

# The Experience in Rhodope Region, Bulgaria

**Angel Nikolaev, BSERC**  
**Zlatka Nikolova, ARM**

Final Project Meeting, Brussels – 25 October 2016



# Rhodope Region

- 21 Rhodope municipalities, rural mountainous area, population 0.4M
- Allocated in 4 districts, no central administrative unit, ARM members
- Very high potential of wood biomass
- Low potential of solar, geothermal, waste heat
- Households: under-heated, 63% use wood biomass
- Public buildings: fuel oil, electricity, wood



# The starting point...

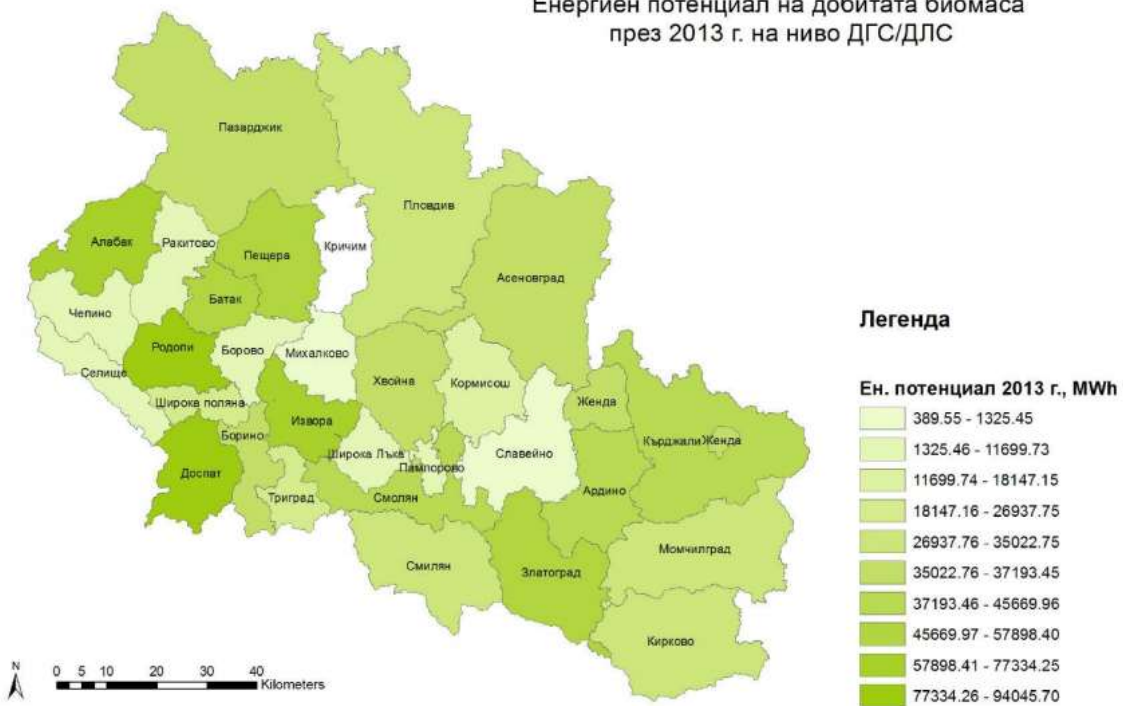
- All municipalities are obliged to develop & report EE plans and RES plans, but the lack of data and capacity often resulted in poor/no plans.
- Two municipalities had SEAPs
- Plans based mainly on energy audit recommendations (no detailed assessment of RES potential and demand, no mapping, no CBAs).



# Maps

## RES potential (e.g. biomass)

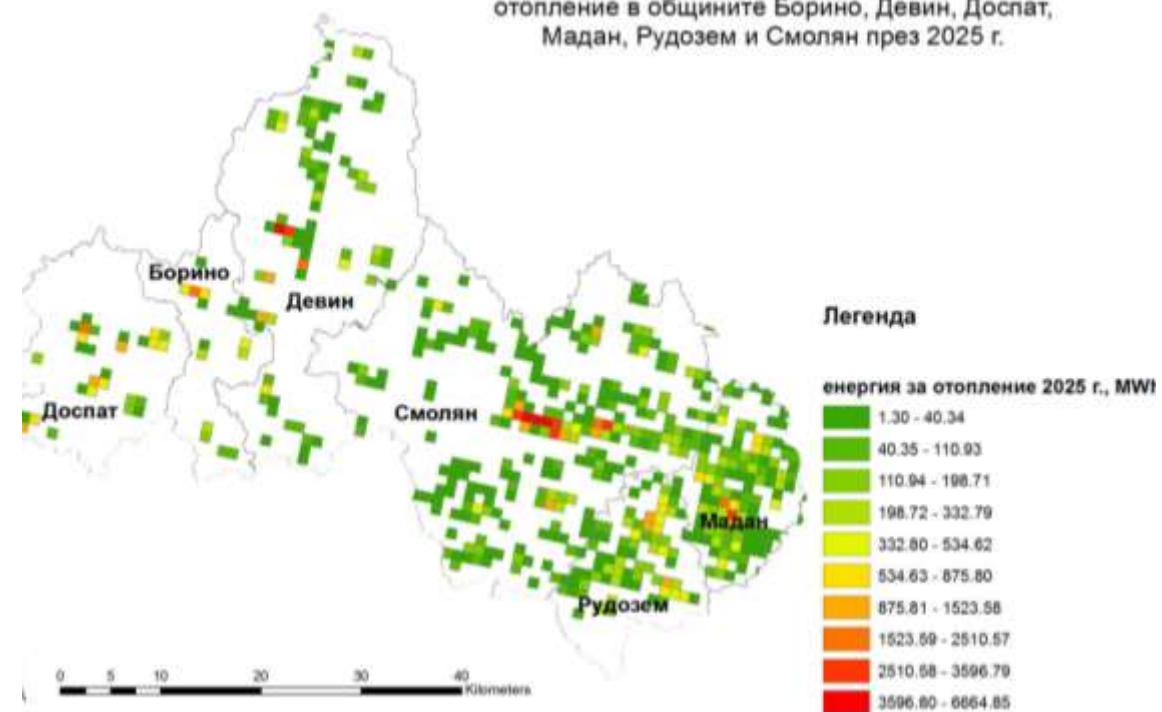
Енергиен потенциал на добитата биомаса през 2013 г. на ниво ДГС/ДЛС



## Residential & public sector heating & hot water

Barriers: - no data on actual consumption  
- georeferenced population layer has resolution 1 km<sup>2</sup>

Прогнозно годишно потребление на енергия за отопление в общините Борино, Девин, Доспат, Мадан, Рудозем и Смолян през 2025 г.



# Cost-benefit analyses

## Residential sector:

- Heating (excel tool comparing 11 heating options for a given level of heat consumption)
- Hot water

## Public sector:

- Heating (district and individual)
- Hot water



# Results:

## An example of residential heating scenarios

Indicator	Baseline Scenario (2030)	Optimal Scenario (2030)
Energy Consumption [TWh]	1.2	1.2
Total costs (financial, social, environmental) [k€]	64,9	54,6
Share of RES [%]	63	100
CO <sub>2</sub> emissions [kt]	213	65

# The Country Governance Committee in Rhodope Region



Composed of 22 representatives of municipal, district, and national authorities, and utilities

Added value:

- Consensus on planning scope and objectives
- Assistance in data collection
- Feedback on proposed methodology and results
- Discussion of policies and measures
- Commitment to plan implementation
- Promotion of the plan



Co-funded by the Intelligent Energy Europe  
Programme of the European Union

# Measures

- Renovation (EE & RE) of public buildings;
- Support (financial, organizational, expert) to the local population to implement EE & RE projects in residential buildings;
- Support for the establishment and operation of logistic centres for biomass;
- Organisation of information campaigns to increase population awareness.





# What's next?

1. Plan implementation & monitoring by the 3 bodies that endorsed it:
  - Association of Rhodope Municipalities:
    - General Assembly (endorsement)
    - Economic development, EE & RE Commission (monitoring)
  - Smolyan District's Council on Sustainable Energy Development
  - Kardzhali District's Council on Energy Efficiency
2. To ensure replication - the planning methodology will be promoted at national, regional, and local level



# Project outcomes and lessons learned

## Main outcome:

- Demonstration of a replicable methodology for the development of local and regional H/C plans.


## Main lessons:

- CGC structure and procedures are very successful
- A regional/district planning is an excellent means of enhancing local planning
- LRAs can greatly improve planning, if provided with simple methods & tools and trained to use them



# Thank you for your attention!

Angel Nikolaev, BSERC  
Zlatka Nikolova, ARM



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