

CHALLENGES OF BIOENERGY USE IN THE DANUBE REGION

Energy efficient and sustainable Danube
cities and regions: Linking strategic
thinking and energy issues

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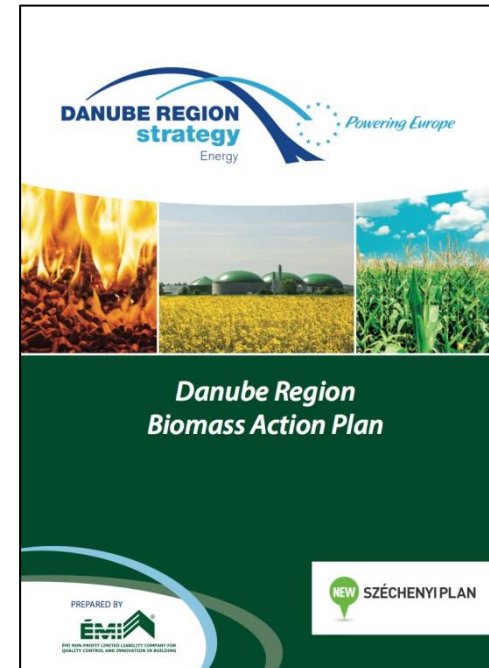


Outline

- Current characteristics and challenges of bioenergy in DR
 - National level
 - Municipality level
- Solutions and experiences
 - Municipality level - energy planning
 - Transnational level – trading platform DANUBIOM

Bioenergy characteristics - DRBAP

- Biomass has the greatest significance among renewable energy sources in the Danube Region;
- Forestry sector is the main biomass supplier and is going to keep its dominance till 2020;
- Information deficit on
 - RE technologies and environmental aspects;
 - Access to reliable data is difficult;
 - Existing data are heterogeneous
- Fragmented bioenergy market and energy infrastructure;
- Contradictory/not relevant national and EU level policies;
 - inefficient energy utilisation;
- Inappropriate technologies:
 - missing holistic technology application: lack of knowledge related to complex decentralised energy systems;
 - problem of fit of investments and technologies

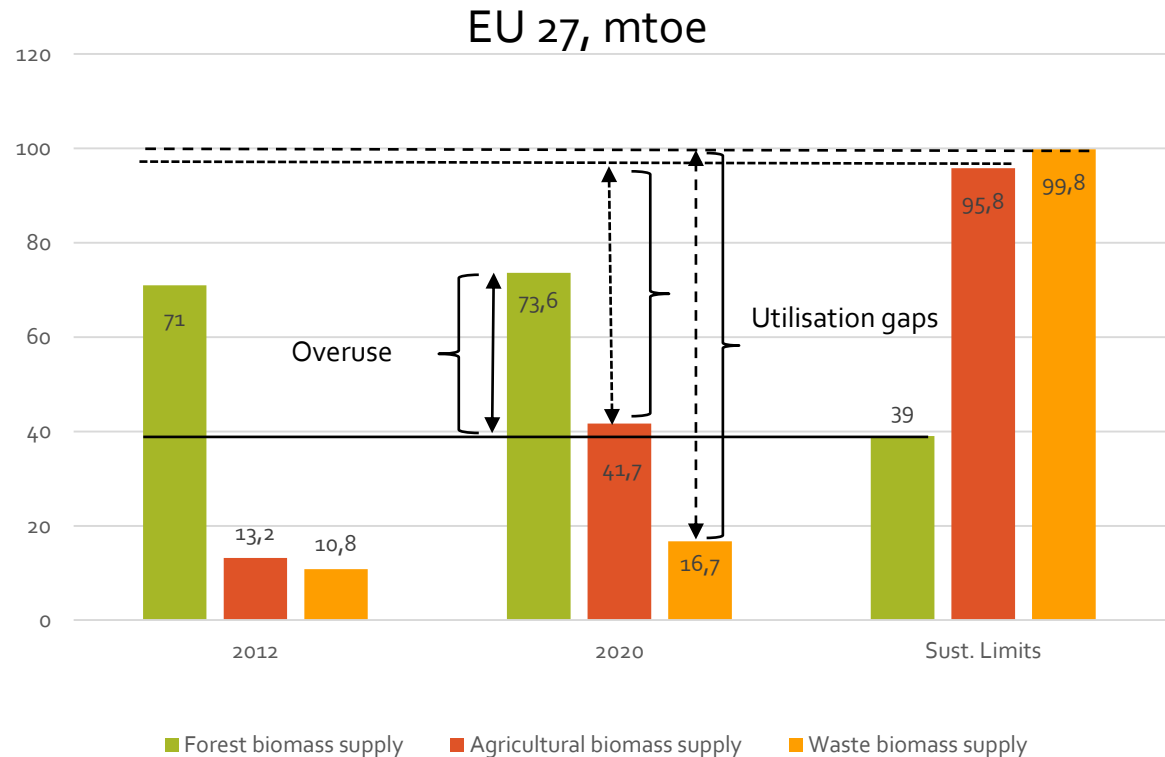


Utilisation imbalances

- Woody resources
 - Increasing demand
 - Decreasing availability



Overuse



Sources: SWD(2014) 259 final; EEA 7/2006

- Waste&agric. res.
 - Utilisation gap

Sustainability risks (SWD(2014) 259 final)



• Resource depletion

- Soil erosion
- Reduction of SOC
- Decreasing water table



Shrinking
cultivation
area



Forrás: EEA 37/2004, Centeri Cs.

• Inefficient bioenergy generation

- Increasing emissions from land use land use change and forestry (LULUCF);
- Deteriorating life cycle GHG emission performance;
- Indirect impacts, e.g. indirect land use change;
- Airborne emissions

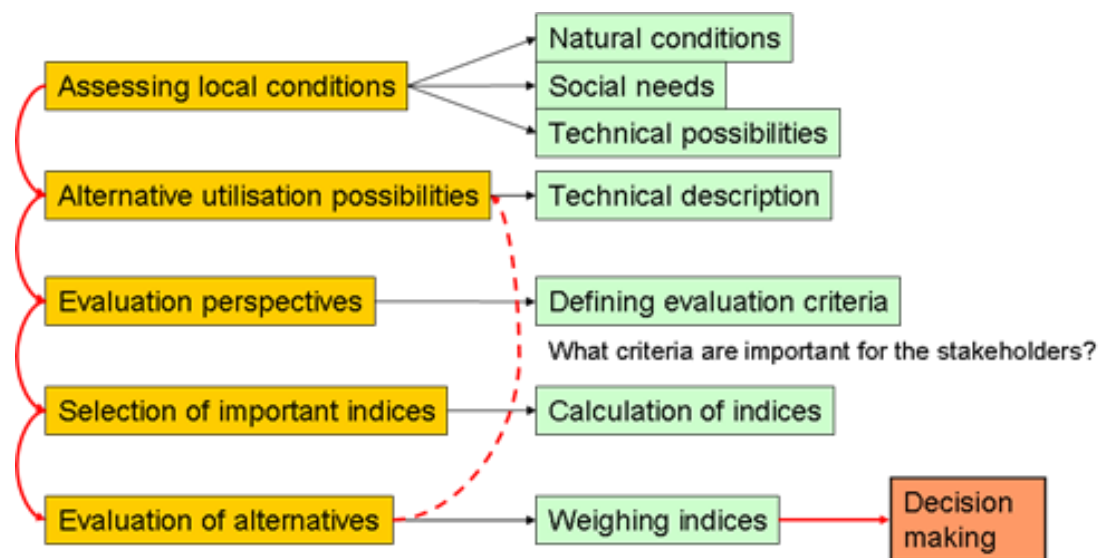
Problems on municipality level

- Low efficiency of firing
- Scarcity of feed-stock, especially in case of firewood
- Oversized plants
- Competition for feed-stock with other uses
- In some areas heavy reliance on firewood
- Missing practice of potential assessing
- Missing connections to local economies – isolated investments



Possible solution at municipality level

- Energy planning
- Participatory methods
- Strategic thinking



Source: Polatidis–Haralambopoulos 2008, 299

Experiences with energy planning

- Although the village has an energy strategy developed in a participative way it was overwritten by subsidy driven developments – PV installation
 - No FIT for RES-H and low FIT RES-E hinder rapid development of RES utilisation in Hungary
 - The new investment is not very much known and embedded into the local community
- Landscape was an important issue
 - Participants are very aware of the beauties of the landscape
 - Characteristics of this landscape has to be protected
 - RES investments has to be designed to fit into the landscape
 - Wind was not welcome, PV is placed in a remote but geographically optimal location
- Economically less viable steps are postponed – biomass boiler renovation, central heating renovation



Important lessons - 1

- Participation
 - Involvement of stakeholders is not always possible with voluntary participation
 - Voluntary participants often don't have competences/ideas
- Strategic thinking
 - The role of a strategy is not always clear
 - Participants often required ready-to-implement projects
- RESP has to be embedded into the formal administration
 - Formal designation of responsibility and related tasks
 - E.g. sub-committee for energy in the local government
 - RE Strategy should be accepted as a legal/semi legal document

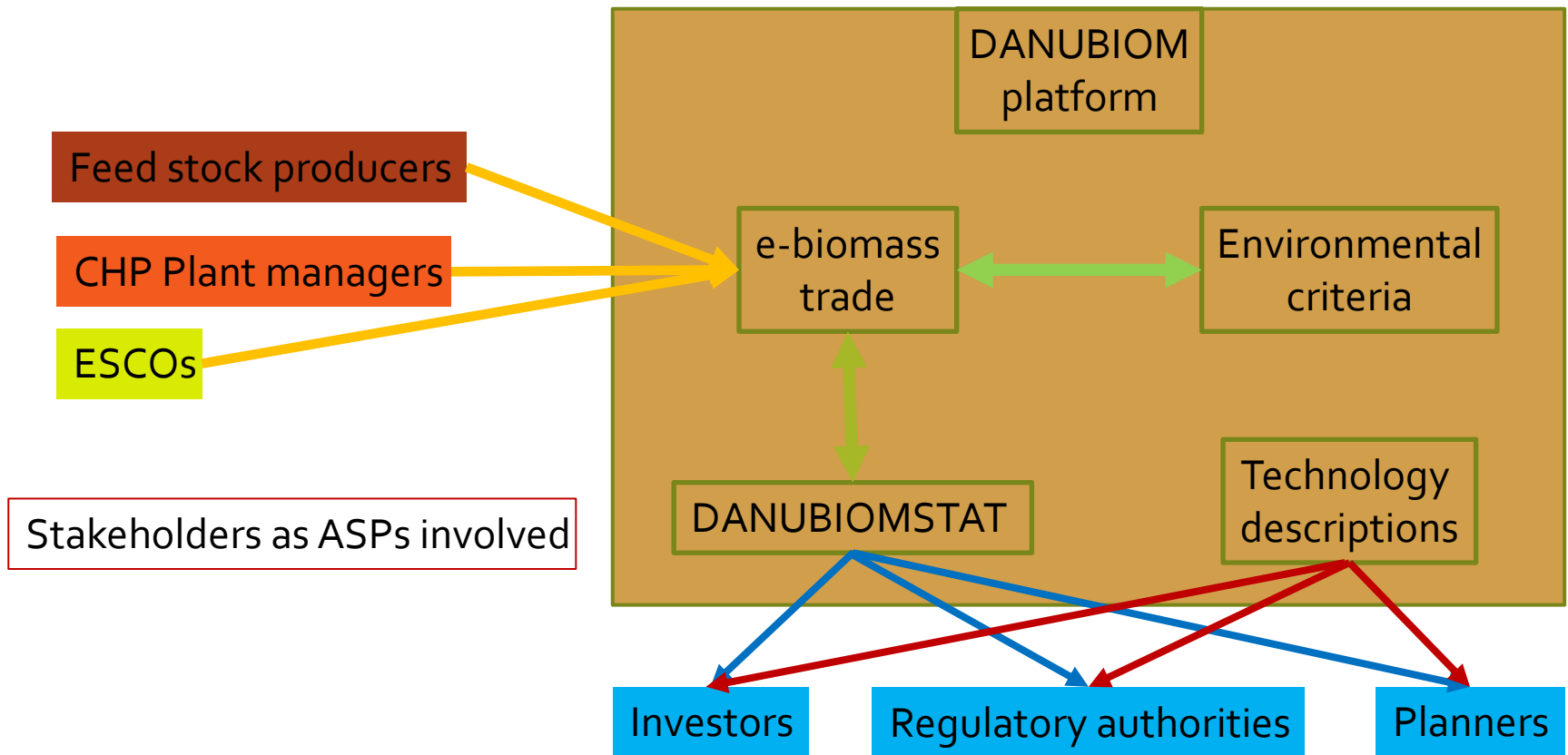


Important lessons - 2

- Energy self-sustenance is not a local issues
 - Energy production is not perceived as requiring personal engagement from local people
 - No designated responsibilities for energy issues
 - Decision-makers don't know much about the energy situation in the settlement
 - Energy democracy?

- Collective decision making was not possible
 - The creation of a formal and extended decision making body was not possible
 - Decisions are made on higher formal or informal levels
 - Decisions are not based on strategic directions
 - Decisions are often not evidence based
 - Thus, the calculation of indices was useless

DANUBIOM project proposal



THANK YOU FOR YOUR KIND ATTENTION

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