INSTITUTE FOR ECOLOGY OF INDUSTRIAL AREAS

# IETU NEWS

No. 17, December 2016

www.ietu.katowice.pl

## New Year – new logo

We are pleased to announce that with the new year 2017 the Institute is changing its logo and the visual identification system. Changing the image reflects changes occurring in IETU since 2015 and connected with the ongoing restructuring process, defining new key research directions, presentation of the market offer and implementation of IETU's marketing strategy. The new logo has been designed having in mind the mission of the Institute and its areas of activities reflecting IETU's knowledge, competence, reliability and experience, both in the scientific circles as well as in economic and business sector in the country and in the European Research Area.

The carried out modification of the logo was to refresh and modernise the elements of our identity with a simultaneous maintaining the continuity of the brand and strengthening the recognition of IETU's name. The new logo is more legible, elegant and dynamic and we hope it reflects the new image of the Institute in the changing world of science and environmental services market.

*Ed.*

## Project MISCOMAR

Bioenergy is a key element of the renewable energy strategy in the European Union. Currently, most biofuels are produced from edible plants grown on agricultural land and the biomass used for production of heat and energy is mainly based on wood. Sustainable biofuel and food production requires the development of new methods for cultivation of energy crops on low-grade agricultural land, leaving uncontaminated and high quality land for production of food.

*to be continued on page 3*

## LUMAT – Implementation of sustainable land use in integrated environmental management of functional urban areas

*Meeting of the project team in City of Ruda Śląska*

*Post-zinc heap in Ruda Śląska*

*Land in the vicinity of the heap in Ruda Śląska*

How to change the behaviour of local governments and residents to create people-friendly cities? How to integrate actions in order to transform urban wastelands and degraded areas into attractive places of work, leisure and recreation? How to encourage residents to create changes in the landscape and functioning of the city? How to involve stakeholders in the process of revitalisation of the green public space?

These are just only some of the issues connected with the development of functional urban areas that the scientists and representatives of local governments are dealing with under the LUMAT project coordinated by IETU.

In seven functional urban areas of Central Europe, under different environmental, spatial, social and cultural conditions, pilot actions related to the creation of green areas will be carried out, in that:

– revitalisation of post-zinc heap in Ruda Śląska in order to increase green open space,

*to be continued on page 2*

## In this issue:

# Waste management plan for Silesian Voivodeship (2016-2022)

A draft version of the waste management plan for the Silesian Voivodeship developed by IETU, Institute of Mechanised Construction and Rock Mining and Savona Project was presented to the Board of Silesian Voivodeship at the beginning of September 2016. At the end of October the Board decided to refer the draft plan for approval to the municipal executive bodies and the process of consultations with municipalities took place in November 2016.

The draft plan developed in accordance with the principles laid down in the regulations on environmental protection consists of the following basic elements:
- analysis of waste management state and forecast of quantitative and qualitative changes of waste,
- goals and directions of activities to be undertaken by 2030,
- waste management system under which the set up goals will be realised,
- task schedule.

*Consultation meeting concerning the Waste Management Plan – Rybnik, 16 November, 2016*

*Consultation meeting concerning the Waste Management Plan – Częstochowa, 22 November, 2016*

An important part of the municipal waste management plan is the investment plan, which specifies investment tasks to be implemented by 2022.

The analysis of the municipal waste management state showed that in the Silesian Voivodeship in 2014 about 1 600 thousand Mg of such waste was produced. About 30% of municipal waste was collected in a selective manner and about 12% was recycled. Based on the analyses of forecasts concerning the amount of waste that will be generated it was found out that there will be a significant increase in the mass of waste by 2030. Currently in the Silesian Voivodeship there are 17 regional installations for mechanical and biological treatment of mixed municipal waste (MBT) and 31 installations, in which composting of green waste and other biowaste is applied. Residues after processing in these systems are directed to 20 waste disposal facilities. Waste from selective collection goes to 25 sorting installations, in which it is additionally cleaned prior to recycling.

The main assumptions of the developed investment plan are as follows:
- no need to build new MBT installations in the Silesian Voivodeship,
- modernisation of the existing MBT plants to increase their efficiency,
- construction of new composting plants and modernisation of the existing plants for green waste and other bio,
- waste to meet the needs arising from the increased selective collection of waste,
- construction of installations for thermal treatment of residual fraction obtained in mechanical and biological,
- treatment of waste due to restrictions concerning its storage,
- expansion of landfill cells located at MBT plants in case of capacity deficit,
- reclamation of closed landfill cells.

The main priority for municipal waste management in the Silesian Voivodeship is the construction of infrastructure for selective waste collection, together with undertaking systematic and systemic educational activities. Thermal waste treatment installations necessary for the functioning of a complex municipal waste management system should be capable of processing 30% of the generated waste, i.e. approx. 500 thousand Mg per year.


*Henry Mercik – Member of the Managing Board of the Silesian Voivodeship during the meeting summarising public consultations on Waste Management Plan – Katowice, 30 November, 2016*

The draft version of the investment plan will be subjected to consultations with the Minister of the Environment and after agreement and adjustment stage it will be presented to the Silesian Voivodeship Regional Assembly.

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## LUMAT... *continued from page 1*

- implementation of the project and revitalisation of the "green" degraded area in Trnava (Slovakia) under the public participation process,
- application of green areas management model in peri-urban areas of Turin, including other places (Italy),
- development of a priority map of abandoned and uncultivated areas for Ostrava (Czech Republic), providing information on their degradation and potential health risk,
- creation of a garden "show" as a recreational space for the revival of peri-urban area of the city in the region of Voitsberg (Germany),
- use of compensatory financing for the construction of green infrastructure in the region of Leipzig (Germany),
- establishment of a permanent working group for managing degraded areas in Slovenia in order to increase their attractiveness to investors.

The expected outcomes of the LUMAT project include: information databases and tools for managing relationships between urban and peri-urban areas as well as action plans containing financial mechanisms and institutional arrangements, e.g. land management agencies. To engage citizens and local stakeholders interactive information tools (e.g. mobile applications) will be used. The project will strengthen integrated environmental management in functional urban areas due to sustainable use of land and development of ecosystem services.

The project received funding under INTERREG Central Europe Programme.

For more information visit:
**http://www.interreg-central.eu/Content.Node/LUMAT.html**

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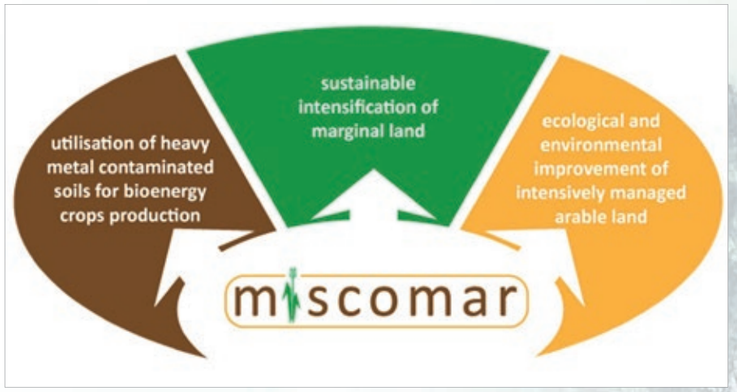
# Project MISCOMAR *continued from page 1*

**MISCOMAR – Miscanthus biomass options for contaminated and marginal land: quality, quantity and soil interactions** is an international research project coordinated by IETU (June 2016 – May 2019). Its aim is to develop techniques for growing Miscanthus on soils excluded from agricultural production, in particular on soils contaminated with heavy metals (Poland), low-grade shallow and stony soils (Wales) and high clay content, waterlogged soils (Germany). In the above-mentioned countries on special research plots field experiments are carried out in order to select new seed-based genotypes of Miscanthus, coming from the cultivation programme at the University of Aberystwyth.




*Concept scheme of MISCOMAR project*

In the conducted study both the impact of crops on the condition and quality of soil and the impact of soil conditions on crop quality as well as its final utilisation will be taken into account. Usefulness and efficiency of biomass production from new, stress resistant Miscanthus genotypes on marginal land and contaminated soil will be determined and compared with a standard grown Miscanthus giganteus.

New Miscanthus genotypes will be assessed for the possibility of their use for the production of energy in the process of anaerobic digestion and combustion. In addition, genotypes grown on heavy metal contaminated soils will be tested for their suitability in the process of phytoremediation. MISCOMAR is implemented by IETU in cooperation with two European research units, well experienced in biomass production for energy purposes – University of Aberystwyth (Wales) and University of Hohenheim (Germany). The project is carried out under the ERA-NET Co-fund FACCE SURPLUS and the Polish part of the project is financed by The National Centre for Research and Development.

For more information about the project visit the website: **www.miscomar.eu**

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FACCE SURPLUS
SUSTAINABLE AND RESILIENT AGRICULTURE FOR FOOD AND NON-FOOD SYSTEMS

The National Centre for Research and Development

# THERMACO – environmental assessment of innovative technology for heat management

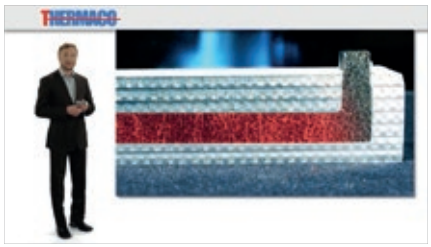


*Photo from the video film summarising the THERMACO project available at the project website*

The development of innovative technology for production of highly durable composite Al-MMC of increased thermal conductivity was the aim of the completed in October project THERMACO – Smart thermal conductive Al-MMCs by casting. The research was focused on material based on conventionally cast aluminium, the heat conducting structures of which were made of carbon graphene or pyrolytic graphite (TPG).

The composite can be used, for example, in microelectronics as an element of wind power plant construction and in high-efficiency car engines. Implementation of the innovative technology in the future will increase the efficiency of key energy and resource-saving technologies and improve thermal management systems.

The THERMACO project was realised by ten project partners, including research units and business representatives from Italy, Spain, Finland and Poland. The study was funded under FP7-COOPERATION (ENV).

IETU team assessed the impact of the innovative technology on the environment and human health. With this end in view environmental impact assessment, life cycle analysis and sustainability assessment were performed. The carried out study showed potentially insignificant impact of the modern composite on the environment within its full life cycle in comparison to the solutions currently used. At the same time the principles of good practice for dealing with raw materials, products and waste both during the production processes and disposal or recycling of waste material and the obtained products were defined.

For more information about the project visit the website: **thermaco.eu**

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SEVENTH FRAMEWORK PROGRAMME

THERMACO

# Environmental Technology Verification Body at the HydroSilesia 2016

etv JWTŚ - IETU

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During this year's HydroSilesia Trade Fair IETU presented an offer of a newly created unit – Environmental Technology Verification Body (JWTŚ-IETU). A seminar "How to get EU ETV verification certificate for innovative water and wastewater management technology under the European Union Environmental Technology Verification Programme?", organised by JWTŚ-IETU, was an opportunity to gain practical knowledge on how to get the EU ETV verification certificate in Poland and obtain funding for innovative activities, including ETV verification. Presentation of verification services, the target group of which are small and medium-sized enterprises offering eco-innovative technological solutions was met with great interest among entrepreneurs visiting the trade fair.

Detailed information on JWTŚ-IETU can be found at: **www.ietu.katowice.pl/etv.htm**

The 8th Trade Fair for Water and Sanitation Utilities HydroSilesia 2016 and the 8th Trade Fair for Drainage and Irrigation, Water Facilities, Infrastructure and Flood Control Equipment MELIORACJE 2016, the honorary patron of which was the Institute for Ecology of Industrial Areas, were held on 26-27 October 2016 in ExpoSilesia Centre in Sosnowiec. Visitors had an opportunity not only to see the latest trends and innovative solutions in the water and wastewater management sector but also could take part in the accompanying events, such as conferences or seminars, which were the source of knowledge and expertise in the presented fields.

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Graphical layout and print: Werdan
Printed on 100% recycled paper