

EVALUATION OF ABOVE-GROUND BIOMASS OF UNDERGROWTH AND UNDERSTOREY IN DRAINED FORESTS IN LATVIA

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ABSTRACT

Biomass is the world's fourth largest source of energy after oil, coal and natural gas. Biomass is the largest and currently the most important renewable energy option and can be used to produce various forms of energy. As a result, biomass, together with other renewable energy options, is able to provide all the energy services needed in today's society, both locally and globally. Among many other aspects, the renew-ability and versatility of biomass as an energy source is also an important advantage. In addition, compared to other energy sources, biomass is widespread around the world.

The aim of the study is to evaluate the energy wood resources available in the understorey and undergrowth of drained forests in Latvia.

There are the resources of undergrowth and understorey of Agency "Forest Research Station" in Jelgava Forest district used, as well the data of State Forest Resources Monitoring realized by Latvian State Forestry Research Institute "Silava".

The study estimates the amount of biomass to be obtained in *Myrtillosa* mel. and other drained forest site types. The mass models are designed to calculate the mass of absolutely dry wood for State Forest Resources Monitoring data.

The results of the study conclude that a higher amount of biomass of undergrowth and understorey is obtained in stands with lower density. Countrywide, there in the drained forest site types, most biomass is obtained in *Mercurialiosa* mel. forest site type - in average 10.55 t ha⁻¹ and in *Oxalidosa* turf. mel. - in average 7.96 t ha⁻¹. The the lowest biomass is found in forest site type *Callunosa* turf. mel. - in average 0.7 t ha⁻¹ and in *Callunosa* mel. - in average 0.18 t ha⁻¹.

Keywords: biomass, undergrowth, understorey, drained forests, Latvia.

INTRODUCTION

In recent years, energy has become a major issue for global, regional and national development. In the field of energy until 2030, the main goals of Latvia's sustainable development strategy are the use of local renewable energy resources and the extraction of safe, renewable energy [1].

The world's population continues to grow rapidly, so that today's population is twice as large as in 1960, and is projected to increase to 9 billion by 2050. Forecasting models