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MATERIAL FLOW ANALYSIS OF RESIDUAL BIOMASS FOR COMBUSTION FOR LATVIA WITH SANKEY DIAGRAMS

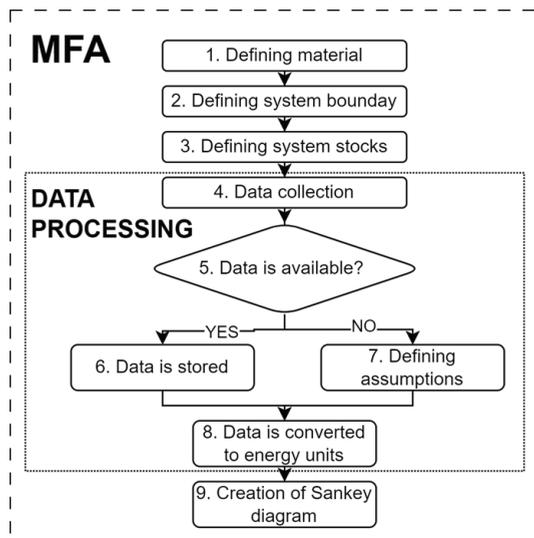
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Abstract – To meet climate targets, Europe has increasingly utilized biomass as a renewable alternative to fossil fuels for combustion and heat production. This shift has resulted in the heating sector becoming heavily dependent on primary wood biomass. However, recently implemented regulations have introduced restrictions on the use of primary wood in the energy industry. While low-quality biomass holds significant potential for combustion, there is limited information regarding the availability and quantities of non-wood biomass resources in Latvia. To evaluate what share of non-wood biomass resources can be used to cover roundwood consumption, material flow analysis approach was used. None of the studied biomass resources in this article can individually cover the required energy demand; however, a combination of all the studied resources can cover it. Specially grown energy crops exhibit the highest potential, but other analyzed biomass types have local availability and could be utilized in specifically adapted local boiler houses.

Keywords – *Alternative; biomass; energy; leaves; MFA; reeds; wood*



Material flow analysis algorithm for the study

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