

Description of training program “Energy wood harvest in the forest management process.”

The training programme is intended for private forest owners, societies and associations, forestry companies or enterprises, as well as those employed in the forest sector. It has been developed within the framework of the Baltic For Bio (Accelerating the Production of Forest Bioenergy in the Baltic Sea Region, project number # R058) project under WP 3 work package activity GA 2.3.

The aim of the training is to provide a broader insight into the role and potential of energy wood and educate forest owners, entrepreneurs and those involved in the forestry sector on the use of felling residues and small wood in energy production.

All materials are provided in Latvian because most of the topics are related to specific issues and regulations relating to Latvian forest owners and entrepreneurs, including global-scale information and data. Nevertheless, the Forest Advisory Service Centre of the Latvian Rural Advisory and Training Centre, has created a description of each presentation so that the project partners have an insight into how they can design the training program for their target audience. One platform has also been created in English with a description of the training program and will be supplemented over time.

The training programme consists of two parts - theory and practice. To create it an innovative approach with a distance learning platform has been used. Consequently, the theory is available to the target audience in the Internet environment which ensures the acquisition of knowledge at any time and place. The theoretical material is designed for two different target groups - forest owners and entrepreneurs involved in the forest sector.

The themes of the presentations are repeated in both programmes, but with specific nuances, since basic knowledge is necessary for both audiences. More specific aspects are included in the programme which is intended for companies. The distance learning platform contains various types of materials that make the learning process more interesting and versatile. It is often difficult to give all the information in one presentation, therefore by adding audio files to the respective slide, more information can be included and acquired. Additional reference materials are also included, such as user manuals in video format, as well as other materials from the project results, such as handbooks, videos, reports and summaries.

Presentation themes included in the training programme (for forest owners, companies and those employed in the forest sector) are the following:

Sustainable wood energy development in the Baltic Sea region - *Baltic ForBio* international project.

This presentation will provide an insight into the Baltic ForBio international project regarding its goals, objectives and results. It will also explain why it is relevant and important. This presentation also provides a brief summary of the forest bioenergy sector in each partner country. At the end of the presentation the main conclusions and valuable lessons learnt from the project and partner countries will be summarised.

- The additional material contains information on the existing training experience in the project partner countries up till the present time.

Types of energy wood and their availability – “Forest energy Atlas” - insight.

The presentation offers an insight into the harvest of energy wood in the forest management process. This training material provides an opportunity to get acquainted with forestry issues related to energy wood types and their availability. It also provides an insight into the Forest energy Atlas GIS platform and database.

- Additional materials: “Forest energy Atlas” user manual in video format and a questionnaire for “Forest energy Atlas” users.

Calculation of the volume of energy wood using innovative computer programmes “*Mežvērte*” and “*Meža eksperts*”.

This presentation explains what these two programmes are and what they are intended for with visual examples from printouts of the programme results. These programs have been used daily in Ltd. Forest Advisory Service Centre to assess the expected estimated volume of assortments in a forest stand. Forest owners need to know the value of their forest property or a specific forest stand intended for felling thereby, both computer programmes have been advanced. The principle of the programme is the same as before. Still, an additional section has been created to calculate the expected volume of wood biomass from logging residues (branches and the top), which can then be processed into fuel chips. Thus, giving the owner an idea of the volume of the expected wood assortment and the volume of wood biomass, and the expected income from the felling site.

Sustainable forest management.

This includes the requirements of Latvian legislation, for example, what must be taken into account when addressing the preservation of biodiversity in the forest management process. It also includes other binding rules and regulations for the preparation of energy wood.

Preparation of energy wood and the application of various technologies.

The presentation offers an insight into the preparation of energy wood and the application of various technologies. This study material provides an opportunity to get acquainted with those forestry issues that affect the preparation of energy wood, the methods of logging, supply chains, logging machinery used in this process, as well as proper planning of the felling site operations.

- Additional materials contain various videos from the project partner Latvian State Forest Research Institute “Silava”. These materials also include the presentation of a colleague from the Forest Advisory Service Centre on the preparation of biofuels in different stages of forest management.

SBP (Sustainable Biomass program) - sustainable biomass certification for wood chips in Latvia.

Quite often, in order for a product to enter the market with a distinctive marking, it has to meet various requirements. One of these requirements is the SBP certification and, consequently, this presentation will provide an insight into what it is and for what purposes it was created. The presentation will also address the issues of the opportunities the certification provides for the entrepreneurs, including the necessary information for the buyers of the product.

The use of energy wood in heat energy.

The presentation offers an insight into the uses of energy wood in heat energy. This study material provides an insight into the possibilities of the use of biomass in heat and electricity production and its connection with the Latvian Sustainable Development Strategy Plan for 2030. This study material also includes information about general purpose and local boiler houses where basically wood fuel is used.

- Various videos from Latvian boiler houses as well as cogeneration stations are available from additional materials.

Energy wood market in the country and in Europe.

The presentation offers information on the energy wood market in the country and in Europe. This study material provides an opportunity to get acquainted with the demand for wood biomass in the country, trends and forecasts. It also provides information on the dynamics of wood biomass and the obtained energy prices and their forecasts.

Preparation and storage of wood fuels.

The presentation is based on WP5 GA 5.3. output “The Wood Fuel User Manual” information combines with experience from Latvia. Mainly have been highlighted best practice for storage landings after extracting logging residues and small dimension trees how storage time may be affected the quality of wood chips. Also, transportation possibilities and requirements depending on seasoning and weather conditions. One more important aspect has been taking into account wood fuel usage and its impact on the environment. The main message of this presentation to give practical advises and examples which anyone can use.

After all the presentation sections, an additional section was created for other materials that did not fall under the current themes, such as a compilation of questionnaires for logging companies, overgrowth removers, as well as video materials from the Natural Resources Institute, Finland (Luke), handbooks “Cost-effective and sustainable harvest methods” and “The Wood Fuel User Manual”.

After the theoretical materials, a section “Insight into the practical section” has been created which includes four videos that give the course participant an insight into what is expected in the practical section:

- Measurement of the energy wood pile before starting the chipping process (link to video - <https://www.youtube.com/watch?v=Ey6AAI23T5c>);
- Use of small-scale logging equipment in the tending of young stands (link to video - <https://www.youtube.com/watch?v=OnE2xUXlwzY>);
- Forest stand assessment (link to video - <https://www.youtube.com/watch?v=XDC6KxhFweM>);
- The process of chipping logging residues (link to video - <https://www.youtube.com/watch?v=93WD6zAyZX4>).

And in the very end, the course participants are expected to take a test to evaluate the knowledge they have acquired. For each presentation, questions are created with different answer options, which are generated randomly. Each one has a time limit and a number of allowable mistakes to advance to the next training section.

This training programme is free of charge and requires prior authorization, which is available in three different options:

- Providing Google account authorization option;
- Providing Latvija.lv authorization option;
- Ensuring the users’ independent update of their authorization data (password recovery).

Authorization will make it easier for the person in charge of the training programme to control its demand and effectiveness by seeing how long each participant spends on the relevant training materials. Also, judging by the attendance, the time of the practical section will be understandable, because it is necessary to organize a group for that when going out into the forest.

The training programme has been created with a further development potential, since the current available materials will be updated and supplemented over time, according to the latest developments.

Links to access the training program:

Latvian version <https://talmaciba.lkc.lv/course/index.php?categoryid=12>



English version <https://talmaciba.lkc.lv/course/index.php?categoryid=14>



If you have any questions regarding the training programme "Energy wood harvest in the forest management process", you are kindly requested to contact forestry consultant Ms Elvira Grasmāne from the Latvian Rural Advisory and Training Centre Ltd. (elvira.grasmāne@mkpc.lkc.lv).