems and Threats

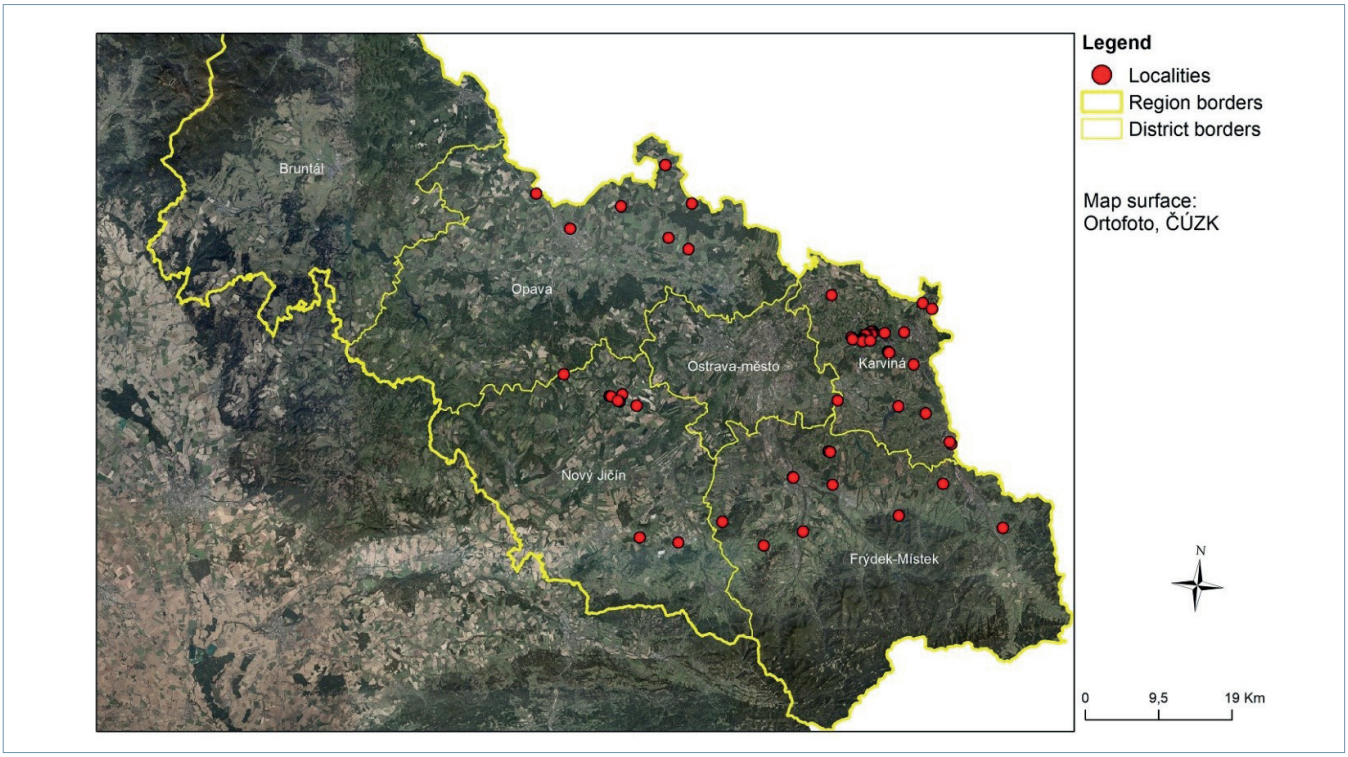
- Brownfield sites can be a source of danger to the environment due to possible seepage into groundwater.
- Since the 18th century, the highly industrialized region has been transformed several times and the area once used has changed to another function without thinking about potential contamination.
- Site register (Contaminated Sites Database System) is not complex and can lead to the construction on land that can be dangerous.

CONTEXT

There is a Contaminated Sites Database System in the Czech Republic. This database records about 5,000 sites that are divided into three categories. The Ministry of Environment´s Guideline divides sites in categories A, P and N. The first category (A) are sites that have been already surveyed and the contamination was approved. They are divided into subgroups based on the size of the risk (simply the number of people affected by the risk). The second category (P) are sites that can be potentially contaminated. We know that some activities were conducted on these sites in the past, but no detailed research has been carried out on what types of contaminants, at what depths and at what concentrations are located there. These areas are divided into four subgroups, with the subgroup P4 being the ones that LUMAT was interested in. The subgroup P4 is further subdivided into four hazard types. The last category are locations N. These are those where either the survey did not show pollution, or which are already after the remediation.

PHYSICAL CHARACTERISTICS

During the processing of the priority map, the research team focused on a total of 52 localities, which are located in FUA Ostrava and are not directly in the cadastral area of Ostrava. The reason for the exclusion of Ostrava was a well-developed (in 2010) comprehensive map of Priorities - these were approximately 100 localities, which were subsequently included into the Contaminated Sites Database System. The 52 sites were selected based on several criteria to suitably demonstrate the variety and scale of the problem. The first sub-group were locations that were used as industrial sites but changed their function after World War II and now they are used for housing, services, or recreation. The second group consists of sites that have been used for different types of use, from industry to housing and agriculture, but today the sites are completely abandoned, often overgrown. The third group are brownfield sites. None of the sites were registered in the Contaminated Sites Database System.
The selected localities in the Moravian-Silesian Region (in FUA Ostrava) are shown in the figure:



MAIN PROBLEMS

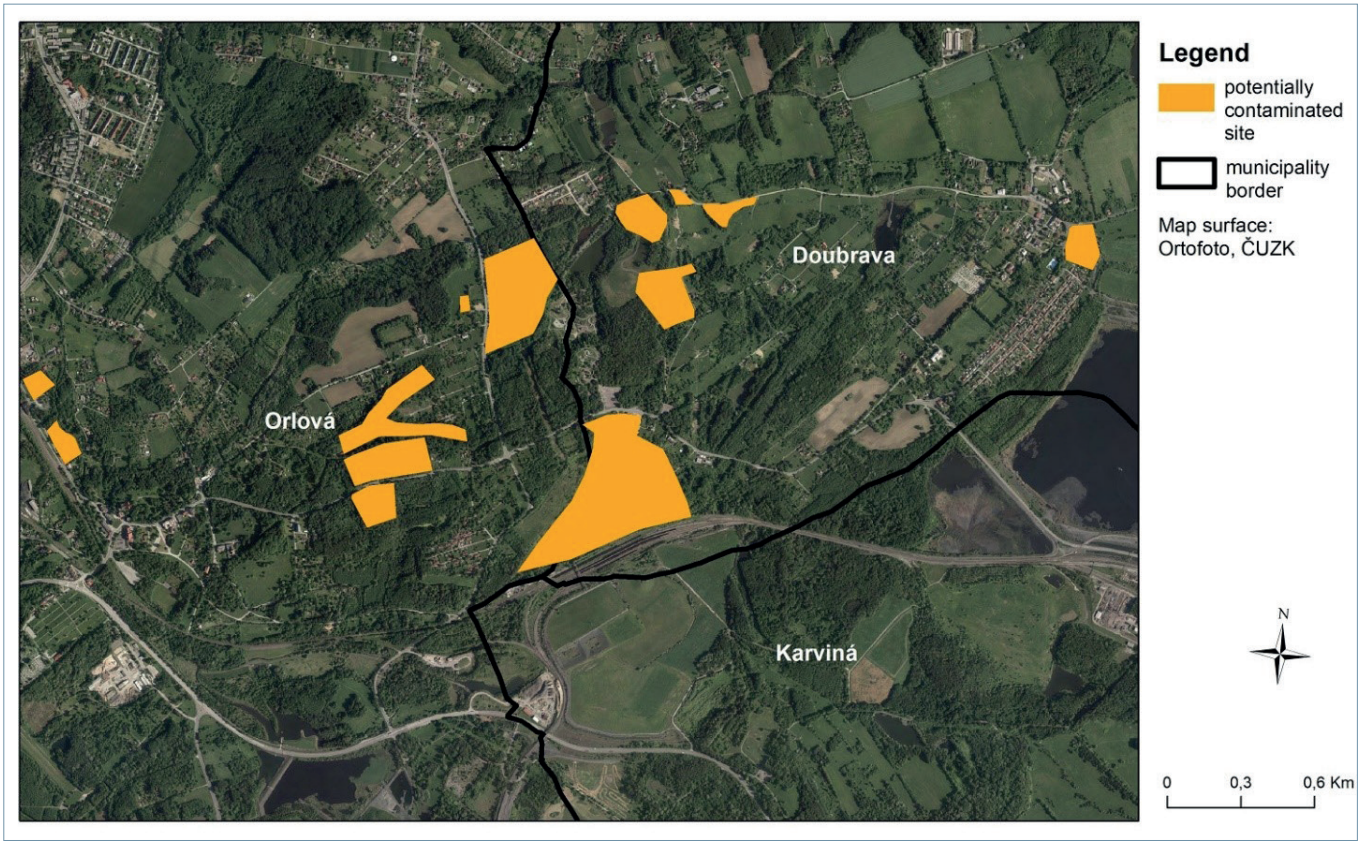
The first problem was the methodology of sites selection itself, often it was necessary to work with aerial photographs from the 1950s, search in chronicles. In a few cases, it was necessary to contact the owner to enter the site. Overall, the owners were rather negative. The reason was the fear of effects of the findings on the price of their land. It was necessary to make a field survey to identify the type group of the location, to find out how the site looks like, what is the terrain morphology, what are the watercourses in the area, how many inhabitants live in the area. Furthermore, it was necessary to obtain information about the geological and hydrogeological situation of the site, about the protected areas and the limits in the area surrounding the site. Thanks to a high quality information from the INSPIRE Portal and the data from the Czech Geological Service it was possible to process properly such a number of sites.

STAKEHOLDEERS

The pilot action involves:
Moravian Silesian region; Ministry of environment; Land owner; Municipalities; Citizens.

WHAT LUMAT WILL DO

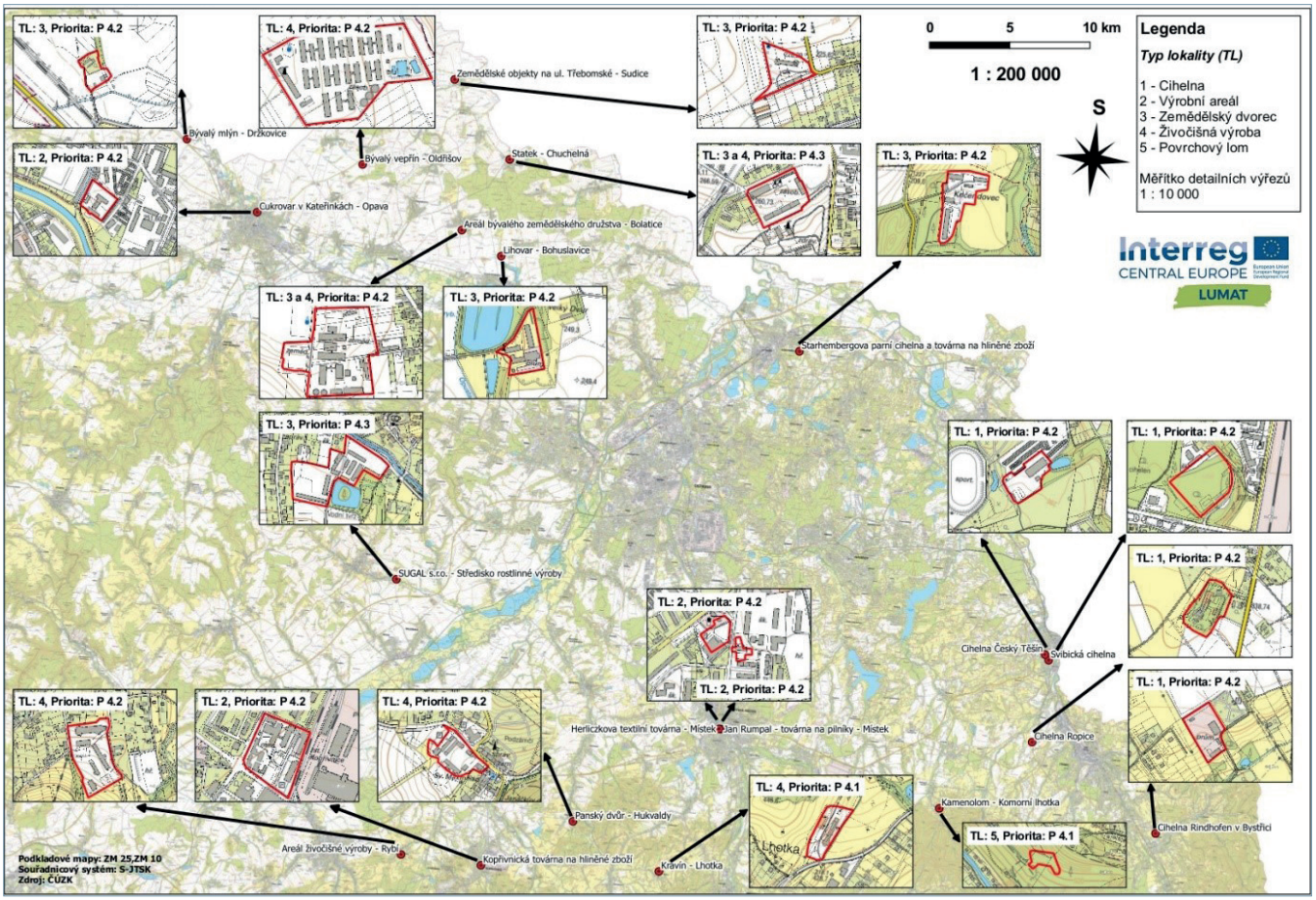
1. The LUMAT project - its research team and expert company evaluated and described 52 sites in total. These sites were included in the Contaminated Sites Database System which represents an increase of more than 10 % for FUA Ostrava.
2. Discussion on the necessity of registering these areas was opened. Some selected municipalities have also described the extent of the problem in relation to cadaster size - see Figure.



LOCALITIES IN SELECTED AREAS ORLOVÁ AND DOUBRAVA, MSK 2019

The map itself, whose part is shown in the following figure, was handed over to the representatives of the region.

The success of the project can be seen in the fact that, thanks to a two-year discussion, the Ministry of the Environment was convinced to decide to register so far unregistered potentially contaminated sites in the Czech Republic and to include them in the Contaminated Sites Database System registration (it is expected to be 20,000 sites in the Czech Republic).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TL: 4, Priorita: P 4.2
TL: 3, Priorita: P 4.2
0 5 10 km
1 : 200 000
S
Legenda
Typ lokality (TL)
1 - Cihelna
2 - Výrobní areál
3 - Zemědělský dvorec
4 - Živočišná výroba
5 - Povrchový lom
Měřítko detailních výřezů
1 : 10 000
Zemědělské objekty na ul. Třebomské - Sudice
Bývalý mlýn - Držkovice
Bývalý vepřín - Oldřišov
Statek - Chuchelná
TL: 2, Priorita: P 4.2
TL: 3 a 4, Priorita: P 4.3
TL: 3, Priorita: P 4.2
Cukrovar v Kateřinkách - Opava
Areál bývalého zemědělského družstva - Bolatice
Lihovar - Bohuslavice
TL: 3 a 4, Priorita: P 4.2
TL: 3, Priorita: P 4.2
Starhembergova parní cihelna a továrna na hliněné zboží
TL: 3, Priorita: P 4.3
TL: 1, Priorita: P 4.2
TL: 1, Priorita: P 4.2
TL: 1, Priorita: P 4.2
SUGAL s.r.o. - Středisko rostlinné výroby
TL: 2, Priorita: P 4.2
TL: 2, Priorita: P 4.2
Cihelna Český Těšín
Svibická cihelna
TL: 1, Priorita: P 4.2
TL: 4, Priorita: P 4.2
TL: 2, Priorita: P 4.2
TL: 4, Priorita: P 4.2
Herliczkova textilní továrna - Místek
Jan Rumpal - továrna na pilniky - Místek
Cihelna Ropice
TL: 4, Priorita: P 4.1
Kamenolom - Komorní lhotka
Panský dvůr - Hukvaldy
TL: 5, Priorita: P 4.1
Cihelna Rindhofen v Bystřici
Areál živočišné výroby - Rybí
Kopřivnická továrna na hliněné zboží
Kravín - Lhotka
Podkladové mapy: ZM 25,ZM 10
Souřadnicový systém: S-JTSK
Zdroj: ČUZK
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COMMUNICATION PRODUCTS

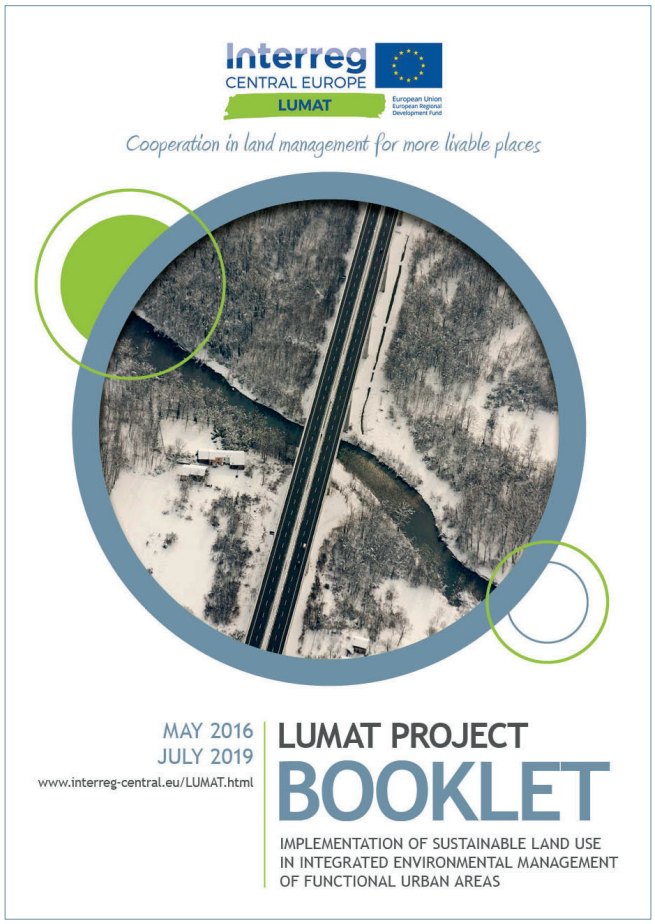
We are at the end of the project and some important communication products are available!

PHOTOCONTEST

The photos presented at the photocontest can be seen on the gallery:
https://www.lumatproject.eu/photocontest

BOOKLET

Most of the shots were used in the final publication of the project, available online:
https://www.interreg-central.eu/Content.Node/LUMAT/Final-Booklet.pdf



VIDEO AND DELIVERABLES

On our website, you can also see the promotional video made to disseminate the results of the project and all the deliverables:
https://www.interreg-central.eu/Content.Node/LUMAT.html

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- Slovak University of Technology in Bratislava
- Slovenian Ministry of the Environment and Spatial Planning
- Saxon State Office for Environment, Agriculture and Geology
- City of Trnava
- City of Kranj
- LINKS Foundation Leading Innovation & Knowledge for Society
- Institute for Sustainable Development of Settlements
- Metropolitan City of Turin
- Moravian-Silesian Investment and Development, a.s.

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