AQUARES project – report from activity A3.4 – Study visit

Summary

Date: 25th of September 2020

Form: Online by ZOOM application

Language of the meeting: English, Czech

Participants: 40

Link for the video record: https://youtu.be/VerRQFh0K0w

Report

The study visit was organized to transfer experience on water reuse implementation and monitoring issues in the Czech Republic by The Regional and Development Agency of the Pardubice Region (RRA PK). There were presented best practices from Pardubice region – Green roof in Lanškroun city, Dry polder Žichlínek, Hanging garden in Polička city and Biotop in the Hlinsko city.

The study visit content

The study visit is dedicated to all partners and their stakeholders to transfer experience on water reuse implementation. Study visit is to share the best practices in the different topic and areas connected with the water reuse technologies. The study visit was planned originally in physical form in the fourth semester, but the situation with COVID19 stopped most of events not just in the Czech Republic, but in all AQURES project partners as restriction of travelling, physical events etc. We agreed with the lead partner Murcia, on the organization of the study visit in online regime to achieve this activity. Another reason why we decided to organize the event online was also recommendation by Joint Secretariat (JS) for program Interreg Europe. JS proposed to do as much activities online as we can a to do not cancel or postponed activities, if it is possible to organize them online.

The best practices that were shown on the site visit were chosen by RRA PK on base of the best practices that the Pardubice region could demonstrate. There is not any methodology how to organize the study visit yet. The study visit supposed to be organized physically to give partners better understanding of the shown best practices. Online version in compare to the physical version, the online version has better availability for participants, saving the time to travel, and is safer due to the pandemic situation. We see in RRA PK the online version of this kind as a great added value to connect people through online meetings.

RRA PK planned the online meeting from 9:40 till 12:20 see in the program of the meeting Online program, but due to the technical problems the meeting was till 13:00. The online meeting was organized through ZOOM application. In online version participated all AQUARES partners with stakeholders which we see as the big impact of the online version. The participation was much bigger in compare to the physical form. The RRA PK recorded the meeting with the aim to achieve wider range of stakeholders. Any one in any time can watch the record and get the information about the best practices from the Czech Republic.

Online program

The online program was organized in the same style as was planned for physical meeting. The partners could listen to the presentations and instead of the "physical visit" they could watch the video that the RRA PK recorded before the meeting. In the introduction got each partner space to introduce themselves and their organization and spoke about their expectations from the lecturers and introduced places. There was window for the discussion after each presentation. The discussion ran through the chat and moderator from the RRA PK read the questions and tried to approximate the question and this meaning.

Online program

9:30 – 9:40	**Connection** *connection window for all participants*
9:40 – 10:10	**Introduction** *opening speech - project AQUARES and program of the online study visit* *presenting by RRA PK Lucie Balcarová* *introduction of all participants – AQUARES partners and stakeholders*
10:10 – 10:30	**Lanškroun city presentation** *green roof, infiltration areas, flood protection measures* *presenting by mayor of the Lanškroun city*
10:30 – 10:50	**Dry polder Žichlínek** *flood protection* *presenting by mayor of the Lanškroun city*
10:50 – 11:10	**Break** *short coffee break at your office*
11:10 – 11:30	**Hanging garden in Polička** *hanging garden on the library of the Polička city* *presenting by library´s director Jan Julk*
11:30 - 11:50	**Biotop Hlinsko** *root water recycling systems in Biotop* *presenting by mayor of the Hlinsko city*
11:50 – 12:20	**Conclusion** *all partners - discussion, collection of the feedback, the end of the meeting*

Practices that has been seen

Lanškroun city – green roof, infiltration areas

The practice describes the system of the green roof management in new public building, cultural centrum L´Art in the Lanškroun city. The preparation of project began in 2015, from the idea of main architect. The whole roof is covered with substrate which soaks water. This enables plants to thrive and when there is too much water after heavy rains, it is directed towards the sides and by overflow further to retention tanks which are under the parking and in front of the cultural centrum. The maintenance department can later use this water for irrigation purposes during periods of drought. One of the positives should be an improvement of thermal insulation of the cultural centrum.

The Lanškroun city works on flood protection areas in the city centrum with streets renovation. During the heavy rains and melting snow is the city centrum very easily flooded. There was a concept of town

greenery developed. The elaborate helps to solve technical issues of water retention and water soaking.

Potential for learning or transfer

This system can be adapted to all countries – green roof and also the street renovation. Mayor of the city spoke about obstacles on the beginning of project, examples how they solve the problems a shared their knowledge. Lecturer, the mayor of the city is available to share the knowledge from the new project.

Dry polder Žichlínek

Dry polder was built between 2006 and 2008 and it was built mainly to protect cities and villages from the flood. This dry polder is the biggest in the middle of the Europe. This investment was carried by Morava River Basin Management, this company manages watercourses in our area. In the middle of the polder is situated the river Moravská Sázava. The dry polder covers an area of 166 ha and its main purpose is to decrease the flow of water which would otherwise enter the part below the polder without any control. There is a drain in the middle of the polder which regulate the flow coming for parts above. The place has become very attractive for the local habitants. This area is possible to visit and enjoy beautiful moments of peace and rest in the nature, when it is not flooded.

Potential for learning or transfer

Not only such big polder but even small polders are able to help in those areas which are often hit by flash floods. The main potential is to prevent further damage of the property of not just residents. The damage is always connected to big costs needed for its removal. The dry polders are great to build them where the amount of water is difficult to predict.

Hanging garden on library in Polička city

The hanging garden is a part of operations of the Centre of Technical Education in library. The garden makes the surrounding areas special, nicer and more attractive. The garden represents the desire to connect robots and nature. Know-how is from the Czech company “Čarokvěty”. Simply we can say that the garden has 800 pockets made of non-wowen textile. Each of the pockets is occupied by two plants. The pockets have a special felt layer in the rear part which can be soaked with water. There is a sensor in this layer and it sends a signal that humidity has dropped under 16%, a water pump gets activate to a period of one minute. This system is automated. There is a plan to use also the rain water for irrigation.

Potential for learning or transfer

This system has the biggest advantage, that it uses only the absolutely necessary amount of water. Without the automatic irrigation system would be nearly impossible to water and maintain such a garden. This system is great to use on dry places or places, where is not possible to add greenery.

Biotop Hlinsko

The biotope is completely new and it is the only one in the Pardubice region. One of the reasons why to build biotope were acquisition costs that are lower than some aquapark or other kind of pools.

Other reasons were operational, because the biotope is in the attitude 600 m above the sea level and the municipality cannot afford an aquapark which would create a big loss. But the biggest benefit is that there is no need to use any chemicals. The whole system is based on natural cleaning. There are three parts of the biotope, swimming part, part for water cleaning and these parts are interconnected by a stream. Cleaning zone is divided into smaller sections. The first section is microbiological. It contains bacteria responsible for primary cleaning. It is followed by two other zones, planted with vegetation. The next part of the cleaning cycle continues thanks to the root system created by plants. The whole cleaning zone has been conceived in an ideal way to sediments to settle down. There are filters at the end of the zone which catch all bigger pieces of dirt which may enter the process in the biological section. The technology itself consist of nothing more than just two operation water pumps. The system is very simple but well-done build and clear.

Potential for learning or transfer

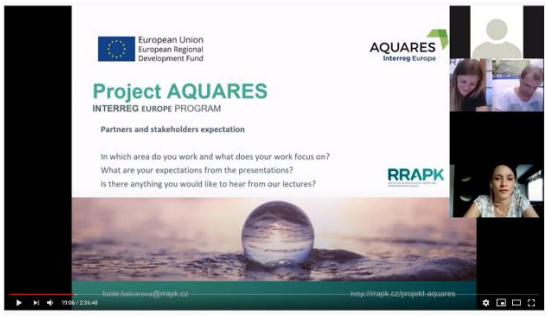
Mayor of the city Hlinsko can just recommend this system. It presents financially acceptable, modern layout without the need of use chemical agents. The water is constantly reused and there is no need to pump up more water into the system.

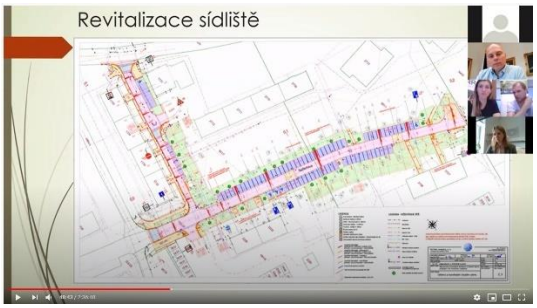
Conclusion

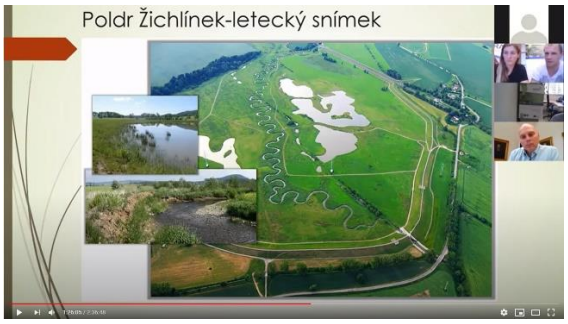
The online study visit presents good practice from the Czech Republic from the Pardubice region. All examples of good practices can be applied in the AQUARES project regions. Our lecturers are open to share more information, their knowledge in projects and ready to help with projects or realizations. Lecturers are also very open to be informed about the process in partners regions and about relevant knowledge about water reuse technologies or similar project they had been presented.

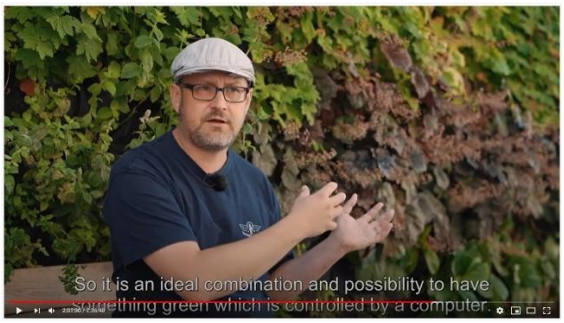
Pictures

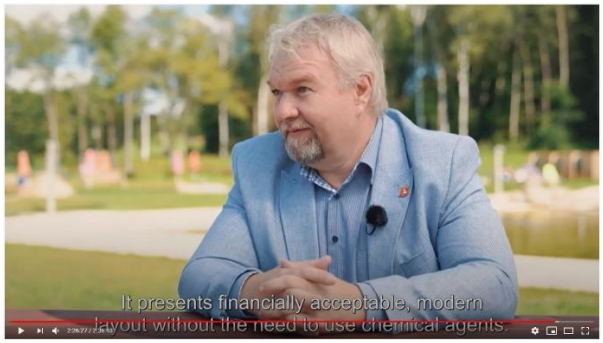
Printscreens from the meeting.










It presents financially acceptable, modern
layout without the need to use chemical agents.


Simultaneously, we use the power of gravity.
There is no other trick, no other technology.

AQUARES
Interreg Europe

European Union
European Regional
Development Fund

List of attendance – Study visit

organize online by application ZOOM on 25th of September 2020

No.	Partner	Name and Surname	Organization	Email	Participation
1	FLA	Sara Zanini	FLA	sarazaninifloriana@gmail.com	online
2	FLA	Mita Lapi	FLA	mita.lapi@flanet.org	online
3	FLA	Lorenzo Cozzi	FLA	lorenzo.cozzi@flanet.org	online
4	FLA	Giusi Rabotti	AIAT - Landscape agronomist / phytopathologist - stakeholder	info@giusirabotti.it	online
5	FLA	Raffaele Mauri	AIAT - stakeholder	ingraffaelemauri@gmail.com	online
6	FLA	Alessandro Tosi	AIAT - stakeholder	alessandro.tosi93@gmail.com	online
7	RRA PK	Lucie Balcarová	RRA PK	Lucie.balcarova@rrapk.cz	online
8	RRA PK	Radim Vetchý	Mayor of the Lanškroun city – Lecturer	Radim.vetchy@lanskroun.eu	online
9	RRA PK	Jan Julk	Director of the Polička library – Lecturer	jukl@knihovna.policka.org	online
10	RRA PK	Miroslav Krčil	Mayor of the Hlinsko city - Lecturer	krcil@hlinsko.cz	online
11	Malta	Henry Debattista	Energy and Water Management	Henry.debattista@gov.mt	online
12	Malta	Brian Borg	Ministry for Energy and Water Management	Brian.a.borg@gov.mt	online
13	SSW	Maria Kasidoni	Ministry of Environment and Energy	mariakasidoni@hotmail.com	online
14	SSW	Argyris Papakonstantinou	Stakeholder representative from the Hellenic Association of Municipal Enterprises for Water Supply and Swerage (EDEYA)	deyal1@otenet.gr	online
15	SSW	Eleftherios Sfyris	Stakeholder representative from the Hellenic Association of Municipal Enterprises for Water Supply and Swerage (EDEYA)	sfirisel@edeya.gr	online
16	Lodzkie	Paweł Jarosiewicz	UNESCO Chair on Ecohydrology and Applied Ecology University of Łódź Topic: ecohydrology, NBS	pawel.jarosiewicz@biol.uni.lodz.pl	online
17	Lozdkie	Michał Mikina	Lodzkie Region	michal.mikina@lodzkie.pl	online

RRAPK
REGIONÁLNÍ ROZVOJOVÁ AGENTURA PARDUBICKÉHO KRAJE

18	Lodzkie	Iwona Marcinkowska	Lodzkie Region	iwona.marcinkowska@lodzkie.pl	online
19	Lodzkie	Grażyna Sakson-Sysiak	Lodz University of Technology	grazyna.sakson-sysiak@p.lodz.pl	online
20	Lodzkie	Michał Grzelak	Office of Spatial Planning of Lodzkie Region: Topic: collecting data and conducting analyses in the field of water resources	grzelak.michal@bppwl.lodzkie.pl	online
21	xxx	Marcelina Jureczko	Silesian University of Technology, Environmental Biotechnology Department, PhD Student	Marcelina.Jureczko@polsl.pl	online
22	OOWV	Silke Mollenhauer	OOWV	mollenhauer@oowv.de	online
23	OOWV	Yannick Tiemann	OOWV	xxx	online
24	Trebnje	Peter Suhadolnik	Institute for Water of the Republic of Slovenia	peter.suhadolnik@izvrs.si	online
25	Trebnje	Tajan Trobec	University of Ljubljana, Faculty of Arts, Department of Geography	tajan.trobec@ff.uni-lj.si	online
26	Trebnje	Sara Uhan	Municipality of Trebnje – AQUARES partner	sara.uhan@trebnje.si	online
27	Trebnje	Vesna Zupanc	University of Ljubljana, Biotechnical faculty	vesna.zupanc@bf.uni-lj.si	online
28	Trebnje	Vane Urh	Regional development agency Novo mesto,	vane.urh@rc-nm.si	online
29	f-IEA	Rosario Saura Buendía	f-IEA	xxx	online
30	f-IEA	Ana Stelea	f-IEA	ana.stelea@f-iea.es	online
31	Baltic Coast	Ilona Vilne	Ministry of Environmental Protection and Regional Development	ilona.vilne@varam.gov.lv	online
32	Baltic Coast	Ainis Lagzdiņš	Latvia University of Agriculture, Department of Environment and Water Management	ainis.lagzdins@llu.lv	online
33	Baltic Coast	Ieva Jakovļeva	Ministry of Environmental Protection and Regional Development	ieva.jakovleva@varam.gov.lv	online
34	Baltic Coast	Adelaide Mancini	Association Baltic Coasts	adelaide.mancini@baltijaskrasti.lv	online

35	Baltic Coast	Magda Jentgena	World Wide Fund for Nature	mjentgena@pdf.lv	online
36	Baltic Coast	Agnese Zaķe	Ltd. “BaltLine Globe”	agnese.zake@baltlineglobe.lv	online
37	Baltic Coast	Līga Platais	Ltd. “DEPO projekts”	liga@depoprojekts.lv	online
38	Baltic Coast	Artūrs Veinbergs	Latvia University of Agriculture, Department of Environment and Water Management	li05233@llu.lv	online
39	Baltic Coast	Agnese Jeņina	Association Baltic Coasts	agnese.jenina@baltijaskrasti.lv	online
40	Murcia	Manuel Boluda Fernández	Regional Government of Murcia, Ministry of Water, Agriculture, Livestock and Fisheries, General Direction of Water	manoloboluda@gmail.com	online