

SET-UP OF LOCAL INFORMATION POINTS FOR CITIZENS IN THE SEVEN BIOVILL TARGET VILLAGES IN CROATIA, MACEDONIA, ROMANIA, SERBIA AND SLOVENIA



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Further information about the BioVill project on: www.biovill.eu



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Abbreviations and acronyms

A	Answer
CHP	Combined Heat and Power
DH	District heating
DHS	District Heating System
EU	European Union
FAQ	Frequently asked questions
POIM	Operative Program for Big Infrastructures
Q	Question
GmbH	Limited liability company (Gesellschaft mit beschränkter Haftung)
Ltd	Limited liability company

Executive Summary

The experiences from Austria, Germany and other European countries show that one of the key success factors for establishing a bioenergy village is the involvement and participation of the citizens from the very beginning. Citizens and key stakeholders need relevant and reliable information to be convinced, motivated and encouraged for taking the initiative and supporting the implementation process of a bioenergy concept in their villages. Since relevant information about the potentials of bioenergy is still lacking in the BioVill partner countries, local information points (helpdesks) for the citizens were established in each of the seven target villages. These information points are usually located next to the local public administration or to other central information points in the villages/municipalities, e.g. local chambers of commerce etc. Educated staff provides answers to the citizens and key stakeholders' questions and free information, advice and consultancy on all aspects of sustainable bioenergy and the BioVill project. The helpdesks started to operate in summer 2016. They will continue to work during the whole lifetime of the BioVill project and beyond. Each helpdesk is equipped with promotional material, which was developed within the BioVill project, e.g. task 3.1 and task 4.3.

The enquires for the local helpdesk were numerous as well as the interest of the citizens for the project in each target country, for examples:

- Croatia: Perušić helpdesk estimates about 10 citizens' inquiries per month, some of the were also raised by phone, in Lekenik about 8 enquiries per month were answered;
- Macedonia: the helpdesk activities reached 104 citizens/household until now;
- Romania: the estimated number of enquiries so far were around 10 per month for Estelnic, and for Ghelinta around 12 inquiries per month;
- Serbia: the helpdesk received in total 20 citizens' inquiries so far;
- Slovenia: the info point received 2 to 3 visits/inquiries per week, which means about 144 during the last year.

Overall, it is estimated, that in the period between August 2016 and December 2017 the helpdesks of the seven BioVill target villages have received and answered about 850 inquiries.

The most frequently asked questions from the citizens in the target villages were related to the following main issues:

1. What is the BioVill project and how can it help us?
2. What are impeding factors for the implementation of a bioenergy project?
3. Who are potential stakeholders for the establishment process of a bioenergy village in our villages?
4. Who should lead/be in charge of the establishment process?
5. What awareness measures should be taken within the community to explain the establishment of bioenergy village to public and stakeholders?
6. How local/regional/national administration is supporting energy efficiency measures and/or the production and use of renewable energy at local level? What measures or decisions have been done already?
7. Does support measures for the use of renewable energy exist at regional and national level (e.g. ongoing projects, investments, funding schemes etc.)?
8. What are the social success factors for implementing a bioenergy village project?
9. Who should be responsible for obtaining the funding for a bioenergy village?

With their numerous inquiries, the citizens have shown that the establishment of the helpdesks in the seven BioVill target villages was necessary and successful. By providing information and facts to the citizens, the helpdesks have:

- increased the awareness of the citizens and key stakeholders on the opportunities of sustainable and locally produced bioenergy,
- informed peoples about available bioenergy technologies and its advantages compared to traditional fossil-fuel based systems,

- enabled them to take initiative and support the development and implementation of the bioenergy approach in their village,
- contributed to a reduction of obstacles, hesitations and prejudices of the citizens and decision makers and thus, to a change of their behaviour towards sustainable bioenergy solutions and energy saving measures,
- collected the feedback and suggestions of the citizens on their needs and expectations regarding the new technologies and improved services.

Despite all BioVill project activities still many citizens in the target villages are not fully convinced about the proposed new bioenergy concepts in their villages, especially when it refers to the decision whether to connect to the district heating network or not. They require more details and information about the planned solutions. Thus, the project will continue to support the information activities of the helpdesks until its end in order to help the involved stakeholders to make a qualified decision and thus, to establish a viable and sustainable bioenergy solution.

1 Introduction

1.1 The BioVill project

BioVill is a three years project supported by the European Union's Horizon 2020 research and innovation programme with a budget of around EUR 1.99 Mio. The project started in March 2016 and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in collaboration with 8 partners from the BioVill target partner countries Croatia, Macedonia, Romania, Serbia and Slovenia, as well as from Germany and Austria.

Many South East European countries have high biomass potentials, but they are often not or only inefficiently used for local energy supply and regional economic development. Thus, the overall objective of the BioVill project is to support the development of regional bioenergy concepts and the establishment of bioenergy villages in Croatia, Macedonia, Romania, Serbia and Slovenia. This will be achieved by identifying suitable biomass value chains according to local and regional needs and transferring existing experiences in Austria, Germany and other European countries to the South-Eastern European partners. Thereby the market uptake of domestic bioenergy supply chains will be increased and the role of locally produced biomass as a main source of energy supply and added value for the local and regional economy will be strengthened.

Core activities of the BioVill project include national and local framework analyses, technological and economic assessments of local bioenergy value chains, development of the institutional set-up and energy management concepts for the potential Bioenergy villages as well as capacity building on financing schemes and business models. As a key factor of success the BioVill project uses a multi stakeholder approach fostering the involvement and active participation of the citizens and all relevant stakeholders in the planning and implementation process.

Major results of the BioVill project will be the initiation of at least five bioenergy villages in the target partner countries up to the investment stage for physical infrastructure, the raise of public acceptance and awareness of a sustainable bioenergy production and its commercial opportunities as well as increased capacities of users and key actors in business and legislation to sustainably manage bioenergy villages and to enact national and EU legislation. Altogether the BioVill project will contribute to the expansion and sustainability of the bioenergy markets in Europe and the European Union.

1.2 Scope of the task/deliverable

During the preparation and implementation of the energy transition process towards a bioenergy village, citizens and stakeholders have a high need for reliable and high quality information on the whole process. In order to fulfil these information needs and to provide answers to the questions of citizens and stakeholders, the establishment of information points (helpdesks) in the target countries (target villages) equipped with qualified staff and information material was foreseen as a project activity.

This report is a compilation of the 5 country reports on the helpdesk activities provided in the seven BioVill target villages. It summarises summarizing the results of the provided activities and achieved results, especially the process of establishing the helpdesk, received information inquiries and provided answers as well as the feedback of the citizens on the quality and effectiveness of the helpdesk activities and their recommendations for future activities.

The information given in this report are very helpful for the project partners and local authorities to learn more about the visions and expectations of the target village citizens and to receive first-hand information on how the citizens perceive the bioenergy village approach. The work of the helpdesks will be supported by the project partners also after the submission of the report and additional results will be reported in the final technical report at the end of the project.

2 Croatia

2.1 Establishment of a local information point (helpdesk) for the citizens of Perušić and Lekenik

2.1.1 Perušić

A local information point for citizens has been set-up in village Perušić, it is situated in the premises of municipality and started to operate in summer 2016. Responsible contact persons who are available for citizens are:

1. Nada Marijanović, mag.ing.silv, Project manager of EU funds, Municipality of Perušić
Address: Ulica Kralja Tomislava 14, 53 202 Perušić
Mobile phone: 00 385 (0) 99 497 4007
Email: marijanovicnada@gmail.com
2. Mihael Kurteš, mag.oec., Deputy Municipal Mayor
Address: Kvarće 64, 53 202 Perušić
Mobile phone: 00 385 (0) 98 174 2885
Email: mkurtes@gmail.com

Persons in charge of the information points were introduced to the project and trained by the national BioVill partner in Croatia – North-west Croatia Regional Energy Agency (REGEA). Responsible persons in the municipality for citizen questions regarding the project also participated in a study tour to Germany and Austria. They will continue to work during the whole lifetime of the BioVill project and beyond. Helpdesk in the municipality of Perušić is equipped with promotional material (mostly developed within Task 3.1 and Task 4.3). Information point is designed as a public space accessible to all residents of municipality of Perušić, its purpose is to inform and educate about the project BioVill offering concrete technical and educational solutions on how to establish a bioenergy village. The main objective of the helpdesk is to inform all the locals and the main stakeholders, that municipality of Perušić in cooperation with company Viševica Energo Ltd., wants to build a cogeneration power plant on the forest biomass as a result of additional needs for thermal energy, to satisfy own consumption and the entire village of Perušić. The establishment of a district heating network brings an increase in energy efficiency (in comparison to existing), significant financial savings (in comparison to fossil fuels) and the retention of funds in the local community on principle of inclusion and participation of a wide circle of local stakeholders and consumers being the key to success future bioenergy village Perušić.

The purpose of setting up local information point (helpdesk) is to raise the visibility and recognition of project BioVill and its availability to the public, providing information about activities that will be carried out in their municipality. The helpdesk encourages cooperation, partnerships and also provides guidelines on the development of regional heating on biomass, in accordance with the needs of the municipality of Perušić. Working hours of the helpdesk are weekdays Monday to Friday from 07.00 to 15.00 h, and on Saturday, if necessary, under consultation with the public. During that time, the residents of municipality of Perušić can visit and use the possibilities the information corner offers, which is open to all interested people without exception and without prior notice. The info corner collaborates with other associations, relevant services, professional individuals and includes volunteers in its work.



Figure 1: Opening of the BioVill information point for citizens in Perušić, REGEA 2016

The main goal is to allow as much quality information to the citizens as possible at the local level in order to raise awareness about the use of renewable sources of energy, in order to use energy as efficiently as possible in the household. It is important to emphasize a systematic approach to all activities related to the implementation of a biomass heating system because informing about the project and its motivation to actively participate in individual activities and discussions are very important to making decisions. The importance is observed in the area covering regional heating and in their connection to the system without which the new plant will not be able to become profitable.

Apart from providing information, education and free consultation, citizens in the information corner can also look at and take flyers and brochures about efficient heating systems which are made as part of the project BioVill and available in the Croatian language, but also from similar projects dealing with bioenergy.



Figure 2: Information material available on the information point, REGEA

The cooperation between national BioVill partner – North-west Croatia Regional Energy Agency and the representatives from village Perušić responsible for helpdesk is continuous and professional. At least once per week REGEA is in contact with responsible person from the helpdesk Perušić. Relations joined together in an effort to promote sustainable use of bioenergy in the municipality Perušić.

2.1.2 Lekenik

The municipality of Lekenik together with REGEA set up the local information point for the BioVill project and related projects in the city hall during the first Information day on March 8, 2017 in order to enable all the interested parties to get first-hand information on the use of renewable energy systems and on systems for increasing energy efficiency. Responsible person for the helpdesk and available at local information point for citizens is:

Mr Ivan Mužek, Head of the single administrative department
 Adress: Zagrebačka 44, 44272 Lekenik
 Telephone number: 00 385 (0) 44 527 814

Other employees of the municipality are also on hand to assist in dissemination activities, especially Mr Dinko Sever who has also participated on the BioVill study tour, Mrs Viktorija Majcen who is participating in organizing of all BioVill events and Mr Ivica Perović who is the key driving force of the BioVill project.



Figure 3: Opening of the BioVill information point for citizens in Lekenik, REGEA 2017

The information point is equipped with various project and promotional materials, which were prepared and disseminated within the BioVill project, such as: project flyers in Croatia, project video with Croatian subtitles, promotion material on residential heating systems (logwood, pellets and woodchip heating systems) translated into Croatian, heat comparison tools for ovens/boilers, presentation materials from the study tours in Germany and Austria and other useful materials. All of these information and promotion materials have also been distributed at information days, local events and have been posted on the project website in order to inform citizens and stakeholders about the BioVill project. Working hours of the helpdesk are the same as the working hours of the Municipality – Monday to Friday, 7:00 a.m. – 3:00 p.m. During that time, the residents of Lekenik village can visit and use the possibilities the information corner offers, which is open to all interested people without exception and without prior notice.

The purpose of setting up local information point (helpdesk) is to raise the visibility and recognition of project BioVill and its availability to the public, providing information about activities that will be carried out in their municipality. The helpdesk will encourage cooperation, partnerships and also provide guidelines on the development of regional heating on biomass, in accordance with the needs of the municipality of Lekenik.

The main goal of the info corner is to raise awareness about the use of renewable sources of energy, in order to ensure that citizens are using energy as efficiently as possible but also to ensure the acceptance of the project of implementing the biomass DH system.

The cooperation between national BioVill partner – North-west Croatia Regional Energy Agency and the representatives from village Lekenik responsible for the helpdesk is continuous and professional. REGEA is in constant communication with the Mr Ivan Mužek and Ms Viktorija Majcen who are mostly in charge of the promotion of the BioVill activities in Lekenik village and for answering the citizen's questions.



Figure 4: Information material available on the information point, REGEA 2017

2.2 Enquiries accepted and FAQ

2.2.1 Perušić

Developed promotional materials within project BioVill (BioVill Flyer, BioVill Fact Sheet) were handed out to all the participants with additional material being delivered in order to disseminate the project to other departments of the Municipality who have been put on the helpdesk. Responsible person in the municipality for helpdesk estimates about 10 citizens' inquiries per month, some of the were also raised by phone.

Since the operation of the BioVill helpdesk, a number of 80 info-sheets have been distributed about different types of heating systems (firewood, pellets and wood chips) and 200 BioVill flyers. Most interested persons are mostly citizens and workers/representatives of the nearby sawmills, wood processing industry, public institutions, the Elementary School Perušić and the Kindergarten Pahuljica as well as key stakeholders and the bioenergy working group members.

2.2.2 Lekenik

The information point in the city hall of the municipality is a place where friendly staff is on hand to assist all citizens and are able to answer their questions about biomass and its potential within the municipality, bioenergy production, biomass heating systems but also to raise the awareness about the use of the bioenergy. Also, information point is equipped with leaflets, publication and other useful and informing material, mostly translated results of the BioVill project. The estimated number of enquiries is around 8/month.

Since the operation of the BioVill helpdesk, a number of 80 info-sheets have been distributed about different types of heating systems (firewood, pellets and wood chips) and 150 BioVill flyers. Most interested persons are mostly citizens, representatives of wood processing companies, public institutions as well as key stakeholders and the bioenergy working group members. The citizens' feedback (especially one acquired during information days) already shows certain knowledge and interest in bioenergy projects.

The most frequently asked questions (FAQ) in both target villages are the following:

1Q **What is the Biovill project?**

A: The BioVill project is a three years project supported by the European Union's Horizon 2020 research and innovation programme. The objective of BioVill is to initiate, promote, and guide bioenergy villages in Slovenia, Serbia, Croatia, Macedonia and Romania up to the investment stage. The project started in March 2016 in collaboration with 9 partners from the target countries, as well as from Austria and Germany. North-west Croatia Regional Energy Agency in Croatia is responsible for all activities within project Biovill with target municipalities Lekenik and Perušić.

2Q **What is a Bioenergy village?**

A Bioenergy village is a village, municipality, settlement or community which produces and uses most of its energy from local biomass and other renewable energies. Biomass from forestry, agriculture and waste is used in a bioenergy village to generate electricity and heat. This is usually implemented by several technologies of different sizes, such as: woodchip boilers, pellet stoves, logwood boilers, biogas plants, combined heat and power plants using woodchips etc. They usually supply a small district heating grid of the village in order to distribute the heat to the consumers.

3Q **What are the objectives of bioenergy village?**

A The objectives of bioenergy village include:

- The biomass feedstock is produced locally and in a sustainable way;
- The power supply from local renewable energies is at least as high as the energy demand of the village;
- The heat demand is provided by locally produced biomass or other renewable energies;
- The business model allows also consumers, farmers and forest owners to become shared owners of the installations;
- The creation of the bioenergy village is based on a high level of public participation.

4Q How can the project help to the municipality of Perušić and Lekenik?

A The village will get the following services from the BioVill project:

- Information on bioenergy villages and bioenergy relevant topics in other countries including study tours in Germany/Austria;
- Assistance in the formulation of strategic bioenergy goals;
- Assistance in the set-up of a bioenergy information center for our village;
- A study on the techno-economical assessment of our village and concrete suggestions for the set-up of bioenergy installations;
- An economic analysis of different options for bioenergy installations and energy efficiency measures;
- Proposals for possible business models for your village;
- Organisation of workshops, training courses, working group meetings in our village;
- Promotional material for our village and participation in local, country- and EU-wide promotional events.

The support from the BioVill consortium includes: service support by the national BioVill partner (North-west Croatia Regional Energy Agency), coverage of organisational costs for selected events (workshops, trainings, etc.) which are organised by the BioVill partners in the target villages, but no direct payments/grants/subsidies to the village.

5Q What measures should be taken within the community to explain the establishment of a bioenergy village to public and or stakeholders?

A: North-west Croatia Regional Energy Agency with the municipality regularly carries out awareness building measures (information events: workshops, working group meetings; press releases; local media campaigns, presentations to peer groups etc.) which have been performed to promote residential biomass heating systems including the feed-back collected during these activities. All measures that were and will be held have one common goal to promote information and experience exchange as well as knowhow transfer on sustainable bioenergy concepts in order to increase public acceptance and to raise public awareness among the citizens and stakeholders in the target villages.

6Q Who are the key stakeholders to support the set-up of a bioenergy village in municipality of Perušić?

A: The key stakeholders who will give support to the establishment of the bioenergy settlement are primarily Perušić Municipality as the local government unit, and company Viševica Komp d.o.o. as the producer of heating energy, as well as all households and public institutions, as initiators of the concept of bioenergy settlement, but also as end users upon realization of the project. Among the public institutions, the strongest advocates of the change of the existing fuel for wood biomass are surely the Elementary School Perušić and Kindergarten Pahuljica, whose main cost of operation is heating oil and maintenance of the old technology of the existing heating system. The municipality will provide technical and organizational assistance in the implementation of the project activities.

7Q How local/regional/national administration is supporting the energy efficiency or production and use of renewable energy at local level in municipality of Perušić?

A: Municipality of Perušić is constantly trying to find possibilities how to support use of renewable energy at local level. In 2015, the Perušić municipality adopted a program for the overall development for the period 2015 to 2020, where the mayor and the municipal council played a key role in the development. The official legal framework and strategic documents, which promote renewable energy sources in the municipality, are: Europe 2020 Strategy, National Strategy for Environmental Protection of the Republic of Croatia, National Strategy for Sustainable Development, Plan for Air Protection, Ozone Layer Protection and Climate Change Mitigation on the Republic of Croatia for the period 2012 – 2016, Sustainable Development Strategy of the Republic of Croatia, Development Strategy of Lika-Senj County, Spatial Plan of Perušić Municipality, Programme of the overall development of Perušić Municipality 2015-2020. Within these documents and strategies, there are development measures and projects that are crucial for further development, and on the same list there is also the project of improving the thermal energy supply with a heating system throughout the municipality Perušić, which represents the basis for the realisation of a bioenergy village Perušić

8Q Are there existing issues which might pose a problem or threat for successful establishment of a bioenergy villages?

A: The risks which might pose a problem or threat for successful establishment of a bioenergy village are: unavailability of concrete active funding instruments (bank loans/credit lines with preferential interest and grace periods or national and EU programmes/due to the lack in experience in the biomass production sector, banks are reluctant to grant loans. The most critical factors are finding a viable business model, coordination with local forest and wood production companies and political support (local and national). All key stakeholders in village agreed that the investor, it can be a public-private partnership or fully private, should be responsible for obtaining the funding, in some cases accompanied with support of local and regional authorities.

9Q Which technologies will be implemented in Perušić? What are the advantages of these technologies for inhabitants of Perušić municipality?

A: The municipality plans to manage the district heating network in cooperation with the local company Viševica Energo Ltd. Currently, public buildings are using fuel oil and electricity for heating purposes. The major objectives of the village in the energy sector are to increase the efficient use of biomass and thereby reduce the need of fossil fuels and greenhouse gas emissions as well as support the regional economic development. The heat will be covered by two sources/technologies: Stand-alone Biomass based district heating system and Industrial Biomass CHP Plant. DH network will connect at least 202 buildings (private and public). Apart from providing cheaper and environment-friendly heating, an additional benefit of a future biomass based DH plant would be, that it creates new economic activities in the region, e.g. local forest owners can supply their own biomass to the CHP plant and either receive heat for a lower price or an additional income for the biomass delivery. Creating new business opportunities and new jobs is also considered as a key factor for reversing the negative population trends, which Perušić is facing the last two decades.

10Q Are there existing companies, supply chains and technology in the area of municipality of Perušić for forest biomass/wood who will give support to this project?

A: In the area of Perušić Municipality, from the industry which can provide biomass, there are 2 sawmills with small capacities and one subject with big capacity - company Viševica Energo Ltd. as the producer of heating energy. Viševica has one of the most modern facilities for timber processing in Europe, with wooden sleepers being their primary product. Apart from the sleepers, wooden elements for furniture and parquet flooring are produced in the sawmills owned by this company. The overall goal of the municipality of Perušić is to completely replace fossil energy, in a first step with renewable energies, by constructing a DH system, powered by a biomass based CHP plant from the wood processing company Viševica Energo Ltd.

11Q Which sources of funding are available for a bioenergy village establishment and which one should be chosen?

A: At the moment bigger investment are difficult as the credit lines for woody energy projects and government support schemes are suspended in Croatia. The investor might have the possibility in the future to obtain subsidies for this investment, based on preliminary information available regarding the Norwegian Financial Mechanism as well as the Integrated Territorial Investment mechanism. One of the key barriers related to the utilisation of biomass for heating in Croatia is the current relatively low price of fossil fuels - according to Eurostat data, for 2017 average price of natural gas for households in Croatia was 0.036 /kWh, which is among the lowest in EU countries¹ - which makes most biomass heat projects economically non-competitive (when compared to fossil fuels) without some form of subsidies. In the past subsidies for biomass heating projects were available from two main sources:

- Environment Protection and Energy Efficiency Fund (EPEEF), which provided subsidies for renewable energy projects (including biomass) to local and regional authorities, but also households. The subsidy programs run by the Fund have been stopped in 2016.
- IPARD pre-accession programme, which Croatia had access to before its accession to the EU in July 2013, and which included subsidies for small cities/municipalities for implementing (among others) biomass heating projects. In the current Operational Programme of Rural Development 2014-2020

¹ EUROSTAT Natural gas statistics, November 2017, available at:
http://ec.europa.eu/eurostat/statistics-explained/index.php/Natural_gas_price_statistics

(the continuation of the IPARD programme) no subsidies for biomass heating for cities/municipalities is foreseen.

REGEA in cooperation with the Municipality is constantly trying to find possibilities for implementation of such projects, including not only subsidies, but financial mechanisms and models like the biomass heat contracting model. REGEA has provided support in the aim of:

- Providing support and information about small-scale heating systems bringing leading experts and producers of pellets, wood chips and boilers to the BioVill events; and
- Providing information and advices on possible financial subsidies for the small heating system. REGEA was actively involved in keep reminding the national authorities on the importance of the implementing bioenergy project in Croatia.

12Q Who should be responsible for obtaining the funding for a bioenergy village?

A: Municipality of Perušić in cooperation with national BioVill partner (North-west Croatia Regional Energy Agency) will be responsible for obtaining the funding of the district heating network, while the domestic wood processing company Viševica will be the investor of the CHP biomass plant.

13Q What measures should be taken within the community to explain the establishment of a bioenergy village to public and or stakeholders?

A: North-west Croatia Regional Energy Agency with the municipality regularly carries out awareness building measures (information events: workshops, working group meetings; press releases; local media campaigns, presentations to peer groups etc.) to promote residential biomass heating systems including the feed-back collected during these activities. All measures that were and will be held with have one common goal to promote information and experience exchange as well as knowhow transfer on sustainable bioenergy concepts in order to increase public acceptance and to raise public awareness among the citizens and stakeholders in the target villages.

14Q Who are the key stakeholders to support the set-up of a bioenergy village in municipality of Lekenik?

A: The key stakeholders in the implementation of the BioVill project are Lekenik Kindergarten, Public Reading Room and Library Lekenik, Elementary School “Mladost”, SOS Children’s Village Lekenik, Lekenik Firefighting Association, Lekenik Municipality Tourist Board, Lekenik Forestry Office, as well as other non-profit organisations, entrepreneurs, forest owners and farmers from village Lekenik. The municipality will provide technical and organizational assistance in the implementation of the project activities.

15Q How local/regional/national administration is supporting the energy efficiency or production and use of renewable energy at local level in municipality of Lekenik?

A: The legislative frameworks, as well as a number of strategies in the field of renewable energy sources, have been adopted at the national level. Lekenik municipality is trying to adopt all the provisions of laws, regulations and strategies in the legislation at the municipal level and in a case that certain provisions may not be contained it will be corrected as soon as possible. The municipality will also adopt adequate provisions which will have a stimulating effect on the strengthening of bioenergy in the whole village. The aim of the municipal administration is to take advantage of the opportunities brought by new technologies, including the implementation of a sustainable energy supply system that will as much as possible use energy from renewable sources that are available in the nearby environment.

16Q Which technologies will be implemented in Lekenik?

A: The initial plan builds on the fact that potential energy consumers, such as large-scale public buildings, are concentrated in the centre of the village. This concentration offers the opportunity to implement an efficient district heating (DH) grid based on biomass. The DH system will include public buildings in the centre, such as the SOS Children’s Village Lekenik – consisting of six semi-detached and eight detached buildings –, the Social Centre of the SOS Children’s Village, the kindergarten, the Football Club, the Primary School “Mladost” and the Lekenik Library. The envisaged DH network will at least connect 18 buildings with a total area of 13,118 m². The total assumed annual space heat demand was assumed to be around 1,088 MWh/a. The total connected consumer peak load will be 837 kW. The implementation of a biomass based DH system would surely provide many positive effects, such as newly created and secured jobs, environmental benefits and increased competitiveness of the forestry sector. In remote

areas, where grid connection is not economic, other BioVill project activities are focused on replacing old in-house heating systems based on heating oil and natural gas with modern biomass based systems.

During the course of obtaining answers to questions given by responsible persons in the municipalities, the locals were able to also receive direct links to the website of project BioVill, videos to important strategies, documents or laws, and web sites of key organisations and bodies. In addition, it will be updated regularly with relevant publications that locals may find of importance. The information points will be updated with further questions from citizens where they can receive answers related to the project itself, additional activities, and funding, business models and alike.

2.3 Recommendations and future plans

For the successful work of helpdesks in both target villages in Croatia, citizens proposed some recommendations which are given below:

- Organize idea competitions within a group or among all citizens to come up with ideas for how to become a more sustainable community, challenge private entrepreneurs, come up with ideas for solution that will contribute to more sustainable development of bioenergy in target villages;
- Improve people's attitude towards energy consumption - education of citizens, apartment owners and building managers on energy efficiency and consumption by organizing workshops with experts.

In order to ensure the smooth running of helpdesks in the future it is important to keep the right persons in charge for BioVill and bioenergy topic, who are involved from the beginning of the project and who have the relevant information's, because each inhabitant has different reasons for participating in a local renewable energy project. One successful way to create awareness is to convey a holistic message that the project can achieve a variety of objectives. For example, it is important to emphasize the harmony between environmental protection and the creation of economic value. Furthermore, in order to continue successful work, Biovill events will be organized in 2018, supported by the helpdesk and REGEA to convince or encourage more residents to use renewable energy sources to change consumer behaviour by providing either new or an alternative solution to existing situation. Biovill information point's activities have a positive impact, since the number of inhabitants increasing who know about the project BioVill.

In conclusion, established information points received a positive response, citizens highlighted as major strengths: bringing partner's together, group work, atmosphere which supports generating ideas, acknowledgement and discovering of problems, exchange of knowledge and information. This is proved that citizens and stakeholders were satisfied by the positive experience and answers, and prone to operate in order to meet the challenge putting into practice solutions proposed during the face-face meeting at helpdesks with responsible person.

3 Macedonia

3.1 Establishment of a local information point (helpdesk) for the citizens of Kichevo

In the period after the first information day and the first meeting of the main bioenergy working group, several local offices have been considered for the establishment of a local information point (helpdesk) for the citizens in Kichevo. The Regional Office of the Economic Chamber of the Republic of Macedonia in Kichevo (Regional Chamber of Kichevo) was selected as the most suitable option in terms of location, activity and prominence. Kichevo has its own Chamber since 1992, as a territorial committee of the Economic Chamber of the Republic of Macedonia. Since 1996, the Chamber has been reorganized into a Regional Chamber, covering the region of Kichevo, Makedonski Brod, and Plasnica. Its threefold role is to unite the companies into one organization, to improve the conditions for their operation and development, and to ensure mutual business cooperation. Currently, the Regional Chamber counts 70 members (companies). Within its premises, the helpdesk was opened on 9th November 2016. Person in charge of the helpdesk is Dijana Lazaroska Jovanoska, contact person of the Regional Chamber as well. The helpdesk is located in the center of Kichevo, 50 m away from the main square and the pedestrian area, thus maximizing the accessibility for the general public. Also, it is several hundred meters away from the defined site for project implementation. It works from 8 am till 4 pm during the working days.

Activities for which the Regional Chamber is already responsible are among others: organizing trainings, monitoring the current working conditions and economic movements, composing proposals for acts and other documents of interest to the economy in the region, and maintaining regular contacts with the companies (members of the Chamber). As additional role in the BioVill project, the Regional Chamber (local helpdesk), enables interactive contact with interested citizens seeking for more precise information about renewable energy sources and energy efficiency measures, thereby raising the public awareness on the positive effects of utilization of bioenergy, particularly biomass. For that purpose, the helpdesk offers pool of companies with the highest quality of renewable energy technologies and energy efficiency products available in Macedonia, whose promotion materials are showcased for visitors. Other materials found in the helpdesk include: BioVill project banner, presentation, fact sheet, flyer, video, promotion materials on biomass, presentations and materials from study tours, Excel-based tools for individual heating systems, etc.

Besides the general public, the helpdesk is also targeting the beneficiaries from the first phase (public buildings), second phase (old residential buildings) and third phase (new residential buildings) of the planned biomass district heating system, by means of different communication channels. Public building stakeholders are addressed via a network of directors and technical personnel, council of parents, and teachers, while residential building stakeholders are addressed via councils of residents.

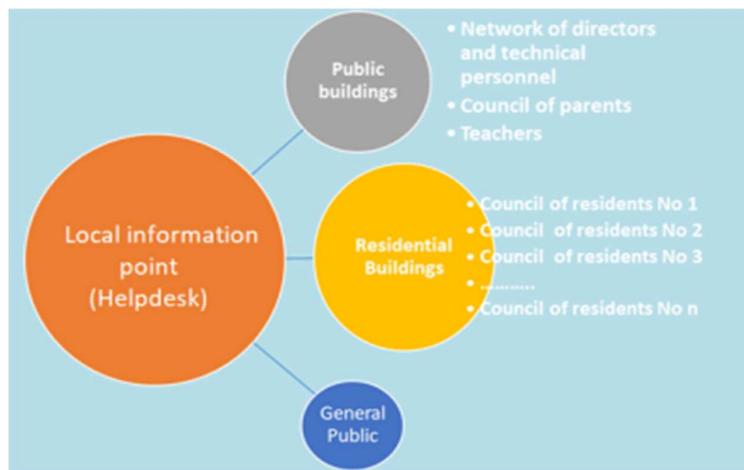


Figure 5: Premises (left) and communication scheme (right) of the helpdesk in Kichevo

Direct contact between the helpdesk and the BioVill's local responsible person (Tino Aleksov) as well as between the helpdesk and the BioVill's national partner (SDEWES-Skopje) was set-up at the beginning, with an aim to concretely guide the helpdesk activities deriving from the project and provide technical support when needed. At the time of the Project Meeting in Macedonia (16-17.1.2018), the BioVill project partners had the chance to visit Kichevo and its helpdesk, and get acquainted with the local conditions and business opportunities. Pictures and participant list are given below.



Figure 6: BioVill project partners visit the helpdesk in Kichevo

3.2 Enquiries accepted and FAQ

Since the opening of the helpdesk, citizens have shown great interest in the BioVill project and its activities in Kichevo. In collaboration with the BioVill's local responsible person and the BioVill's national partner, the helpdesk contributed to reaching 104 households from the settlement of the prospective bioenergy village, that took part in the survey with citizens on their visions and ideas about the set-up of the bioenergy village in Kichevo (Deliverable 3.6). Moreover, a significant number of information and promotion materials have been handed out to the general public by the helpdesk to date, such as: 500 project flyers in Macedonian, 300 project flyers in Albanian, 300 info-sheets on logwood, pellets and woodchips, 200 project fact sheets, and other materials from information days and trainings where the helpdesk assisted (invitations, agendas, pens, portfolios and notebooks). With the aim to fulfil the pool of companies whose materials are showcased in the helpdesk, SDEWES-Skopje linked the helpdesk with the Energy Efficiency Information Centre in Skopje and transferred materials on existing companies dealing with renewable energies and energy efficiency in the country.

So far, citizens have given positive feedback on the information provided and a summary on their frequently asked questions follows below.

1Q: Can the wood be a renewable energy source?

A: Yes, it can. The wood can be climate friendly because the emitted CO₂ during burning wood fuel equals the amount of CO₂ the tree absorbed during growing. Most importantly, the wood cannot be a renewable energy source by definition, if it is used in an unsustainable manner. Utilization of waste wood (forest and wood-processing residues) converted into woodchips, pellets, and briquettes, is highly recommended.

2Q Why was the settlement Lozhionica selected as a pilot location for project implementation?

A: Several sites have been investigated for project implementation, but only one was selected as a pilot location. The settlement Lozhionica encloses densely populated area (residential and public buildings) and therefore characterizes with relatively high heat demand which is in favour of the planned district heating system energy and cost efficiency. First priority is given to the public buildings (schools and kindergarten) due to their old and inefficient heating systems. A prospective realisation of that first phase will gain the confidence of the households in the settlement to connect to the district heating system or at least forgo their outdated and environmentally unfriendly in-house heating systems. Further developments of the project idea in other settlements in Kichevo mostly depend on the proactive engagement of stakeholders and citizens.

3Q How can Kichevo benefit from the project implementation?

A: Taking into account the selected site for project implementation, around 3,600 citizens and students could benefit from the operation of the planned three-phase district heating system. The system will replace the inefficient heating systems and solve the problems with heating, especially in the public buildings (schools and kindergarten). Furthermore, the newly created value chain will: a) induce revenues for the wood suppliers and the system operator and open new jobs, b) reduce the GHG emissions from fossil fuels and increase the air quality, c) influence numerous jobs along the value chain (planners, installers, servicers, technology producers). Citizens who will not connect to the district heating system could benefit in case they replace the old in-house heating systems and install efficient heating systems running on sustainable biomass (woodchips, pellets, briquettes, logwood) fostered by the project. Last but not least, the overall benefit from the project is the raised awareness on sustainable bioenergy and other renewable energy sources as well as energy efficiency measures, amongst all citizens in Kichevo.

4Q Are there enough biomass resources available in Kichevo?

A: Concerning the available biomass resources in Kichevo, latest numbers depict an annual harvest of about 40,000 m³, whereof 35,000 m³ for energetic use (firewood) and 5,000 m³ for material use (industrial wood), while additional 2,000 – 5,000 m³ are forest residues. The latter are enough for the implementation of the three-phase biomass district heating system. In general, resources are ample and wood is already the most utilized heating source in Kichevo and the country, although stakeholders and citizens shall consider shifting towards more sustainable and efficient exploitation manners.

- 5Q** How can I join the main bioenergy working group?
A: You can join the main bioenergy working group through the helpdesk or by contacting BioVill's local responsible person in Kichevo, Tino Aleksov, and the BioVill's national partner, SDEWES-Skopje. Also, you can leave your contact at the helpdesk and be informed about the next bioenergy working group meeting open for every interested stakeholder and citizen.
- 6Q** Who will realize the bioenergy concept in Kichevo?
A: Besides the techno-economic, social and environmental assessment, the BioVill project is developing an individual business model for the bioenergy concept in Kichevo. Experts are proposing an establishment of a public enterprise managed by the municipality, a public-private partnership, e.g. between the municipality and the wood suppliers or a combination thereof. In order to be able to realize the concept and afterwards operate the system, the future entity shall use the opportunity to apply for a loan offered by national and international credit lines, funds or programmes that support projects related to renewable energy sources and energy efficiency measures.
- 7Q** When will the planned district heating system be realized?
A: According to the analysis carried out for the concept in Kichevo, 2020 is set as the year when the district heating system starts operating. Nevertheless, the BioVill project will develop the concepts in the target villages up to investment stage. Therefore, the physical realisation of the concept is mainly in the hands of the stakeholders and citizens in Kichevo. In the interest of acquiring a stronger commitment for realisation of the concept, the BioVill project in one of its tasks envisages signing letters of commitment with the key stakeholders in Kichevo.
- 8Q** Are the bills for the planned district heating going to be lower than the current ones for heating?
A: In the techno-economic analysis performed within the project, the district heating prices were set to be comparable to the current electricity prices for households in the country, although in practice, the prices will rely upon the contracts concluded between the future system operator and the specific customer. Both the supply and demand requirements will be accommodated, if long-term contracts of 10 years or more are signed, thus ensuring the development of the prices through the years.
- 9Q** I cannot connect to a district heating network because my house is in a remote area. Can I still implement the bioenergy village approach?
A: Yes, you can. The BioVill project is also aimed at supporting households that cannot be connected to a district heating network due to house remoteness or lack of finances, by promoting solutions for individual (in-house) heating systems, i.e. biomass fuelled boilers and ovens. Before you choose your preferred biomass technology and fuel, you shall read the information material on logwood, pellets and woodchips. Then the BioVill team can calculate for you the heating costs by different biomass technology and fuel and make a heat cost comparison. In this way, you will be able to choose the most suitable option for you.
- 10Q** Where can I learn more about the project and its results?
A: You can learn more about the project through the helpdesk's materials: project banner, flyer, fact sheet, video, standard presentation, information materials on logwood, pellets and woodchips, Excel-based tools for boilers and ovens, presentations prepared from the national partner, presentations and information material from the study tours, etc. However, visiting the BioVill's project website (www.biovill.eu), might be the best way to learn more about the project and get an insight into results delivered and made available for the general public. There you could find the profiles of the project partners, various publications (deliverables), news and press releases, etc. The deliverables are the reports on the project activities undertaken within the project and inter alia, overall results of the techno-economic, socio-economic and environmental assessment of the bioenergy village concept in Kichevo can be inspected therein.

3.3 Recommendations and future plans

Opening a helpdesk within the Regional Chamber of Kichevo, as a knowledge hub where interested citizens are provided with practical and technical information, confirmed to be an effective communication channel between the project and the citizens in Kichevo. It also complements and supports the organization of other project activities, such as information days, working group meetings and trainings.

Recommendations and future plans that stem from the experience gained through the past activities of the helpdesk involve:

- Trying to reach more citizens from the residential buildings, particularly from the second and third phase of the project
- intensifying the communication with the representatives of the involved public buildings (network of directors and technical personnel, council of parents, teachers), particularly from the first phase of the project
- preparing educational materials on renewable energies and energy efficiency for students of different age (together with the teachers from the schools and kindergarten from the first phase of the project)
- participating in the organization of the fourth information day for citizens to be held in 2018
- enhancing the cooperation with the main bioenergy working group
- assisting in the organization of future working group meetings and trainings for stakeholders and citizens
- strengthening the linkage with the Energy Efficiency Information Centre in Skopje and the mutual information and promotion material sharing
- increasing the collaboration with the Municipality of Kichevo and its website (<https://kicevo.gov.mk/>)
- ensuring the participation of companies and members of the Regional Chamber in project activities
- facilitating the communication with citizens through the Facebook page BioVill Macedonia, managed by the BioVill's local responsible person Tino Aleksov (<https://www.facebook.com/BoiVill.MK/>)

In addition to the aforementioned activities, the continuous sharing of project materials and lobbying for the project objectives by the helpdesk will spring up the idea of sustainable bioenergy and other renewable energy sources as well as energy efficiency measures among the citizens of Kichevo and will lay the ground for project realisation in the near future.

4 Romania

4.1 Establishment of a local information point (helpdesk) for the citizens of Estelnic and Ghelinta

This report sets out the basic objectives, structure, roles and activities of the BioVill helpdesks, set-up in Ghelinta and Estelnic. The BioVill helpdesk is a local information point and facility, which provides guidance and information on biomass production, bioenergy, biomass based heating systems for households, but also for small and medium scale biomass based district heating systems. In both municipality, all BioVill publications can be found in printed version, like D.4.1 - Techno-economical assessment reports of bioenergy value chains and their potentials in the target villages, D4.3 - Report on promotion of small-scale heating systems in the target villages in Romania, D5.3 - Report on BioVill training course on bioenergy projects for financial institutions in Romania and D3.7 - Reports on strategic bioenergy goals for the target villages. The information materials on high efficient residential heating systems using wood or biomass fuel have been translated into Romanian language by GEA and are disseminated through information points and events or during open hours in the target villages. Thus, several flyers and info-sheets are available at the BioVill helpdesk in Estelnic, like BioVill Fact Sheet, Logwood info-sheet, Pellets info-sheet, Wood-chips info-sheet, and also BioVill Project Poster. At the BioVill helpdesk there is a comfortable meeting room, with PC, printer, flipchart, Wi-Fi connection and all facilities that are necessary to get information, share information, and to provide technical advices related to the BioVill project and bioenergy issues.

4.1.1 Estelnic



Figure 7: Flyers at the information point in Estelnic, GEA 2016

In order to provide helpdesk services for citizens and stakeholders in the selected target villages and to disseminate the local bioenergy production and consumption concept, the BioVill information point for citizens has been established on 11th November 2016, in Estelnic. The opening day of the information point for citizens in Estelnic was organized as part of the first information day for citizens.



Figure 8: Opening day of the BioVill information point for citizens in Estelnic, GEA 2016

At the opening event of the information point for citizens in Estelnic several well-known personalities were invited: from research area, politics, and business sector. During the event presentations were held by Prof. Dr. Ing. Ion Visa, the General Director of the Transilvania University of Brasov, Research and Development Institute (ICDT), further by the BioVill Advisory Board member, Mr. Fejér László Ödön, parliamentary deputy from the region, by Mr. Lajos Vajda president of Green Energy Association, Mr. Attila Varga Manager of Municipality of Estelnic, and Mr. Balázs Salamon Office Director of Angustia Leader Action Group. The agenda of the event included the presentation of the project; a presentation of best practice examples – bioenergy villages and different types of heating systems; the inauguration of the info point, the distribution of promotional materials; and moderated discussion about the concept of a bioenergy village.

The information point for citizens is hosted by the Mayoralty of Estelnic and is located in the office of the village manager. The activity of the helpdesk is based on its philosophy of working together on biomass, self-sufficient energy village concept and climate issues. Accordingly, the BioVill information point works also through local BioVill Working Group members. The helpdesk provides technical advices and the professional network of Green Energy Innovative Biomass Cluster is also available for local stakeholders.

In Estelnic, Mr. Attila Varga, the manager of the municipality, is in charge with the activity of the helpdesk. Since he is working at the Mayoralty, the working hours of the helpdesk are from 8:00 am to 4:00 pm every weekday, with the aim to provide very accurate information regarding biomass and biomass based heating energy for public and private buildings.

The cooperation between the national BioVill partner, namely the Green Energy Association (GEA) and Green Energy Innovative Biomass Cluster and the BioVill target villages is continuous and professional based. The staff of GEA is contacting at least once per week the local helpdesk. The staff from GEA and the contact person from BioVill target village, Mr. Attila Varga from Estelnic organized several meetings for local stakeholders and inhabitants. Since the start of the BioVill project, the local contact persons supported the realization of a survey, the heat demand survey at local public institutions, companies and private households. During the BioVill events the local mayors and the members of the Working Groups are fully involved and they also provide information and face-to-face dissemination for the inhabitants. Thanks to the local contact person in Estelnic, accurate and relevant information has been distributed about the ways of bioenergy production and all kind of renewable energy resources for local inhabitants, bioenergy users, etc.

4.1.2 Ghelinta

The BioVill information point for citizens in Ghelinta has been opened on 16th December 2016, in order to provide information services for citizens and stakeholders in the BioVill target village. The opening of the information point in Ghelinta was part of the first information day for local citizens. People who were invited to the opening event were the Mayor, Mr. József Cseh, members of the local Council, representatives of forest owners associations, the school director, the catholic pastor, etc. During the information event several presentations were held, by Mr. József Cseh, the Mayor of Ghelinta, Mr. Lajos Vajda, president of Green Energy Association, and Mr. Balázs Salamon Office Director of Angustia Leader Action Group. The agenda of the event included the presentation of the BioVill project and of experiences and best practice examples from the first BioVill study tour in Germany; the inauguration of the local information point for citizens; the distribution of promotional materials; and a moderated discussion about the concept of a bioenergy village and possible solutions for Ghelinta.

The local information point and support facility provides guidance and technical information on biomass use for energy purposes, bioenergy production for locals, biomass based heating systems for households, but also for small and medium scale biomass based district heating systems (DHS). At the helpdesk in Ghelinta several BioVill publications can be found in printed version, in Hungarian language, such as D3.7 - Report on strategic bioenergy goals for the target villages, D.4.1 - Techno-economical assessment reports of bioenergy value chains and their potentials in the target villages and D4.3 - Report on promotion of small-scale heating systems in the target villages in Romania. Furthermore, the most suitable call for biomass DHS implementation, namely the Operative Program for Big Infrastructures POIM, Guidance for 6.1 measures, is also available at the information point.

The information materials on alternative heating solutions using wood or wood residues were translated into Romanian language by GEA, and are used and distributed to the inhabitants of Ghelinta. Thus, different flyers and info-sheets are available at the BioVill helpdesk as mentioned in subchapter 4.1.1. At the BioVill helpdesk PC, printer, Wi-Fi internet connections are available and all facilities that are necessary to provide information regarding the biomass use and the BioVill project.

The helpdesk is hosted by the Mayorality of Ghelinta and is located in the office of Local Agricultural Directorate. The activity of the BioVill helpdesk is to provide relevant and reliable information about utilization of biomass, energy self-sufficiency. Accordingly, the helpdesk functions through the local BioVill Working Group members. The helpdesk provides technical advices and the professional network of Green Energy Innovative Biomass Cluster is also available for local inhabitants and stakeholders.



Figure 9: Opening day of the BioVill information point for citizens in Ghelinta, GEA 2016

In Ghelinta Mr. István Fejér, member of the Local Council of Ghelinta Municipality is in charge for the BioVill helpdesk activities. Since he is part of the staff at the Mayoralty of Ghelinta, the working hours of the BioVill information point is from 8:00 am to 4:00 pm every weekday, with the aim to provide very accurate information regarding to biomass and biomass based heating energy for public and private buildings.

The cooperation between the national BioVill partner, namely the Green Energy Association (GEA) and the bioenergy target village Ghelinta is well developed, and focuses on implementation of biomass based heating systems for public and private buildings. The staff of GEA is contacting at least once per week the local helpdesk. The staff from GEA and Mr. Fejer Istvan organized several meetings for local stakeholders and inhabitants. Since the BioVill project has been started, the local contact person supported the realization of a survey, the heat demand survey at local public institutions, companies and private households. The local mayor and the members of the Working Group are fully involved in all BioVill events and they also provide information and face-to-face dissemination activities for inhabitants.

Thanks to the local contact person in Ghelinta, accurate and relevant information has been distributed about the ways of bioenergy productions and all kind of renewable energy resources for local inhabitants, bioenergy users, etc.

4.2 Enquiries accepted and FAQ

4.2.1 Estelnic

During the activities of the BioVill helpdesk, 84 info-sheets have been distributed about different types of heating systems (firewood and wood chips). The target group for disseminating the flyers and info-sheets were citizens, key stakeholders and the local bioenergy working groups. Since several local entrepreneurs and key stakeholders are member of the bioenergy working group, they are also involved in dissemination activities.

The estimated number of enquiries is around 10 per month. The interested persons are mostly entrepreneurs in wood logging or wood processing sector, guest house owners or members of the local forest owners association, in the same time the number of interested citizens is very low.

Since the operation of the information point, 54 households received information regarding possible subsidies and incentives to switch from classical stoves to small-scale biomass-based heating distribution systems. The total number of households, beneficiaries of the information and dissemination activities carried out by BioVill helpdesk and GEA team members about usage of biomass at small-scale heating systems is 84. In Estelnic, 232 BioVill project flyers have been distributed (114 through info days, 34 through the survey conducted with citizens, and 84 through the activity of the information point for citizens).

4.2.2 Ghelinta

The BioVill information point for citizens in Ghelinta has been opened on 16th December 2016, in the presence of 46 participants, including the citizens of the commune, and relevant stakeholders, like representatives of the local council, farmers and forest owners, entrepreneurs, the school director, the local priest.

Information materials on, e.g. use of biomass for energy purpose and modern residential heating systems using wood fuel have been shared, in order to reach more individuals through the BioVill information point in Ghelinta. The estimated number of enquiries is around 12 per month. During all events organized in the village (helpdesk activities, working group meetings, and survey with citizens) flyers and info-sheets have been distributed. In Ghelinta, during these activities, the person in charge with BioVill helpdesk and GEA team members have distributed a number of 107 info-sheets about different types of heating systems (firewood and wood chips).

The total number of households, benefiting from the information and dissemination activities carried out by GEA team members and the BioVill helpdesk about usage of biomass at small-scale heating systems in Ghelinta is 237, 6100 through info days, 55 through the survey conducted with citizens and 82 through the activity of the helpdesk).

The most frequently asked questions (FAQ) raised to the helpdesks in both target villages are the following:

1Q What is the BioVill project about?

A: The BioVill project is financed by EU Horizon 2020 program. It will support the preparation and implementation of the bioenergy village approach in seven selected target villages in Romania, Croatia, Macedonia, Serbia and Slovenia, e.g. by bringing together, training and motivating the local stakeholders and by providing technical expertise in order to develop an concept for energy self-sufficiency of the target villages.

2Q Why is it good for the village to join the project?

A: Involving the village in this project is an opportunity to gain international experiences in the bioenergy field. Furthermore, the sustainable use of local biomass sources can provide positive impacts on local social, economic, environmental issues, for instance, more income can be generated by the local forest owners, new jobs could be created, and the harmful emissions during the heating season could be reduced.

- 3Q How much does a biomass boiler costs and what are its operational costs compared to the old firewood based boilers used so far?**
A: The biomass heating system needs a significant initial investment, but these investments can be financed mainly by European Union support programmes while some parts of the initial investments must be covered by local government or local private stakeholders. Separate biomass-based heating systems for households costs very much (for Romanian conditions), therefore the local stakeholders have to think about a joint biomass-based district heating system (DHS).
- 4Q Why is it useful/beneficial for village residents to join the biomass-based district heating system?**
A: The benefits are: a higher heating and living comfort, reduced/no work with the firewood, predictable costs, independence from natural gas and other fossil fuels, a strengthened local biomass-based economy, etc.
- 5Q What means the use of biomass?**
A: In the Romanian target villages the use of biomass primarily means use of wood waste that is periodically produced in the area, or the use of the woody biomass resulted from short rotations forest plantations, like the energy willow.
- 6Q Is it necessary to convert the collected biomass into pellets?**
A: No, it is not necessary. It can also be chipped and burned in a woodchip boiler or used as logwood fuel.
- 7Q Is the biomass utilization not too expensive?**
A: This depends on the local conditions, used technology and business model. But usually it is cheaper than gas, heating oil – electricity and offers high thermal comfort through modern heating systems.
- 8Q Can agricultural residues, such as straw, be burned?**
A: Yes, agricultural residues, like straw, can be burned in biomass boilers.
- 9Q What kind of wastes and residues can we burned in the biomass boiler?**
A: This depends on the boiler technology. But technologies for all kind of solid woody waste and solid agricultural by-products, such as branches, barks, sawdust, grain straws, corn stalks, etc., exists.
- 10Q Does the BioVill project only focus on public institutions and private companies or also to the housing sector in the village?**
A: The BioVill project and the helpdesks with support by GEA team members provide information and technical support to everybody, especially to the citizens of the target villages.
- 11Q What role does the Forest Owners Association in Estelnic plays in collecting waste wood?**
A: The Association can organize the labor force, submit a project for the acquisition of a wood-chipper, transportation facilities, tractor, etc. in order to be equipped for biomass production.
- 12Q How can a local inhabitant work and earn money on this topic?**
A: The local inhabitants can also be involved in biomass production. If they own forests, mountain pastures or such areas where woody biomass can be collected and/or produced, they can start the biomass production and supply it to the district heating system. Secondly, the sawmill owners can also provide woody by-products as biomass fuel. Thirdly, the local inhabitants can invest in the biomass-based district heating system (DHS), thus they can become heat energy producers for the local public and private heat consumers. Further details can be provided / discussed at the helpdesk.
- 13Q Are there biomass boiler and firewood boiler producers in the region?**
A: All current information about woodchips, pellets and firewood fueled boiler producers from the region are available at the helpdesk.
- 14Q Who provides service and maintenance, when any complication/problems arise during boiler operation?**
A: All current information about the companies who provide maintenance for heating systems from the region are available at the helpdesk.

15Q Which legal regulations are currently in force on the Romanian market, regarding energy willow plantations?

A: Law nr. 186/2017, amending and supplementing the Land Law nr. 18/1991 provides the legal frame regarding the energy willow plantations in Romania. More details are available at the helpdesk in the villages.

At the BioVill information point for citizens, further information about solar panels, alternative solutions for hot water production on household level, etc. have been provided. Moreover, updated information for the „Green House” (RO: Casa Verde) government program have been provided too. The national program has been launched in 2010 with the aim to provide financial support for households who want to use renewable energies for heating and hot water. The program for the installation of heating systems using renewable energy, including the replacement or completion of classical heating systems is dedicated to private households. The eligible households are those who want to purchase renewable energy based heating systems, including those intended to replace or complement the classical heating systems; expenditure on the installation and commissioning of the system;

The national program provides:

- up to 3,000 RON, for the installation of unpressurized solar panels;
- up to 6,000 RON, for the installation of pressurized solar panels;
- up to 8,000 RON, for the installation of heat pumps, excluding air-to-air heat pumps.

The program called „Green House” was very popular, so far in Estelnic. More than 20 households use solar panels for hot water preparation; some of them are also connected to the heating system in the house. Moreover, in the last two years, the households decided to install solar panels, even without support by the the governmental subsidy program.

At the BioVill information point for citizens in Ghelintă appeared some questions regarding to the requirements of the size of woodchips that is going to be produced by local sawmill owners. Some other questions referred to the question, how a biomass CHP plant operates. e.g. how can it produce steam and power out of biomass? These questions have been answered by Erpek Ind. Ltd. company and experts from GEA. Technical details and solutions have been provided by Erpek Ind Ltd., since the company deals with heat energy production, design and installation of biomass based heating systems at small and medium scale.

In order to gain more practical information regarding to biomass based heating systems in different cases, GEA, Erpek Ind. Ltd. and the BioVill information points from the target villages organized a study tour to the Covasna County. On that study tour, on 9th March 2017, the stakeholders visited a greenhouse facility, heated by a woodchips-based biomass boiler with 4 MW capacity, a meat processing company, where a biomass boiler produces 5000 liter hot water per hour, a waste management company, where biomass is collected from the public areas from Sfantu Gheorghe municipality, while a biomass boiler heats the company’s offices and workshops, and a business incubator house, where a biomass boiler provides the heating. At all visited institutions and private companies the representatives of the BioVill target villages were warmly welcomed, received valuable information and exchanges experiences on the use of bioenergy for heating.

4.3 Recommendations and future plans

In the BioVill target villages, the information points for citizens are operating during the weekdays and are open for any questions. Both contact persons participated at the BioVill study tours and in other relevant meetings and they were and are involved in the project activities implemented by GEA, they have relevant and reliable information regarding the bioenergy topic. Thus, the national BioVill partner GEA considers the helpdesk services as very suitable and necessary. In order to achieve the planned results, e.g. in awareness raising, the activities of the helpdesk has to be continued. Moreover, regular information days and other information and training actions have to be carried out in both target villages. Thus, the BioVill project will support the helpdesk activities in 2018 as well, such as “BioVill goes to school”, “BioVill goes on the street”, etc., in order to get in touch with more local inhabitants.

The main prerequisites for the successful work of the information point for the citizens are, to keep the right persons in charge for this topic, who are already involved in the project and who have the relevant information. In order to ensure the functioning of the helpdesk, a continuous update of the professional material and the knowledge of the persons who are in charge is crucial in both target villages.

The positive impact of the BioVill helpdesk activities in the target villages is already measurable, since the number of inhabitants who know about the BioVill project and the bioenergy concepts has substantially increased. Beside the helpdesk activities, organizing information events for the citizens and local stakeholders and publishing articles on the topic in the local newspapers is also crucial. In the future, in order to reach more citizens with updated information on the BioVill project and the stage of implementation of biomass based district heating system, more online information sharing, like on social platforms, should be used, since nearly all citizens are users of this platforms. GEA is already very active in social networks and has published there all BioVill events with a large number of information and pictures. Thus, GEA will provide assistance to the contact persons from local helpdesks.

5 Serbia

5.1 Establishment of a local information point (helpdesk) for the citizens of Kostojevici

The helpdesk (citizens' information point) for the BioVill target village Kostojevici was set up in the scope of the first info day that took place on February 28, 2017. It was set in the administration building of the Municipality of Bajina Basta in the area frequently visited by local population. The responsibility for the helpdesk activities has been operated by environmental inspector from the municipality who is supported by the staff of the national BioVill partner, SKGO. Project materials are disseminated through the info point and advice regarding bioenergy is available on request.



Figure 10: Entrance to the office where helpdesk is located inside of the municipal building Bajina Basta

In addition to the helpdesk in the municipal building, a project roll-up and materials are permanently exhibited and available in the Primary School "Dusan Jerkovic" in the village of Kostojevici.

Ms. Dragna Ivanovic, is the person in charge for the helpdesk and for providing information to the interested citizens of Kostojevici and Bajina Basta. She is the environmental inspector and BioVill project associate who has been involved in the activities from the very beginning, has attended all three study visits and has been oriented by the BioVill project experts and SCTM core project staff.

The helpdesk is open to citizens every day from Monday to Friday and working hours are 7.00 till 15.00 unless Ms. Ivanovic is out on the field work assignment.

Helpdesk has a function to disseminate project materials like that on individual heating solutions or BioVill project flyers. Its role is also to provide first level of information upon citizen's inquiries and to reach out to project team when and if necessary.



Figure 11: Helpdesk in the office of the environmental inspection service of the municipality of Bajina Basta

5.2 Enquiries accepted and FAQ

Since it became operational, the helpdesk was mostly active in period's right after specific activities in Kostojevici or Bajina Basta, like info days or working group meetings that involved larger number of citizens of the village. Most of the inquiries to the helpdesk were provided personally in the office of Ms. Ivanovic. In addition, some questions about the project were received over the phone, especially after the two surveys conducted among citizens of Kostojevici. The total number of questions received by the helpdesk is approximately 20. Most of the persons posing the questions were household owners from Kostojevici with just one local entrepreneur and one small forest owner. Generally, the feedback from the users of the helpdesk and their attitude towards bioenergy village concept is positive. Citizens are aware of the current situation of the district heating system and its lack of sustainability, both related to environmental and financial aspects. Therefore, they are very interested to know what is going to happen with it. For them, the idea of using locally available and owned biomass is very attractive since it might have a positive effect on the economic and environmental sustainability of the DH system.

Questions posted to the helpdesk vary from most general about the project and about the bioenergy village concept to more concrete regarding individual costs of heating and possibility to connect to the grid. Most common questions are:

1Q: What is bioenergy village?

A: A bioenergy village is a settlement that provides most of its energy needs from locally available renewable energy sources, predominantly forest, agriculture or residual biomass.

2Q: What fuel is going to be used in local boiler house?

A: This depends on a number of different factors, like available type of biomass, existing biomass value chains, possibility to have long term supply contracts, but also on market price of different energy sources. For Kostojevici, the most obvious choice is wood chips, because it does not need too much of pre-treatment and the boiler technologies are available and affordable.

3Q: Will the existing district heat grid be used in bioenergy village?

A: Yes, still some upgrades will be needed in terms of automatization and management of the system.

4Q: How will the transition to bioenergy village affect my energy costs?

A: This depends on several factors and differs for users on the district heating grid and individual user. If the district heating system is switched from using crude oil to biomass this fact by itself would decrease production costs. Also, if the number of users of the grid increases production per price user will also be lower. Finally, if energy efficiency measures are applied additional saving can be achieved and the cost for users should be lower. Still, to be able to correctly answer to this question detailed calculations are necessary. These include investment costs as well as future running and operational costs.

5Q: Can individual users be a part of the bioenergy village?

A: Yes, they are important part of the concept and should explore various possibilities of using renewable energy.

5.3 Recommendations and future plans

Main success factors for useful helpdesk are reliability and integrity of the person providing the responses and outreach to the people. In case of Kostojevici, the first factor has fully been met since Ms. Ivanovic is well known and respected specialist in the field of environment. However, the outreach to the people so far was very limited, due to low level of promotion of the helpdesk and the limited number of citizens' requests.

Therefore, a recommendation for next steps is to intensify the promotion of this information service to the citizens of Kostojevici and to the wider population of Bajina Basta. Also more materials will be provided to the helpdesk from the project, project partners, but also other projects engaged in this field of action.

6 Slovenia

6.1 Establishment of a local information point (helpdesk) for the citizens of Dole pri Litiji

The local community Dole pri Litiji held the opening of a local information point (helpdesk) of BioVill project and tourist information point “Charcoal land” on 27th of September 2016. At the same time, the Municipality of Litija turned over the facilities of the old post building to the local community. The speakers at the opening ceremony were Mayor of the Municipality of Litija, Mr. Franci Rokavec, Deputy Mayor of Municipality of Litija Ms Lijana Lovše, president of Slovenian Tourist Association, Mr. Peter Misja, Director of Slovenian Forestry Institute, Dr. Primož Simončič and the representative of the local community. Among others, the purpose and objectives of BioVill project were presented, including planned activities of the project, about which the villagers will be kept informed. The event was attended by about 80 residents; reporters of local newspaper and local TV station were also present.

Local management and the use of the facilities for various events ensures that information point is always available and easily accessible to residents, tourists and interested public. The information point has official opening hours three times a week: Monday 12:00-16:00, Wednesday 12:00-18:00 and Friday 12:00-16:00. Outside of the office hours, the person in charge is available by email and phone. Info point has one employee (employment through public works) from the beginning of info point operation. Formerly, it was Mrs. Požaršek and now it is a new employee, Mrs. Dunja Guček.

The local information point shares information about the project with the local inhabitants, tourists and other interested visitors. The employee of the info point is part of a local working group and thus embedded in the work and development of the village in order to share information on project's progress. Main information are presented on a poster and the visitors can get promotional material on wood biomass and small-scale heating systems, the BioVill project flyer and others.

The Slovenian Forestry Institute cooperates with the info point and supports it with information and promotional materials. Four info days for the citizens were organised jointly with the info point. Further, also local events have been organised, at which many people visited the info point, e.g. the traditional hike along the trails of Charcoal Land, the cycling climb to the Charcoal Land and the holiday of the Charcoal land. In addition, also an excursion to Dole and to the bioenergy info point was organised for the project consortium after the 5th BioVill project meeting which was held in Slovenia.



Figure 12: Entrance to the Information point in Dole pri Litiji

6.2 Enquiries accepted and FAQ

The number of visitors of the info point varies between the summer and winter season. Throughout the year, home-based visitors, local people and those who buy charcoal come to the Info point - they come from all over Slovenia. There are more visitors when there is a major event in the village or a local holiday, for example, traditional hike along the trails of Charcoal land, cycling climb to the Charcoal land, Charcoal land holiday and other. Usually, there are between 500 and 1000 people at such events.

During the summer, many tourists, both domestic and foreign (mostly from Austria and Germany) visit the village mainly due to charcoal, charcoal piles, charcoal farms and “Charcoal land”. Many tourists come from other charcoal villages and know about this tradition. At the same time they now receive more information about the village and its bioenergy concept as well as about energy self-sufficient bioenergy villages. Outside of the summer season, the Info point has a weekly visit of 2 to 3 visits. More visitors also come in wintertime, when the ski slope is open.

As for the BioVill project, the visitors mainly asking about the plan for setting up the district heating system in the village. The most asked questions at local info point are:

- What is a bioenergy village and why is it good for the environment?
- Who decides which buildings will be included in the district heating system network and how big can the network be?
- Where basic information is provided if someone wants to set up a district heating system?

Both employees were trained on the tasks at the info point, so they are well informed about the topic and they can provide good answers to visitors. Another interesting topic for the visitors are good practice examples. The info point provides materials on best practice examples that were selected and prescribed within the BioVill project (e.g. D2.1). Tourists can also have a look at the drawn maps of the planned DH network, the plans and the analyses and studies which were prepared during the BioVill project. They can also take flyers. If they have some more detailed questions, they are linked to Jože Prah, the regional expert on bioenergy issues.

In general, local visitors are well informed about the project itself, know details about it or at least know that the project exists and that something is happening in the village. Visitors are usually satisfied with the provided information. The helpdesk never received negative feedback yet.

The only negative thing that visitors point out is the lack of accommodation in the village (and sometimes the reason for tourists not to come again to Dole). On the other hand, development centre of “The heart of Slovenia” promotes day trips to the village for sightseeing and viewing all cultural heritage sites. The village also plans to arrange this and is already preparing a project on glamping in Dole.



Figure 13: Inside of the information point in Dole pri Litiji

6.3 Recommendations and future plans

The first and foremost priority of the local info point is to inform inhabitants of village, visitors and other interested persons about the progress of the project and the concept of bioenergy villages. The person in charge of the helpdesk provides information about the use of biomass, district heating systems and efficient modern heating systems for individual houses, which is also important for the time after the end of the project. The info point personnel also helps in organizing visits and trips for tourists and participates in the promotion of the place at all major events and at the same time promotes the BioVill project. Thus, this person provides a link between the inhabitants of Dole and the local visitors or the project partner. A main prerequisite for a successful work of the info point is that the person in charge has to know the project and should be strongly involved in all relevant activities in the village, e.g. promotional events such as info days, meetings of the working group, planning and establishment of the district heating system etc.

The Slovenian BioVill project partner as well as the visitors of the info point assess the quality and effectiveness of the helpdesk as very high. According to the opinion of the citizens of Dole the info point is useful and provides a lot of valuable information, not only on the bioenergy village approach and the BioVill project, but also on the European programme Horizon 2020.

One of the goals of the development of the village is the construction of a new building, part of which will be the boiler room for the district heating system. On the higher floors of the building, there is a new info centre on Dole and its activities foreseen and local bioenergy info point will be part of it. By this, the info point will become even more attractive to visitors and will help to mobilise further the local population and their involvement in joint activities to become first BioVill village in Slovenia.