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BioVill

Increasing the Market Uptake of Sustainable Bioenergy

Bioenergy Villages (BioVill) - Increasing the Market Uptake of Sustainable Bioenergy

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For further information look at:

www.biovill.eu

www.youtube.com/watch?v=_xYhqrXhkXA

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BioVill Key Facts

Bioenergy Villages (BioVill) - Increasing the Market Uptake of Sustainable Energy	
Objective	Support the development of regional bioenergy concepts and the establishment of bioenergy villages in Croatia, Macedonia, Romania, Serbia and Slovenia by transferring existing experiences from Austria, Germany and other European countries to the partners in South-East Europe
Duration	03/2016 – 02/2019
Budget	EUR 1.99 million
Funded by	European Union‘s Horizon 2020 Research and Innovation Programme
No. of Partners	9
No. of Countries	7: Austria, Croatia, Germany, Macedonia, Romania, Serbia, Slovenia

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Project Consortium

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Germany

WIP Renewable Energies, Germany

Klimaschutz und Energieagentur Baden-Württemberg GmbH, Germany

Austrian Energy Agency, Austria

Regional Energy Agency of North-West Croatia, Croatia

International Centre for Sustainable Development of Energy, Water and Environment Systems Zagreb - Office Skopje, Macedonia

Green Energy Association, Romania

Slovenian Forestry Institute, Slovenia

Standing Conference of Towns and Municipalities, Serbia

The Challenge

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How to address this challenge?

BioVill fosters the development of the bioenergy sector in the EU by means of transferring existing experiences from Austria, Germany and other European countries to South-Eastern Europe and supporting the development of regional bioenergy concepts and the establishment of **bioenergy villages** in Croatia, Macedonia, Romania, Serbia and Slovenia (overall objective).

BioVill Target Countries

What is a bioenergy village?

A bioenergy village is a village, municipality, settlement or community or a part of it, which supplies most of its energy for electricity and heating from local biomass, e.g. From agriculture, forestry and waste, and from other renewable energy sources.

It usually combines several energy technologies, such as woodchip boilers, pellet stoves, logwood boilers, biogas plants, combined heat and power plants, and sometimes also solar, thermal and wind energy. Often, a local district heating grid distributes the heat to the consumers.


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Benefits of the Bioenergy Village Approach:

- Increased use of locally produced renewable resources for energy generation (e.g. heat & electricity)
- Improved development of the whole bioenergy sector
- Strengthened local and regional economy, job creation & income generation
- Positive effects on climate change mitigation, environmental protection and human wellbeing

Best Practice Example:
Bioenergy Village Güssing, Austria

Outcomes of the bioenergy concept in Güssing:

- > 50 new companies
- More than 1.100 new jobs → € 9 Mio. a year
- High degree of self-sufficiency
- The "Güssing" model has been expanded to surrounding municipalities of Güssing; the overall region is now called "öko-energieland"
- Significant decrease of CO2 emissions from est. 37,000 t/a (in 1996) to 22,500 t/a (in 2009)

Project development phases:

1. Realization of the town's energy saving potential
2. Construction of new RES facilities based on the locally-available resources
3. Marketing and outreach to other stakeholders: attracted the attention of many private companies and research institutes
   - Development of research projects related to RE-technologies and eco-energy tourism

©Güssing

BioVill Project Objectives

Overall Objective: Fostering the development of the bioenergy sector in the EU by means of transferring existing experiences from other European countries to South-Eastern Europe and supporting the development of regional bioenergy concepts and the establishment of bioenergy villages in Croatia, Macedonia, Romania, Serbia and Slovenia.

Specific Objectives

1. 5 villages have developed the institutional set-up and energy management concept for becoming a bioenergy village.
2. Mobilization of at least 62 GWh/year heat and power based on solid biomass in at least 5 target villages based on the exchange of European best practices.
3. Increase public acceptance of sustainable bioenergy and raise public awareness on commercial opportunities.
4. Capacity Building of users and key actors in business and legislation

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Core Activities

1. National and local **framework analyses** (policies, legislation, stakeholder landscape)
2. **Technological and economic assessments** of local bioenergy value chains
3. Development of the **institutional set-up** and business models including ownership and operation models for the potential bioenergy villages
4. **Capacity building** on financing schemes and business models
5. Implementation of a **multi-stakeholder approach** to foster the **active participation of citizens** and **stakeholders** in the planning and implementation process.


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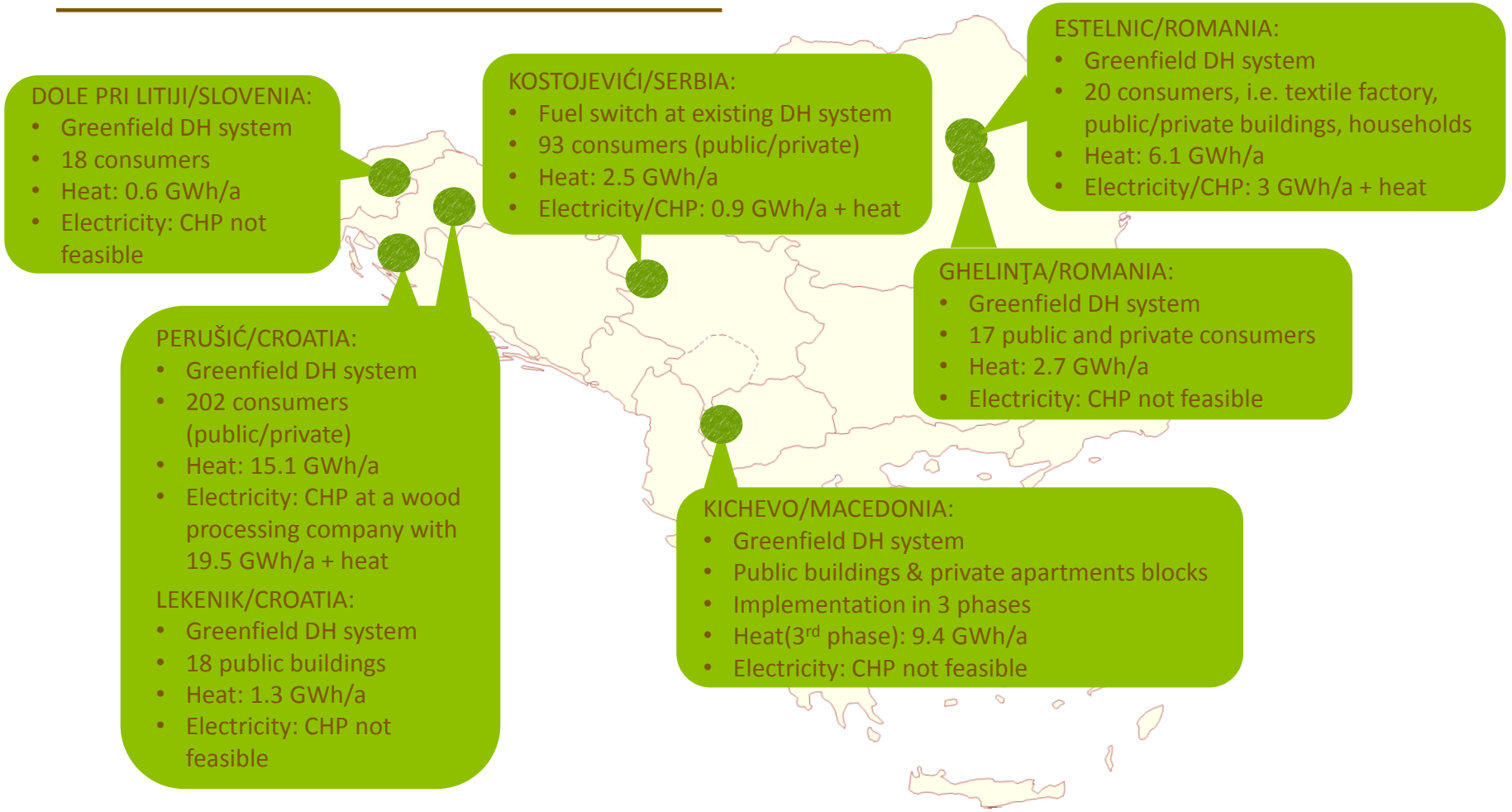
Main Achievements (1)



DOLE PRI LITIJI/SLOVENIA:
- Greenfield DH system
- 18 consumers
- Heat: 0.6 GWh/a
- Electricity: CHP not feasible

KOSTOJEVIĆI/SERBIA:
- Fuel switch at existing DH system
- 93 consumers (public/private)
- Heat: 2.5 GWh/a
- Electricity/CHP: 0.9 GWh/a + heat

ESTELNIC/ROMANIA:
- Greenfield DH system
- 20 consumers, i.e. textile factory, public/private buildings, households
- Heat: 6.1 GWh/a
- Electricity/CHP: 3 GWh/a + heat

GHELINŢA/ROMANIA:
- Greenfield DH system
- 17 public and private consumers
- Heat: 2.7 GWh/a
- Electricity: CHP not feasible

PERUŠIĆ/CROATIA:
- Greenfield DH system
- 202 consumers (public/private)
- Heat: 15.1 GWh/a
- Electricity: CHP at a wood processing company with 19.5 GWh/a + heat

LEKENIK/CROATIA:
- Greenfield DH system
- 18 public buildings
- Heat: 1.3 GWh/a
- Electricity: CHP not feasible

KICHEVO/MACEDONIA:
- Greenfield DH system
- Public buildings & private apartments blocks
- Implementation in 3 phases
- Heat(3rd phase): 9.4 GWh/a
- Electricity: CHP not feasible

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Main Achievements (2)

- ✓ Planned **mobilisation of around 86 GWh heat and 24 GWh electricity** per year produced from locally available solid biomass
- ✓ **Bioenergy Working Groups** established in all villages
- ✓ Support to the **technological & economical assessment** of the planned biomass based heating systems and to the **development of appropriate business models**
- ✓ **Already 420 key stakeholders trained in capacity building measures**
- ✓ **7 municipalities** with a total population of more than 85,000 inhabitants started the process to implement the bioenergy village concept
- ✓ More than **160 activities organised** to involve citizens & key stakeholders, to increase public acceptance of sustainable bioenergy and to raise awareness on its commercial opportunities

Challenges

Current major challenges or the of the implementation of the bioenergy villages in the target countries are, e.g.

- Low world oil/gas prices, thus often low prices for heat (per kWh)
- Often, subsidies for fossil fuels and electricity in the target countries
- Wood is sometimes not seen as a marketable resource which has a value (citizens heat with their own wood “free of charge”)
- Lack of political interest & support programmes in some of the target countries
- Sometimes low credit security of municipalities in target countries
- Lacking willingness of municipalities to take out loans
- Sometimes lacking trust of citizens in district heating due to negative experiences
- Lack of cooperation experiences (between citizens, between municipalities and businesses)
- Usually, low awareness, still too less information and knowledge on bioenergy topics
- Lack of available technologies for reasonable prices

Outlook

Further **opportunities for cooperation**:

- Until the project end and beyond: Citizen involvement and participation
- March-August 2018, target countries: national language seminars on the bioenergy village concept & achievements of the BioVill project for interested follower municipalities and institutions
- April-October 2018, BioVill target & neighbor countries: outreach events & national conferences on bioenergy villages
- November 2018, Brussels: International Final Conference of the BioVill project

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Questions? Remarks?

- **Discussion Questions:**
  1. What would be the biggest challenges in implementing a bioenergy village approach in your country?
  2. Do similar bioenergy villages exist in your country?

Thank you for your attention!

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