

**Development and harmonization of new operational research and assessment procedures for sustainable forest biomass supply**

Participating countries: AT, AU, BG, CA, CZ, DE, DK, EE, ES, FI, FR, GR, IE, IS, IT, JP, LT, LV, MK, NL, NO, NZ, PL, PT, RU, SE, SI, SK, UA, UK, US, ZA

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[www.forestenergy.org](http://www.forestenergy.org)

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Figure 1: Time study in the field.

**Objectives:**

- Capacity building to strengthen the scientific body of forest operations research
- Establish a common terminology and standard units
- Harmonization of standard measurements, sampling methods and estimation of the different biomass components
- Development of best practice guidelines for a work study protocol in regards to forest biomass procurement chains
- Establish a simple format for cost calculations (costs/hour) of procurement machines
- Harmonization of commonly used methodologies in forest operations research

**Working Group 1**

WG 1 will establish a database of commonly used terms and units related to the use of forest biomass for energy and create a unified terminology. Furthermore, standard measurement and biomass units are harmonized within participating countries. The purpose is to develop a common and official terminology for forest biomass operations.

**Working Group 2**

In this working group participating member countries will summarize their current methodologies and procedures in regards to work studies, the current sampling methods and standard measurements for different types of forest energy material. The purpose is to a) survey; b) analyze, c) categorize and b) compare the different and numerous work study methodology, sampling methods and standard measurement approaches in participating countries. Based on the results the working group will provide a set of methods that researchers can choose from depending on local conditions.

**Working Group 3**

WG 3 will investigate the current forest biomass research methodologies including machine costing assumptions as well as data analysis methods in participating countries. The purpose is to a) survey; b) analyze, c) categorize and b) compare the different and numerous methods to determine machine costs and data analysis methodology approaches. The work package aims to develop a simple format for cost calculation (cost/hour) of forest machinery. Furthermore, the working group will ID the most suitable methodologies in forest operations research.

**Working Group 4**

In this working group the Action will investigate the current state of the art in regards to system analysis and modeling in forest operations. The purpose is to compare the different and numerous system analysis approaches and models (from simple deterministic to more complex stochastic and discrete-event) developing recently as a result of the rapid change of harvesting methods under the pressure of increased mechanization and forest energy harvesting. Furthermore, the WG will investigate new approaches to design supply chains and their associated costs i.e. how resource availability can be studied in terms of cost and supply.

**Main Achievements:**

- Creation of the peer reviewed Journal of Forest Energy at: [journal.forestenergy.org](http://journal.forestenergy.org)
- Publication of "Good Practice Guidelines for Biomass Production Studies"
- Publication of the Forest Energy Portal at [www.forestenergy.org](http://www.forestenergy.org) including:
  - Expert Database & Company Register
  - Database about Harvesting Guidelines for forest biomass
  - Blog
  - Video Channel

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Participating countries: BE, DE, DK, ES, FR, GR, IT, IL, IS, LU, NL, PL, PT, SI, SK, TR

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## Working Group 1

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## Working Group 2

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## Working Group xx

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## Main Achievements:

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Figure 2: Suspendisse potenti. Nulla dolor metus.

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9. **Working Groups.** Feel free to play with the size of the background box, and the font size so that your text fits in.