



POWER4BIO
**REGIONS FOR
BIOECONOMY**

**Roadmaps from promotion to implementation of
small- and medium-size bioenergy projects
in rural Romania**



GREEN ENERGY
Romanian Innovative Biomass
CLUSTER



GREEN ENERGY

Romanian Innovative Biomass CLUSTER



- Green Energy Innovative Biomass Cluster has been founded in 2011 with the aim to raise the interest in the production and utilization of the biomass, the most important renewable energy source in Romania.
- Green Energy Cluster is a social economy cluster that ensures the frame to develop solutions in the field of the biomass by putting emphasis on the ecological and social innovations.
- Members:
 - Biomass fuel producers,
 - Biomass boiler manufacturers and installer companies
 - Technology providers
 - Universities & R&D entities
 - Public Institutions, Local and Regional Authorities





Challenge?

- Many rural and suburban areas have high biomass potentials, but they are often not or inefficiently used.
- The challenge is to increase the market uptake of bioenergy by establishing sustainable local bioenergy supply chains and thereby supporting regional economic development.
- For that:
 - Increase the public awareness,
 - Identify barriers,
 - Collaborative mentality,
 - Engage local key stakeholders
 - Co-create plans,

Success Methods on Implementation of Bioenergy Projects? 1/7

➤ Framework Analysis

- Assessment of available supportive programs and incentives
- Local bioenergy potential assessment
- Existing (bio)energy infrastructure
- Evaluation of local energy demand, consumption behaviour
- Identification of readiness level
- Socioeconomic assessment



Success Methods on Implementation of Bioenergy Projects? 2/7

- Know-how transfer
 - Presentation of Best Practices
 - Study visits: see, feel, touch, ask, try,
 - Training and workshop session with experts

Success Methods on Implementation of Bioenergy Projects? 3/7

- Stakeholder involvement
 - Set-up of local bioenergy working groups
 - Formulating common strategic bioenergy goals
 - Elaborate of open source information, share and digest
 - Facilitation of information days for local citizens
 - Engage local®ional political support

Success Methods on Implementation of Bioenergy Projects? 4/7

- Technical Planning & Assessment
 - Multi-stakeholder involvement
 - Benefits and Drawbacks: Discuss on it!
 - Design bioenergy value chains
 - Identify and engage local actors for fluid supply chain
 - Technological and economic viability

Success Methods on Implementation of Bioenergy Projects? 5/7

- Financing and Business Model Development
 - Evaluate financing options: available subsidy, local investors, ownership models, legal form, business models
 - Training on project implementation
 - Training on business models e.g. Canvas Model
 - Calculate, evaluate, prepare, submit
 - Ensuring the implementation by letters of commitment/letter of support

Success Methods on Implementation of Bioenergy Projects? 6/7

- Implementation
 - Set-up a project management board
 - Clear Responsibilities, Tasks and Deadlines
 - Mobilization of suppliers, technology providers
 - Monitoring of the implementation, changes, challenges
 - Test running



Success Methods on Implementation of Bioenergy Projects? 7/7

- Dissemination & Up-Scaling
 - Invite and show to regional stakeholders
 - Invite potential multipliers
 - Support replication sites



Results

- Establishment of sustainable energy communities
- Increased awareness of local stakeholders and citizens
- Improved energy management, energy efficiency
- Increased bioenergy capacities in rural regions
- Strengthened local and regional economy

'1 Village 1 MW' Initiative Biomass Heating Systems in Romania



BioSistem



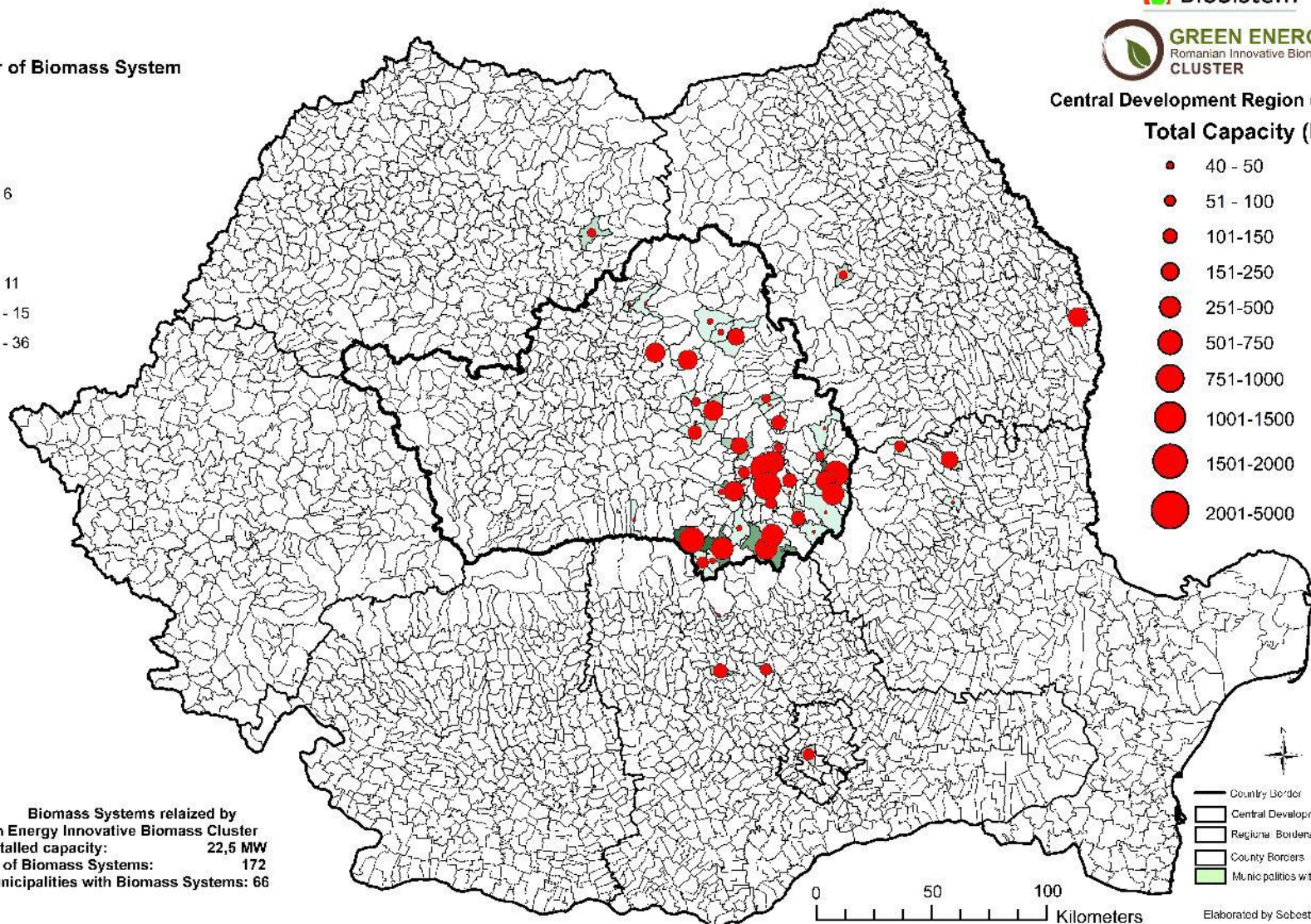
Central Development Region of Romania

Total Capacity (kW)

- 40 - 50
- 51 - 100
- 101-150
- 151-250
- 251-500
- 501-750
- 751-1000
- 1001-1500
- 1501-2000
- 2001-5000

Number of Biomass System

- 1
- 2
- 3
- 4 - 6
- 7
- 8
- 9 - 11
- 12 - 15
- 16 - 36



Biomass Systems realized by
Green Energy Innovative Biomass Cluster
Total installed capacity: 22,5 MW
Total Nr. of Biomass Systems: 172
Nr. of Municipalities with Biomass Systems: 66

Elaborated by Sebestyen Tihomir, 2019

1. Local Supply Value Chain from agrobiomass to bioenergy Enache Mills and Bakery, Huși, RO



2. Local Supply Value Chain, from husks of sunflower seeds, Chicken Farm Avicol Prod SRL, RO



3. Local Supply Value Chain, from energy willow & pasture cleaning to Greenhouses, Dalia Flowers SRL



4. Local Supply Value Chain, from energy willow to Guesthouse, Bicfalau, RO



5. Local Supply Value Chain, Pasture Cleaning to Bioenergy, Locodeni, RO



6. Local Supply Value Chain, Bakeries, Meet Factories, other cross-sectorial industries



Key point: Personalized technological solutions



1 village – 1 MW initiative



Bi-regional cluster networking and business exchange meeting, Budapest

Ghelința, 1st Bioenergy Village in Romania







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Thank you for your attention!

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