



FACTSHEET OF BIOMASS FEEDSTOCK EVALUATION

Summary of the factsheet

The current factsheet tackles the topic of biomass feedstock evaluation: (i) why it should be considered, (ii) how to assess the biomass potential (iii) from biomass potential to biomass availability and (iv) stakeholders that can provide support.

KEYWORDS:

Biomass potential
Biomass availability
Feedstock evaluation
Stakeholders support

Why feedstock evaluation should be considered?

One of the most important aspects to be taken into account when considering any activity around local biomass is to know if there is biomass potential in a nearby area and if it can be guaranteed in the future.

In this sense, it is necessary to differentiate between the potential biomass that may exist and the biomass that will be available and accessible.

How to assess the biomass potential?

A methodology to assess the biomass potential to follow could be:

- To **define the sourcing radius (km)** for assessing the biomass potential (normally should be lower than 100 km). It should be taken into account that a large part of the cost associated with the supply of biomass is due to the transportation of biomass.
- To consult the **agricultural and forestry statistical yearbooks**, in order to assess the amount of ha of each crop at least from the last 3 years.
- To identify the most representative crop in your local area and its corresponding **biomass productivity** that you can obtain **per ha**. This will depend on the type of biomass and:
 - the type of crop species
 - whether the biomass comes from whole tree or only from tops and branches (always respecting the criteria set by RED II)
 - if the biomass comes from pruning, plantation removals, maintenance operations, forestry fires, etc.
 - Frequency of horticultural practices
- In the case of agroindustrial biomass, it will depend on the amount of crops collected and processed each year during the treating/ refining processes in the agroindustries.

Other option if you want to do a first assessment is to consult **some open-source tools** described in the [BECOOP toolkit](#) that provides a first estimation of the biomass potential, as: **BIORAISE**, **S2BIOM**. These online tools are very general but can provide a preliminary idea of the biomass potential.

There are **more advanced techniques** such as to create your **own geographical information system, remote sensing technologies** (as for instance LIDAR), etc but this are more complicated for an unexperienced user.



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Biomass Productivity Ratios

Resource	Productivity per ha (t/ha, d.b.)	Comments
Forestry biomass	20-100	When maintenance operations are needed.
Agricultural biomass from pruning operations	0.7-4.0 (rainfed land) 1.5-8 (irrigated land)	It depends on the crop and the type of land (rainfed or irrigated). Pruning operations are carried once per year or every two years (mainly with olive crops).
Agricultural biomass from plantation removals	1.7-40	It is becoming more and more common to renovate plantations, either by changing variety, crop or to make the plantation more productive. It depends on the crops but between 10-60 years the plantations are usually renovated.
Agroindustrial resources (olive pit, exhausted olive cake, almond shells, etc)	-	Highly depends on the quantity of harvested crop collected each year and the type of agro-industry. It is usually derived as a by-product of refining/treating a crop product.
Biomass from urban parks and garden	15-30	When maintenance operations are needed.

From biomass potential to biomass availability

Once you know the biomass potential, you should consider other aspects in order to assess the biomass availability, as for instance:

- **Technical considerations for the harvesting of biomass** (access to the fields, slopes, distances between plantations etc.)
- To **get in contact with some local owners of biomass** (farmers, cooperatives, public and private forest owners) in order to obtain **information about the standard practices** that the owners of this biomass are doing in the area of interest.
- **Biomass logistic operators are needed**, if they do not exist, it can be a barrier.
- **Current consumers of biomass**. Is there other biomass consumers? Are they expected in the future? Such consumers could threaten the secured supply of the biomass.
- **Other current or future use** of biomass as for instance organic matter.

Once you collect all this information you can have a better picture of the biomass availability in your local area.

Stakeholders that can provide support

To carry out a feedstock evaluation can be a complicated task, so the following stakeholders can provide support:

Research Centers
Universities

Public Institutions
Biomass associations

Biomass owners/
agricultural/forest co-operatives

Biomass
suppliers

Look for them in
the **BECoop**
e-market

THE PARTNERSHIP

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