



GRASSIFICATION

Interreg 
2 Seas Mers Zeeën
European Regional Development Fund

Grassification

D1.2.1

Development of a general outline for a joint public procurement process

Wim De Roo – Provincie West-Vlaanderen

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The GRASSIFICATION project

Roadside grass clippings are a problem fraction throughout the 2 Seas Programme area due to their high volume, subject to high processing costs. The industrial sector, however, is interested in the possibility of using roadside grass clippings as an alternative resource (as opposed to fossil sources or dedicated agricultural produce, e.g. isolation material). The common challenges for applying roadside grass clippings as a renewable feedstock in industrial processes are currently threefold:

- the supply chains are not yet optimal, resulting in higher costs;
- a highly variable and heterogeneous quantity;
- an unsupportive institutional framework leading to legal and political challenges.

The overall objective of the Grassification project is to apply a multi-dimensional approach to roadside grass clippings refining in order to optimize it into a viable value chain for the biobased and circular economy. The project commits itself to optimize logistics and technical aspects of the grass clippings supply chain and processing, demonstrate its market potential as well as formulate policy and legal recommendations to create a more supportive framework for the recycling of this renewable resource. These actions will increase the volume of usable material, lower costs, and generate a higher added-value for this so-called 'waste' streams. In this way, the use of roadside grass clippings as a renewable resource for the production of biobased products and hence the circular economy will become more attractive.

Context of the document

It is estimated that around 350k tonnes of road side grass clippings are generated annually in Flanders alone. Valorising (even partly) this amount of roadside grass clippings could prove to be a tremendous environmental and economic boon. From a land manager point of view, two problems arise:

1. no objective tendering criteria are available if organisations want to maximise the refining potential (technical description, decision criteria etc.)
2. not every land manager manages enough surface to (economically) justify this choice. By joint contracting with other land managers the economic threshold to justify this choice will be easier to reach and a broader roll-out of a circular economy based upon roadside grass refining will be facilitated¹.

Within this deliverable the Grassification partners have put together a template for a joint procurement process. The document below focusses on the specific requirements foreseen within this template that differ from standard mowing procurement documents.

Relevant documents:

¹ Sources: Interreg IVa report: Carelands – Mowing for digestion and Interreg IVb report: Arbor – Rendabele Bermgras inzamelstructuur (in Dutch)

- Interreg IVa report: CaRe-Lands – Mowing for digestion
- Interreg IVb report: Arbor – Rendabele Bermgras inzamelstructuur (in Dutch)
- Grassification model for joint procurement

Development of joint public procurement process – optimising standard procurement requirements

Requirement: Duration of the contract

The Arbor report states that the optimal duration of the contract from an economical point of view (ROI etc.) should be at least 10 years. The joint procurement model tested within the Grassification project chose a shorter duration of the contract (1 year, trice extendable with 1 year) because the added flexibility for a shorter contract (with yearly evaluation of the contract) outweighs potential economic drawbacks. This flexibility was needed, because the joint procurement model differed significantly from traditional cut-and-collect contracts (e.g. impact of increased mowing height on fuel consumption, peak volume shaving of grass clippings, impact of planned new roadside management plans, etc.). Another advantage (from the land manager side at least) is the “stick behind the door” function to ensure the full cooperation of the contractor. This method is easier to use and is more convincing than a fine² or reward approach.

Specific technical requirements

Mowing height: minimum 10 cm

Mowing tests within the Grassification project have shown that the optimum mowing height is 10 cm (as is legally required in Flanders). Compared to lower mowing height the advantages are a reduction of the fuel consumption (less ground contact of spinning blades/flails), better quality of collected grass fragments (reduced sand and litter content) and better survival rates of fauna and flora (reduced suction at soil level). The main disadvantage, especially in urban areas, is the remaining litter after mowing necessitating an additional litter removal step (when mowing below 10 cm litter gets shredded and picked up with the grass clippings). The mowing technique (flail vs. rotary mower) at this mowing height has little impact on the sand content of the grass clippings and on the visual aspect of the roadside verge.

Interviews with stakeholders (both contractors and land managers) have shown the necessity of “mowing height enforcement”. Within the joint procurement model, we have therefore chosen to (1) demand a technical proof that mowing below 10 cm is technically impossible (through hard- or software modifications – see selection criterium “technical expertise”) and (2) a visual inspection of the mowing works.

Shaving of the supply peak of grass clippings

Interviews with potential sites for processing of the grass clippings and other stakeholders have shown that other than the quality of the grass clippings (sand content, etc.) the peak nature of the supply is considered a problem. This leads to an increased processing cost for the

² In Flanders the default fine foreseen within the public procurement legislation is calculated as 0.07 % of the total amount of the procurement with a maximum of 400 €. Other fines have to be foreseen specifically in the tendering document and are difficult to enforce (large administrative workload).

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contractor. Shaving of the supply peaks can be achieved through temporary anaerobic storage techniques (ensiling) and/or temporal spreading of the mowing works (maximising the mowing period while respecting the roadside management plan(s)). From the offer side of the tendering process the managing authorities are encouraged to develop and approve roadside management plans, whereby deviation from the legal mowing dates to allow for a longer mowing period is substantiated and/or provide contractors with the space for ensiling.

The practical implications of “shaving the output peak” (e.g. how much can be ensilaged? When should what roadside verge be mowed?) are laid down with the contractors and are yearly evaluated through their proposed plan of action and plan of processing (see tendering criteria).

Development of the tendering criteria

The big challenge of defining tendering criteria for this joint procurement was to marry the challenge (see introduction) with practical, economical and legal constraints linked to a tendering process. In short: it doesn't make sense to launch a public procurement if the market (contractors, processors) and/or the demand side (land managers) are not able (or willing) to participate.

Before addressing which tendering criteria were chosen, it is important to outline the general concept of the offer evaluation process. This is a 2-phase process, whereby the following questions are answered for each offer:

1. Can the candidate participate in the procurement process? (-> selection criteria)
2. Is the offer a good one? (-> award criteria)

It is important (if obvious) as well to note that if the answer for question 1 is “no”, the offer cannot be considered for evaluation.

Specific selection criteria – machinery specification

The legal framework for selection criteria is very well defined. Other than general criteria (candidates cannot be criminals etc.) the technical suitability of the candidate is evaluated (always with respect to the nature of the procurement subject!). Since enforcing the correct mowing height is considered essential within this procurement process (specific mention under “technical requirements”) only contractors able prove that the machinery they are planning to use is physically incapable of mowing under 10 cm are considered. The way by which this is achieved is left open (software and/or hardware provisions).

Specific award criteria

Award criteria allow the commissioner of the assignment to clarify the relative importance of award criteria. For this procurement template the following award criteria were selected:

- Price (40/100): a simple pricing formula, based upon 2 classes of road side verges (width < 1,2 m; > =1,2 m; price includes mowing and processing) allows an objective comparison of price;
- Plan of action (25/100): a specific mention is given to measures that lead to shaving of the supply peak of grass clippings (such as anaerobic ensilaging, longest possible mowing period);

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- Sustainability criteria (25/100): based upon a rough estimate of the total amount of clippings (fixed on 1000 tonnes), the contractor has to describe how much of this amount is processed in a sustainable way. A multiplier is used to promote processing according to waste hierarchy. This criterion is valued relatively lightly in this procurement model: alternative ways of processing capable of processing these amounts are currently very scarce within the 2 Seas region; and
- Waste removal (10/100): it is expected that due to the relatively high mowing height waste will remain after mowing. Since this is not at the core of the procurement process it is added as a "nice-to-have" whereby contractors can score additional points perhaps offsetting a difference in price.

Most of these specific award criteria are objectively verifiable with a mathematical formula. By specifying which aspects of the plan of action are important it is made clear to potential contractors how the judging of this aspect will take place.

Next steps

The Grassification joint public procurement template resulting from the lessons learned within this deliverable needs to be reviewed by stakeholders ("Is this a viable procurement template?") and evaluated. Deliverables 1.2.2 and 1.2.3 will consider these points. The end result of D1.2.3 will be a modified joint procurement template that will ensure:

1. objective tendering criteria for organisations who want to maximise the refining potential (technical description, decision criteria etc.)
2. a tested model for joint procurement whereby economics of scale outweigh a potential cost increase due to the increase in refining potential.

GRASSIFICATION consortium

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