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Biomass in Serbia - potential of beech forests

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As for the renewable sources for energy production, biomass from forests and wood processing industry comes to the second place. The woody biomass accounts for 1.0 Mtoe, that is equivalent with 1.0 Mtoe of oil. Due to current evaluations, the greatest part of woody biomass would be used for briquettes and pallets production.
As the biomass from forests is increasingly becoming the interest of national and international market, a detailed research on overall potential of woody supply from Serbian forests is required. Beech forests account for 29.4 % of forest cover of Serbia. They also have the greatest standing volume (42.4 % of the overall standing volume) and the greatest mean annual increment (32.3 %)(Bankovic,et.al.2009). Herewith, the aim of this poster is to determine the long-term biomass production of these forests.For this purpose a management unit called Lomnicka reka has been chosen. As these beech forests have similar structural development, this location is considered representative for whole Serbia. DBH of all trees were measured with clipper and the accuracy of 0.01 mm, and the heights with a Vertex 3 device (with accuracy of 0.1 m). All measurements were performed on the fields each 500 m^2 (square meters). The overall quantity of root biomass was calculated using the allometric equations.
The poster shows estimated biomass stocks of beech forests located in Rasina area. Dates are evaluated using non-linear regression (Wutzler,T.et.al.2008).
Biomass potential of Serbian beech forests will enable the evaluation of long-term potential of energy generation from woody biomass in agreement with principles of sustainable forest management. The biomass from such beech forests can represent an important substitution for energy production from fossil fuels (e.g. oil) and herewith decrease the CO_2 emissions.