

# Attitude Differences between Prominence and Inhabitants Concerning Renewable Energy Issues in Northeast Hungary

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# The structure of the presentation

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- **Introduction**
- **Methods**
- **Knowledge of the population about renewable energies**
  - conceptual frameworks,
  - sources
- **Conclusion**

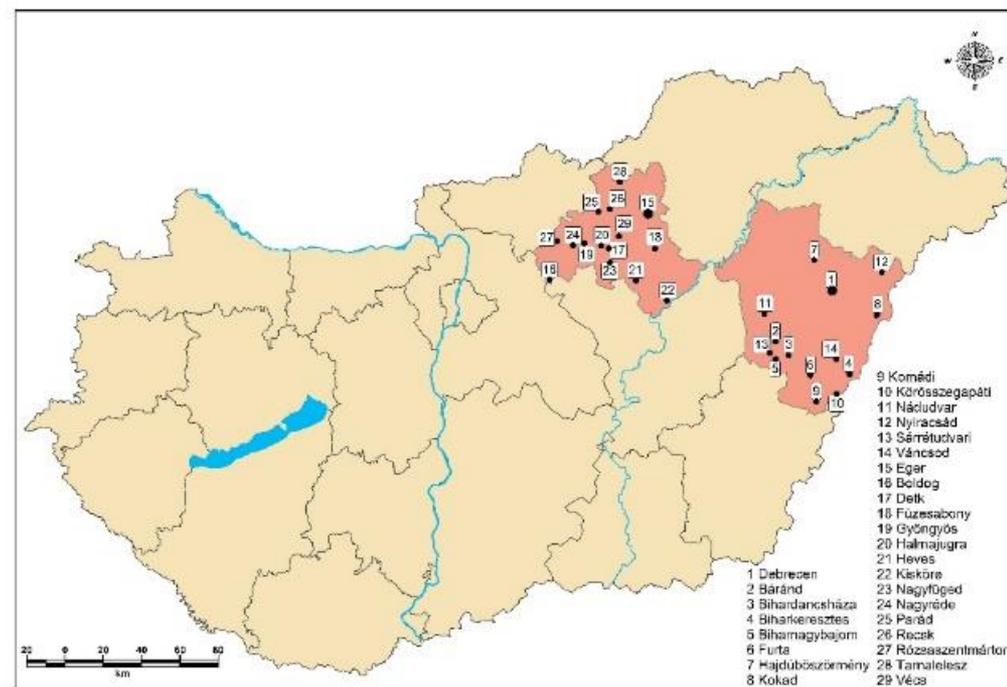
# Introduction

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- Climate change and renewable energy sources
- Renewable energy sources availability (regions and peoples)
- Good information as element of a decision
  
- The more accurate knowledge of the inhabitants of the renewable sources of energy, the greater the likelihood that takes steps to ensure the use of renewables.

# Methods and target area

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- Two counties in **Northeast Hungary** (Physical geographic differences, but socio-economic similarity ) ;
- In 2016 and 2017 we conducted a residential survey on renewable energy sources in 14 and 15 settlements of Hajdú-Bihar and Heves county.
- 29 settlements in two counties were analysed with questioners and personal interview
- 1600 people with a questionnaire (12 questions)
- Residential survey was representative of gender and age
- At least one interviews were made with the leaders in each settlement

# Examining the population's attitudes - reflecting the results of our research (conceptual frameworks)

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The questions were aimed at the following topics:

- how well the population of the settlements surveyed is aware of the meaning of renewable energy sources
- Do they know which energy sources are included in this category and are they aware of how to use these energy sources.
- list 15 terms related to energy production, of which only eight were related to renewable energy sources.

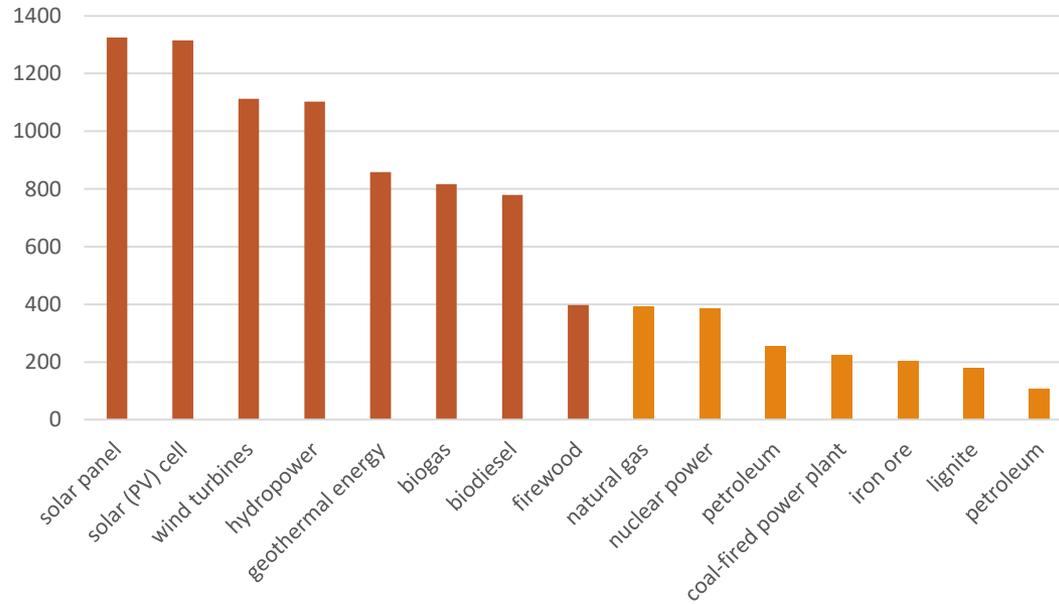
The terms were:

- nuclear power, wind turbines, iron ore, coal-fired power plant, solar panel, biogas, biodiesel, petroleum, geothermal energy, lignite, hydropower, petroleum, firewood, natural gas, solar (PV) cell

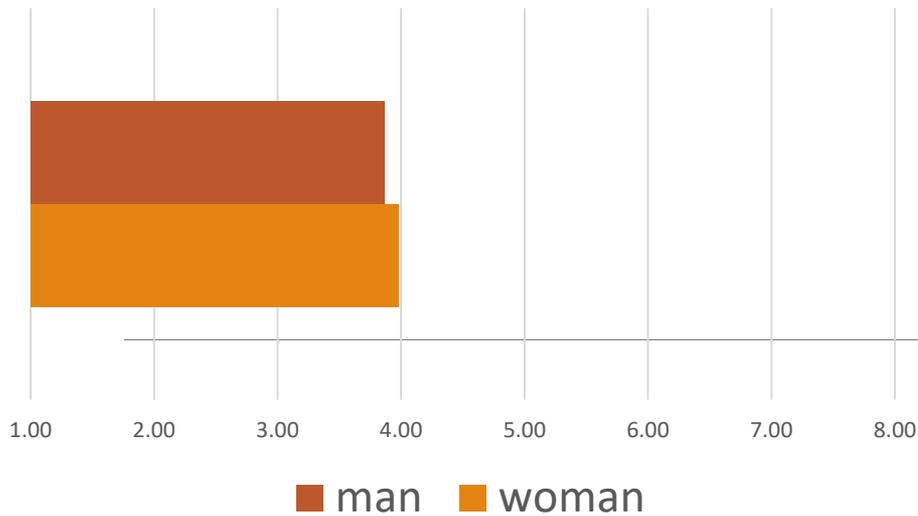
If good information was given to someone who scored 1 point, if he misplaced the terms, then 1 point was deducted from the result. Thus, up to 8 points could be achieved.

# Examining the population's attitudes - reflecting the results of our research (conceptual frameworks)

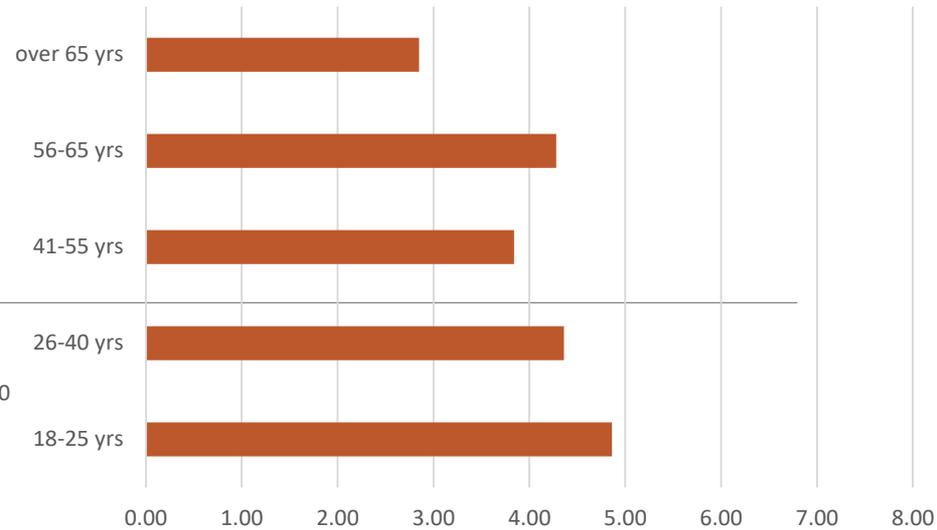
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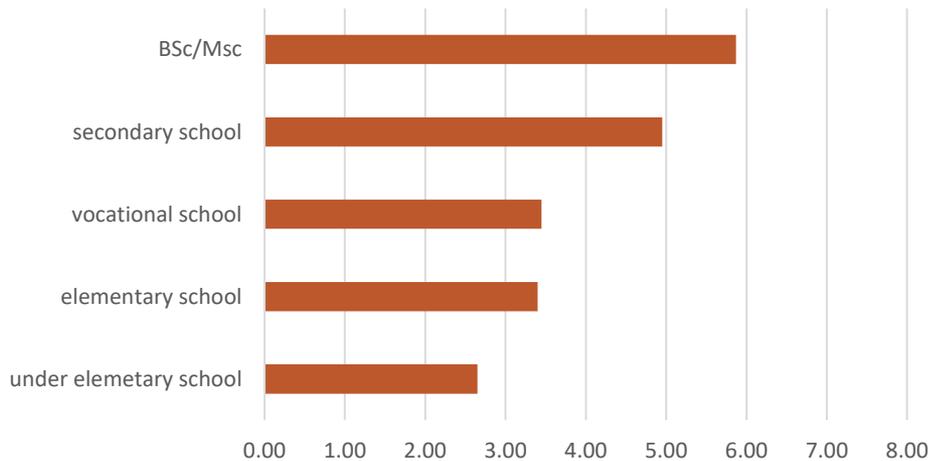
The results of identification of terms related to renewable energy sources and their utilization in the whole sample



The gender average score for all surveyed settlements



Average score for each age group for all surveyed settlements



Average score of people with different educational backgrounds for all surveyed settlements

# Examining the population's attitudes - reflecting the results of our research - **word association**

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Examining the population's attitudes - reflecting the results of our research - **word association**

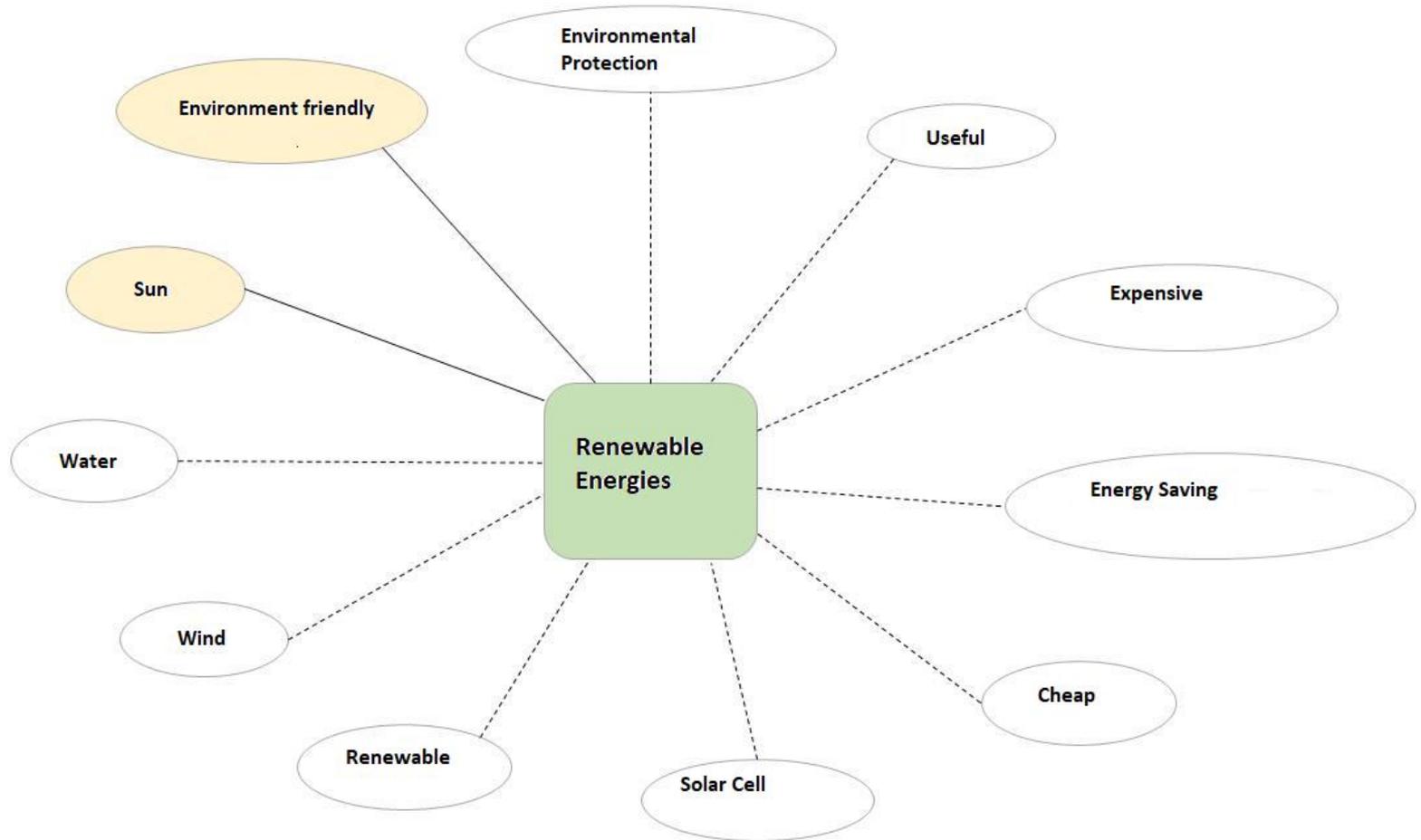
Associations can be grouped into the following 7 groups:

1. The name of the renewable energy type,
2. The renewable energy recovery devices,
3. The positive properties of renewable energies,
4. The negative properties of renewable energies,
5. Terms related to energy production,
6. Irrelevant terms,
7. Terms not related to renewables, but related to energy.

# Examining the population's attitudes - reflecting the results of our research - **word association**

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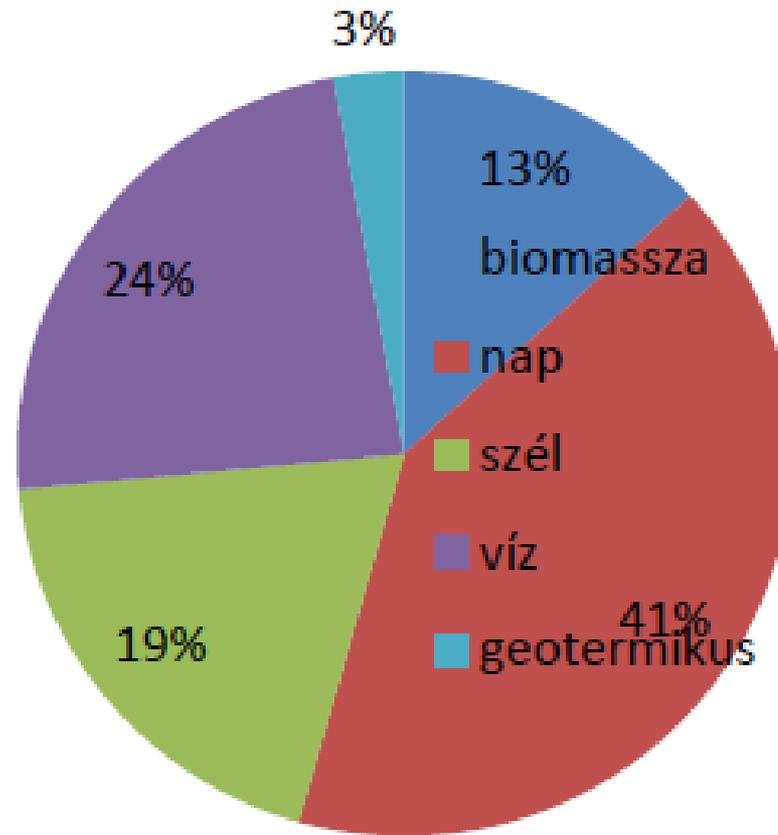
association	relative frequencies
Sun	18,7
Environment friendly	17,0
Water	10,7
Cheap	10,0
Wind	8,7
Energy conservation	7,7
Solar cell	7,7
Environmental protection	6,0
Renewable	6,0
Expensive	5,7
Useful	5,3



The conceptual network of all examined settlements taking into account the relative frequency of associated concepts. (Beige: Medium Relative Frequency, White: Low Relative Frequency).

The proportion of renewable energy types among associations of renewable energies.

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# Sources of information

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Sources of knowledge of the population (%) and their credibility (1-5)

- Good Practices - Authentic, Friend Recommendations (56%) - 4.12
- Media (45%) - 3.47
- Information received from the local government (37%) - 4.24
- School information (34%) - 4.01
- Marketing brochures (34%) - 3.34
- Information from NGO (12%) - 4.42

# Conclusion I. – about conceptual frameworks

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- The conceptual image of the population about renewables is the least accurate in terms of biomass, and their image is clearest about solar, water and wind energy.
- The firewood (and especially the highest educated) isn't regarded as a renewable energy source at all.
- Knowledge of the men and women is roughly equal to renewable energy sources.
- Age also has a significant correlation with the origin and depth of knowledge.
- Overall, a higher level of education is increasing knowledge about energy management.

# Conclusion II. - word association

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- The respondents usually associate with the **classical renewable** energy sources (solar, wind and hydropower), and the best known solar energy is the association between the utilization of renewable energy sources.
- Biomass and geothermal energy appeared to be much smaller relevant in word associations.
- That is good that the public's attitude to renewable energy is clear positive, as, respectively, related to positive associations between the properties.
- Among the negative characteristics alone 'expensive' association reached a higher frequency, which is understandable, since investment costs are generally high,

# Conclusion III. - sources of information

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From the sources of knowledge the **good practices** and the **credible** (eg, municipalities and acquaintances) **information** are emerged, so the investigation of these factors is also important in the future.

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Thanks for your kind attention!

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