



Latvijas
Lauksaimniecības
universitāte



JSC “Latvijas valsts meži”

Latvian State Institute of Wood Chemistry

Latvia University of Life Sciences and Technologies

Report on

**In-depth research on possibility to produce wood-based
textile fiber - lyocell**

ANNOTATION

Rīga, September 2021

The research project “In-depth research on possibility to produce wood-based textile fiber - lyocell” was contracted by the JSC “Latvijas valsts meži”. The investigations were performed by Latvia University of Life Sciences and Technologies, Latvian State Institute of Wood Chemistry as well as by the experts of JSC “Latvijas valsts meži”.

The objective of the research was to assess the potential to produce lyocell in Latvia. The dissolving pulp production possibilities are also analysed because lyocell is produced from dissolving pulp. The decision on the next phase of the project has not been adopted.

The research project contains information and results of analysis according to nine main work tasks.

Strategic and binding policies, planning and regulatory documents related to production of dissolving pulp and lyocell were analysed. The analysis of regulations on the environmental impact assessment procedure was also made. The review included analysis of regulatory framework to obtain a permission for commencement of polluting activities in case such production plants are developed.

The study provides an evaluation of pine, spruce and birch wood resources at a geographical level, their availability and quality. Assessment of exported volumes of pine, spruce and birch pulpwood is done. The possibilities and availability of the resources and supplies of certified pine, spruce and birch pulpwood in Latvian market are analysed. The analysis of logistic costs indicates the most favourable option for transportation – either pulpwood or dissolving pulp and lyocell.

The report suggests the most feasible dissolving pulp production technology for Latvia, based on analysis and comparison of various dissolving pulp production technologies. The lyocell production technology has also been analysed.

An overall market analysis for pulp, dissolving pulp and wood-based textile fibers, including lyocell market has been carried out. Production volumes, ready made products and the main competitors have been identified and potential market share of the eventual dissolving pulp and lyocell plants is assessed.

Four potential location sites of the eventual production plants have been reviewed, evaluated and compared in order to estimate site conformity.

The study also contains an indicative assessment on impact of eventual production facilities from a perspective of climate policy and socio-economic aspect.

Initial investment costs were estimated and financial model for the production facilities was developed. The internal and external risks relevant to development and construction phase of the dissolving pulp and lyocell plants were identified. Also, mitigation measures of risks were pinpointed.

The main findings, conclusions and recommendations of the performed research are compiled as a separate report, with nine chapters.

Considering confidentiality of research deliverables the report contains information not conflicting with the requirements of non-disclosure.

The reports altogether have 1163 pages, they contain 225 tables, 336 figures, 555 references.