Poland, Puławy	**Magdalena Borzęcka-Walker**
Institution	IUNG (Institute of Soil Science and Plant Cultivation)
Position	Assistant professor; Department of Bioeconomy and System Analysis
Field of work	Biomass potential assessment in Europe; Environmental impact of conversion of biofuels, LCA; GHG emissions of food crops cultivation, biofuels production
Experience	
About the feedstock	Within the BioBoost project, theoretical potential (NUTS2 level) and technical potential (NUTS3 level) of biomass from Roadside vegetation, Green urban areas and Residuals of pruning was estimated.
Potential estimations	*Estimation of Roadside vegetation (both herbaceous and woody biomass):* Surface area was assessed according to the Open street map – vector map of EU road network, while 10 m wide stripes of roadsides (5 m on both sides) were considered, at local roads only 5 m stripes. Biomass amounts were estimated with help of Net Primary Productivity map. This map provides data on potential growth of vegetation on different habitats, also with geographic location taken into account. *Estimation of Green urban areas (leaves, shrubs and grass):* Many different types of biomass occur in these areas. The area of urban green spaces was estimated based on CORINE land cover map and included all kinds of green areas in towns. Again, the Net Primary Productivity map was used for determining the biomass amounts extracted from the area. The annual biomass potential (technical potential) is the 50 % of the increase in the biomass growth per year. There were little data on the feedstock form landscape conservation and maintenance use in EU from previous research activities, also no wider potential estimation of such feedstock was available.
Further context	If the LCA analysis should be made for this feedstock, the suggestion would be to set a start at the moment, when the biomass is loaded on the track (cradle), since the previous steps would have to be made anyway within the waste treatment. However, the collection of the feedstock is one of the steps with higher economic costs, since it is very time-consuming. The next expensive step is conversion, like combustion, digestion or turning into biofuel.
Problems	By the estimation of the potential using the CORINE land cover map, it is sometimes not completely sure if there is vegetation or a building. Also,

presence of a park on the map does not say anything about how many trees or how much grass there is. The maintenance technique and organization varies among countries and regions.

Wider insight

In Poland, the management of green spaces and available equipment differs a lot among the municipalities. In Puławy, there is a municipal greening office, which hire number of companies to perform the maintenance. The work include spring and autumn cut of shrubs and autumn collection of leaf-fall. Private garden waste can be left at the facility as compost, or self-delivered to the landfill (free of charge). The cost of collection, disposal and transport amounts at about 10 EUR per m^3. Gate fee is high and most of the people compost it in their garden. Once a year there is the possibility to give the garden waste away for free.

The municipal waste is collected once a week from citizens, where there are two categories: “dry waste”(paper, glass, plastic) and “wet waste” (organic waste, dirty plastics etc.). Some citizens also add the garden waste to the wet waste. The unsorted waste or badly segregated, goes to the segregation process in the sorting line and then biodegradable waste processed or disposed. The landfill company produces compost from the collected green waste.

Messages

One of the few potential estimation of feedstock from landscape conservation and maintenance work in Europe was made within the BioBoost project.

Contact information

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Interlink

Projects *S2Biom* and *BioBoost*

Gallery

BioBoost Geoportal: *www.bioboost.iung.pl*