

The Potential for Sustainable Biomass in the Romanian Energy Sector

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Activity 16: Stakeholder analysis for using black pellets as the biomass option of choice in the energy sector

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The **purpose** of Activity 16 has been to identify the main actors on the biomass market in Romania and to outline their main interests, respectively the influence they could exert on the market using various methods and channels. Using an influence vs. interest matrix, based on all the activities of the project so far, including the workshop and the webinar and a series of online semi-structured interviews, we performed an influence vs. interest stakeholder analysis vis-a-vis the perspective of promoting biomass, including black pellets, as an alternative energy source in Romania. From a methodological perspective, we reached our research objective by conducting thirteen interviews with fifteen representatives of different relevant stakeholders, both from the private and public sector, in the field of environment, energy and agriculture. The interviews were conducted within the time framework of the project. The interview guide and the list of interviewees can be found in the annexes to this report. Based on the results of the interviews and experts' assessment the influence vs. interest matrix was drafted. The interviews revealed also other important issues for the proper functioning of the biomass market in Romania, which were structured into three main categories: challenges, opportunities, proposed measures and recommendations.

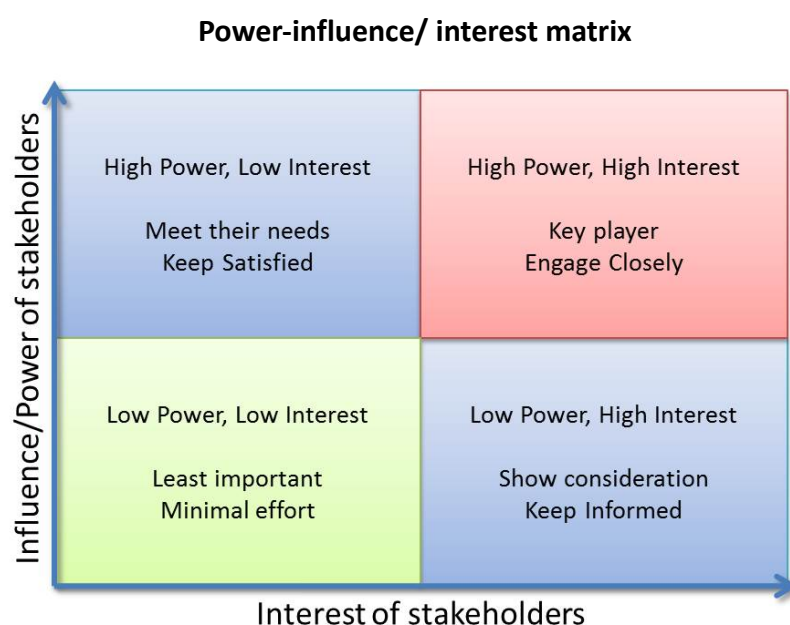
The present report is structured as following: it starts by briefly introducing the concept of influence vs. interest matrix from a theoretical perspective, followed by presenting the resulting matrix in the specific case of the biomass market in Romania. Based on the qualitative analysis of the interviews, the main challenges, opportunities and proposed measures and recommendations are depicted (as resulted from the subjective perspective of participating respondents). Finally, several conclusions are formulated.

Influence vs. interest matrix- short theoretical background

The first step in order to draft the influence vs interest matrix consists in identifying the main stakeholders on the market. Anyone who is interested in or engaged with a company, whether internally or externally, is considered a stakeholder. We can extrapolate this definition for the case of the biomass market in Romania (<https://www.professionalacademy.com/blogs/mendelows-matrix-marketing-theories/>, 2023). Basically, the analysis might seem a little overwhelming when there are many stakeholders. The first step is to organize these stakeholders meaningfully and combine the management-related actions by categories. A very large group of people/organisations can be managed with less effort thanks to the similarity of actions.

The analysis of their interest and influence/ power on the market could be conducted in a well structured and organized way by using a widely spread model, namely the influence vs interest matrix. Therefore, a very effective way to visualize all internal and external stakeholders is by means of a stakeholder map.

One of the most popular matrices is represented by the Mendelow's matrix, created in 1991, which aims at analysing individual stakeholders by assessing their interest and influence. The stakeholders are divided into four different categories based on the analysis of their interests and power. The model suggests a certain kind of treatment for each of these resulting categories (Martins Serra, 2023), as depicted below. When making critical economic/ business decisions on a new regulation, project, product/ service, or strategy, you should always take these groups into account because some stakeholders have the power to modify or even impede your plans.



Source: Martins Serra (2023),

<https://projectizing.com/stakeholders-analysis-powerinfluence-interest-matrix/>, accessed April 2023

The category “Low power, low interest” belongs to the least important category of stakeholders, they do not have either the interest or the power to influence the market (in our case). They shouldn't be observed to check if their status changes, but otherwise they do not represent a priority for the other players on the market.

The category „High power, low interest” has to be monitored on a constant basis, since they can always move to the category „High power, high interest”. Public authorities such as central and local governments, ministries etc. may fall under this category because they may have sufficient power to create new rules and regulations and amend the existing ones, but are unlikely to exhibit an intrinsic interest in the market.

The category „Low power, high interest” doesn't really have a say on the market because of its low level of influence, but its representatives are very interested in its development. This

group could be represented by consumers, companies active on the market etc. The recommendation is to keep them informed about the developments, and to ask for their input and improvement suggestions.

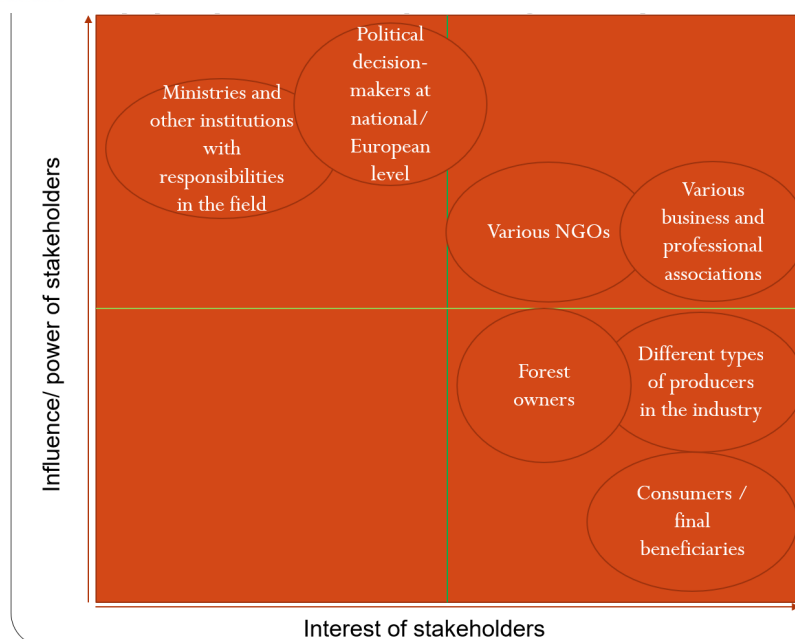
The category “High power, high interest” are key players on the market who have both the interest and the necessary means to impact the market. They have to be managed closely, since they are very active players and have the power to influence market decisions in the direction that suits their needs.

There are also other stakeholders' interest-influence grids, very similar ones, such as that proposed by Eden & Ackerman (1998). An alternative is also proposed by Sridharan (2018), which adds an additional layer, that of medium power and divides stakeholders in three categories: opponents (active and passive), fence-sitters and supporters (active and passive).

Influence vs. interest matrix for the biomass market in Romania

In order to analyse the stakeholders on the biomass market in Romania and outline the influence vs. interest matrix, there were conducted thirteen semi-structured interviews with fifteen representatives of different relevant stakeholders in the sector (see Annex 1- List of interviewees and Annex 2- Interview Guideline). The stakeholders interviewed cover a wide range of interests and perspectives: from representatives of different ministries and public institutions regulating this field, to representatives of different NGOs active in the area of environmental protection and biodiversity, cultivators/ producers of energy plants, producers of energy from biomass, producers of installations/ power plants operating on biomass, private companies active in the forestry and wood industry, representatives of forest owners, representatives of different business clusters in the field of green energy, representatives of employers' and professional associations of economic agents operating in the wood harvesting and processing industry. The interview contained both open questions and close-ended ones, respondents being asked to (self)assess and grade the interest and the influence of their organisation and other stakeholders on the biomass market in Romania. Relying on the answers provided by the interviewed stakeholders, the researchers critically analysed the biomass market in Romania and the following influence vs interest matrix resulted. In our case, Influence/ power represents stakeholders' ability to influence the development of the biomass market in Romania, while Interest suggests their likely concerns related to this market.

Influence vs. interest matrix vis-a-vis the prospect of promoting biomass as a renewable energy source for Romania



Source: own illustration based mainly on the interviews conducted

As revealed by the influence vs interest matrix, the stakeholders with the highest interest and influence are represented by the business and professional association in the sector, which represent mainly the interests of the companies active on this market. They can exert their influence within the consultations and round tables with the policy makers, where they are invited at national and European level. The NGOs are also invited to express their opinion on different drafts of laws and regulations and they can significantly influence the attitude of the wide public through the mass media campaigns that they conduct. Their interest is related to the smooth, sustainable functioning of this market.

Probably those most interested in the proper functioning of this market are the various producers and forest owners, who earn their living by selling their products and services on this market and need a well-functioning market. However, their influence is quite limited to advocacy. An even smaller influence is exerted by the consumers, final beneficiaries of the energy produced, who are directly affected by the well-functioning of the market, energy prices etc.

A high influence on the market is exerted by political national and European decision makers, since they set the general framework and directions for future development. High influence and low interest have also the ministries and other public institutions with competences in this field. They can influence the market through the laws and regulations they release (in accordance with the development strategies and policies drafted by political actors), incentivizing or blocking the development of this sector. However, their genuine interest is quite low. Some interviewees declare that their interest should be higher (even if it is not), since they represent the interest of the population and should facilitate general well-being in society.

There were no stakeholders fallen in the category low influence, low interest. All those interviewed declared to have at least a medium interest in the market.

The biomass market in Romania- challenges, opportunities, measures and recommendations

Considering the answers of the participants at the interview-based survey, which are very subjective by their nature, several challenges, opportunities and measures aimed to foster the well- functioning of the biomass market in Romania were formulated.

One of the challenges most often mentioned by stakeholders that could be seen as having diverging interests, concerns the unsustainable use of forest biomass (as firewood, directly burned, without added value). About 3.5 million households in Romania are currently heated by wood stoves, most of them with a low efficiency of 20-25% (compared to 90%-95% that could be obtained by using modern biomass energy production installations). Also, given the precarious financial circumstances, people are not able to buy wood and wait for it to dry in their own households, but it is burned green, inefficiently.

Another challenge mentioned by several stakeholders refers to the inadequate distribution and sales network (including storage and sorting) -mainly of Romsilva- which facilitates the development of a black/grey timber market. It is not transparently disclosed where individuals can get their firewood from, as there are no distribution and sales centres (well organised and regulated, giving therefore the harvested wood added value) near the logging sites. This leads those in need of firewood to turn to alternative/parallel distribution networks. Failure to resolve this situation and maintain the status quo is in the interest of some private individuals who benefit from these shortcomings.

Some of the interviewees complain about over-regulation in the sector (logging and wood processing) which makes it very difficult for private companies to operate. For this reason, in Romania logging is at a lower level compared to other more developed countries (like the Nordic ones) and there is a shortage of timber on the market. Also, some regulations are considered absurd and make the process of forest exploitation and the actual work of forest workers unnecessarily cumbersome.

Another problem is the lack of education of the population about the ways and needs of logging, which leads to a wrong image of logging and strong adverse reactions. Massive misinformation in the media caused mainly by the lack of education of the population in understanding some technical information and the aggressive campaigns promoted by some environmental NGOs has led to strong reactions of the population against the idea of logging (the forest offers renewable resources to be exploited) and the profession of forester (the profession is in a cone of shadow, they are automatically perceived as criminals and their families sometimes even face problems of integration in society).

On the other hand, NGOs claim there is massive corruption in the system leading to illegal logging and a large grey/black market for timber.

Large differences are observed between the perceptions and statistical data provided by organisations with different interests in the field.

Some argue that fostering and incentivizing the biomass market could lead to even more pressure on the Romanian forests and this is not desirable.

Another challenge consists in the lack of information, education and awareness of the population on the more efficient use of biomass for energy production (especially those in

households that use firewood, but also farmers, owners of small factories, residents of residential complexes, local governments that could use the biomass resulting from current activities/ various regular cleaning processes in order to be independent from the energetic point of view).

Romania's energy development strategies and policies do not place importance on biomass (for example no incentives and/or national programs aimed at fostering the use of biomass for energy production are drafted and implemented, practically the biomass is widely ignored and its potential for energy production is not acknowledged on the energy market). Through the activities carried out within this project, it was possible to ascertain the lack of specific expertise and exhaustive understanding of the field within the state institutions. There are institutions / bodies with competences in the field, but their attributions are fragmented and no one has a global view of the market.

Another issue consists in the difficulty of estimating the quantity of raw material available for biomass-based energy production facilities. This leads to the risk of running out of raw material for these installations. Following the discussions with the stakeholders, it seems that the potential for efficient use of forest biomass seems to be achieved to a large extent.

As far as the opportunities on the biomass market in Romania are concerned, the interviews conducted have shown that the scraps/residues/waste resulting from the agricultural and zootechnical activity, which supposedly remain largely unused (e.g. from the annual cutting and cleaning of vineyards, straw, stalks, peels, animal residuals etc.) represent a great potential as raw material for the production of pellets.

At local administration level, there seems to be a great potential in the waste resulting from the cleaning of green spaces, grooming, gardening etc., which is not valorised in all cases. However, there are some local public administrations where the resulting waste is already used and these could serve as best practice models.

Growing certain types of energy plants that do not require special care on uncultivated land around villages or in areas where the soil does not allow anything else represents a good opportunity to valorise areas that otherwise remain abandoned and to obtain raw material at low cost for biomass power plants.

Another opportunity in this market is the use as biomass for energy production of various residues resulting from everyday human activity and certain industries (e.g. food industry - in some countries nut shells, seed shells, etc. are used for energy production), in line with the underlying principles of circular economy.

In terms of recommendations and measures for the sustainable development of the biomass market in Romania, many of the interviewees pointed to the Rabla Programme for stoves co-financed by the state, aimed at stimulating households to install biomass power plants that are more energy efficient than current stoves.

Another recommendation relates to changing the distribution and sale of forest biomass. Also, in order to analyse and address the market needs correctly, it is essential to clearly differentiate between forest biomass and other types of biomass and to create distinct regulations.

Given the diversity of opinions and data presented by different actors, the implementation by state institutions of objective and accurate communication campaigns, based on correct statistical data, regarding the exploitation of forests and the timber industry is essential in order to educate the population and inform citizens correctly.

It is also recommended to train specialists within the institutions with competences in this sector, in order to have a complex understanding of the biomass market in Romania. They could further on propose appropriate policies and strategies for a sustainable development of the market, making use of its full potential.

It is recommended to launch information campaigns on the potential of using biomass (not wood) for energy production for different small and medium sized communities (e.g. residential neighbourhoods, communes, etc.).

Another recommendation is to stimulate the development of local business clusters involving the establishment of collecting centres (citizen education, job creation) and energy production facilities from existing biomass (which is currently being wasted) fostering implicitly the circular economy and the development of self-sustaining communities from an energetic perspective.

Conclusions

The main conclusions that can be drawn can be summarized as follows:

- lack of expertise in the field within public institutions and implicitly the lack of coherent policies to stimulate the sustainable development of the biomass market as an alternative source for green energy;
- the very divergent opinions of the different actors in the field, which leads to the need to carry out correct and objective information campaigns by the responsible institutions;
- apparently limited potential and sufficiently exploited for forest biomass. It should be explored in more detail the potential of biomass in agriculture and other types of residues.

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ANNEX 1: List of interviewees

Valerica Abrudan- Advisor, **National Agency for Environmental Protection (ANPM)**;
Petru Boghean- Advisor to the **Romanian Foresters Association (ASFOR)**, an employers' and professional organization of economic agents in the sectors of forestry and wood processing;

Sorin Buculei- Administrator, Bioenergy Suceava, **producer of energy from biomass**;

Antoanela Costea- Forest and Protected Areas Project Manager, **Association WWF Romania**;

Alexander Degianski- **Energy plants producer**;

Ciprian Galusca- Project Coordinator for Forests and Biodiversity, **Association Greenpeace Romania**;

Iuliean Hornet- Inventor and administrator, **EcoHORNET, private company for the production and installation of energy production facilities from biomass**;

Paul Kmen- Deputy General Director, **APIA (Agency for Payments and Intervention in Agriculture)**;

Ciprian Muscă – President of the **Romanian Foresters Association (ASFOR)**, an employers' and professional organization of economic agents in the sectors of forestry and wood processing;

Ramona Niculescu- Advisor, Service for Regulation of Greenhouse Gases and Administration of National Accounts, Climate Change Department, **National Agency for Environmental Protection (ANPM)**;

Gheorghe Pei- Procurement manager, **HS Timber, an integrated forestry company, wood processor and also biomass-based electricity producer**;

Ioan Sabau- **Energy plants producer**;

Florin Stoican- President of the **Associations Kogayon and Văcărești Natural Park**;

Catalin Tobescu- President of the **Wood Industry Association – Prolepn**;

Lajos Vajda- President of several clusters and business incubators, among which **Green Energy Innovative Biomass Cluster**.

ANNEX 2: Interview Guideline

Your name.....

The organization you represent and the role it plays on the biomass market in Romania:.....

Your experience in the field is of.....years

On a scale from 1 to 10 (1- not interested, 10- very interested) how interested are you in the functioning or the blocking of the functioning of the biomass market in Romania?

.....

What is your interest regarding the biomass market in Romania?

.....

How would you quantify on a scale from 1 (very little) to 10 (very much) the influence that your organisation has on the biomass market in Romania?

.....

How do you consider that you can influence the biomass market in Romania?

.....

In your opinion, which are the three main challenges regarding the proper functioning of the biomass market in Romania and the sustainable use of biomass as a source of energy in Romania?

- 1.....
- 2.....
- 3.....

In your opinion, which are the 3 main opportunities on the biomass market in Romania?

- 1.....
- 2.....
- 3.....

In your opinion, which are the 3 main measures that should be adopted in order to ensure the optimal and sustainable development of the biomass market in Romania?

- 1.....
- 2.....
- 3.....

Consider the following list of stakeholders/players in the biomass market in Romania:

- Ministry of Environment
- Ministry of Energy
- Ministry of Agriculture
- National Agency for Environmental Protection ANPM
- National Authority for Energy Regulation ANRE
- Various players in the NGO sector
- Biomass producers (energy plants, furniture/ waste etc.)
- Biomass energy producers (integrated or stand-alone)
- Public forest managers
- Private forest managers
- Forest owners
- Pellet producers
- Producers of machinery and equipment for the production of energy from biomass
- Consumers
- Policy makers at national level
- Policy makers at European level
- Local public authorities
- Other stakeholders (e.g. Ministry of European Funds, Ministry of Finance, Ministry of Labour, etc.)

From this list who do you think are the most interested ones in the biomass market in Romania (i.e. they have an interest in developing it vs. they have an interest in blocking it)? (Top 3)

- 1.....
- 2.....
- 3.....

From this list, who do you think has the most influence on the development of the biomass market in Romania (i.e. can exert a major influence to develop or block it)? (Top 3)

- 1.....
- 2.....
- 3.....