



**FULL
RECO4US**

FULLRECO4US SHORT TERM SCIENTIFIC MISSIONS - CALL FOR APPLICATIONS 2023

The **COST Action CA20133** “Cross-border transfer and development of sustainable resource recovery strategies towards zero waste” (“FULLRECO4US”) encourages and supports the **Short-Term Scientific Missions (STSMs)**. STSMs are Exchange Visits aiming at strengthening the existing networks by allowing individual researchers to go to an institution or laboratory in other COST country to foster collaboration and contribute to the scientific objectives of the COST Action CA20133.

Until **October 25, 2023**, there are up to **10 STSMs** to be awarded and conducted. Applicants are invited to apply for one of proposed topics related to specific Working Group objectives **up to April 20, 2023**. Please note that all STSMs must be in line with the general COST Action CA20133 goals and objectives (<https://www.cost.eu/actions/CA20133/>).

Please remember that the STSM must take place abroad (in other COST country) and the applicant should get in touch with a proposed hosting institution individually.

PROPOSED TOPICS / STSM NUMBER AND TOTAL BUDGET

WG 1 – STSM1 (4000 €): “Building a database and aggregating information on thermo-chemical conversion of woody biomass”. The database shall be developed in an open-to-all manner, i.e., it must enable contributions from members of the FullReco4Us Cost action and beyond. The STSM activities must fully align with the objectives of the COST Action CA20133 “Cross-border transfer and development of sustainable resource recovery strategies towards zero waste” (“FULLRECO4US”) – to summarise the state-of-the-art waste resource recovery techniques, identify knowledge gaps and enhance cross-border cooperation.

The potential applicant does not require specific IT knowledge but must have a good understanding of the thermo-chemical conversion processes and characteristics of bio-based feedstocks.

Suggested Host location: Estonian University of Life Sciences

Contact person: Prof. Timo Kikas (Timo.Kikas@emu.ee)

WG 1 – STSM2 (4000 €): “Creating a library of the technical conversion factors of woody biomass”. Technical conversion factors show how much of the primary raw material is converted into a target product and by-products, thus allowing to assess how much waste-woody biomass feedstock can potentially become available in a region for conversion into value-added products and energy carriers. The library shall contain information on the commodity product sequences (referred to as “the commodity trees”) of wood-based products, clearly indicating types and proportion of by-products with respect to the input raw material and output target product. The information shall be presented in a way that allows one to convert product data from primary equivalent to secondary equivalent and/or vice versa. The STSM activities must fully align with the objectives of the COST Action CA20133 “Cross-border transfer and development of sustainable resource recovery strategies towards zero waste” (“FULLRECO4US”) – to summarise the state-of-the-art waste resource recovery techniques, identify knowledge gaps and enhance cross-border cooperation.

The potential applicant does not require any prior specific knowledge yet background in wood industry or forest industry might be considered an advantage.

Suggested Host location: University of Latvia

Contact person: Prof. Elina Dace (elina.dace@lu.lv)

WG 1 – STSM3 (2400 €): "Defining a database design and data structure for aggregating information". The database structure shall be designed to be suitable for aggregating quantitative and qualitative data on the resource recovery and thermo-chemical conversion (valorisation) process and technology of woody biomass feedstock [*into energy carriers*]. The STSM activities must fully align with the objectives of the COST Action CA20133 "Cross-border transfer and development of sustainable resource recovery strategies towards zero waste" ("FULLRECO4US") – to summarise the state-of-the-art waste resource recovery techniques, identify knowledge gaps and enhance cross-border cooperation.

Suggested Host location: Norwegian University of Life Sciences

Contact person: Prof. Jorge Mario Marchetti (jorge.mario.marchetti@nmbu.no)

WG 2 - STSM 1 (2400 €): "Building a database with the information on solutions available for biochemical valorization": As WG2 focuses on biochemical recovery from waste, this STSM will be oriented in a first step to validate a preliminary structure of the database of developed and emerging solutions available for biochemical valorization, and after that the information about different biomass pre- and post- treatment methods, process parameters, utilized microorganisms, and obtained products would be filled in.

Suggested Host location: University of Latvia

Contact person: Prof. Elina Dace (elina.dace@lu.lv)

WG 2 - STSM 2 (2400 €): "How to structure information to make smart decisions for valorizing feedstocks into products?": As the STSM activities must fully align with the objectives of the COST Action CA20133 "Cross-border transfer and development of sustainable resource recovery strategies towards zero waste" ("FULLRECO4US"), this STMS will be focused on determine the smartest way to valorize feedstocks into products and the methodology (indicators, criteria, KPIs) that could facilitate these decisions.

Suggested Host location: University of Antwerp

Contact person: Prof. Philippe Nimmegeers (Philippe.Nimmegeers@uantwerpen.be)

WG 2 - STSM 3 (2400 €): "Classification of types of bioproducts that are already produced and what is the current knowledge about them": The scope of this STSM will be determine how we can produce bioproducts and what are the feasible and sustainable choices to make for getting achievable qualities and how does it relate to compliance. For achieving this target a wide range of products will be considered– including ion adsorbents, antioxidants, antimicrobials, alcohols, biopolymers, bioplastics, single cell oil, (V)FA, construction materials, caffeine derivatives, pigments, drug delivery systems, etc.- and the different processes will be described.

Suggested Host location: Hitit University

Contact person: Dr. Gamze Mujdeci (gnurmujdeci1@gmail.com)

WG 3 - STSM 1 (2400 €): "Upcycling of selected fruit and vegetable processing by-products into higher value ingredients by using innovative extraction and fractionation methods": processing of agro-food materials may generate large amounts of by-products and waste, which contain large fraction of valuable nutrients. Efficient recovery of such nutrients is a challenge both for the scientists and industry. The STMS, in accordance with the objectives of COST action WG 3, will be focused on development, application and assessment of biorefining schemes of agro-food processing side-streams into high value substances by using high pressure and enzyme assisted extraction and fractionation techniques.

The potential applicant is expected to have good knowledge in the field of chemical composition of agro-food biomaterials, their properties and processing as well as basic knowledge in separation science and technology.

Suggested Host location: Department of Food Science and Technology of Kaunas University of Technology, Kaunas, Lithuania

Contact person: Prof. Rimantas Venskutonis (rimas.venskutonis@ktu.lt)

WG 3 - STSM 2 (2400 €): " Evaluation of phenolic compounds by solid-state fermentation of selected biological residues using different fungal species ": WG3 focuses on wastes and/or residues that are of sufficient quality to be used for food and feed production, mainly through fermentation. In the Department of Wood Science and Technology, Biotechnical Faculty (University of Ljubljana, Slovenia) we have a collection of Industrial microorganisms with more than 300 filamentous fungal strains and isolates that can be used for the fermentation of various residues and wastes. For example, the research on the production and evaluation of phenolic compounds by solid-state fermentation of selected biological residues using different fungal species has just been carried out as an MSc thesis. The specific topic can be agreed with the potential applicant upon arrival in order to find the most suitable activities that are fully in line with the objectives of the COST Action CA20133.

Suggested Host location: Biotechnical Faculty of University of Ljubljana (Slovenia)

Contact person: Dr. Davor Kržišnik (davor.krzisnik@bf.uni-lj.si)

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Suggested Host location: Department of Food Science and Technology of Kaunas University of Technology, Kaunas, Lithuania

Contact person: Prof. Rimantas Venskutonis (rimas.venskutonis@ktu.lt)

WG 4 - STSM 1 (2400 €): "Membrane fabrication and process development for resource recovery applications from wastewater": In line with the objectives of the COST Action CA20133 "Cross-border transfer and development of sustainable resource recovery strategies towards zero waste" ("FULLRECO4US")-WG4, the STSM activity will focus on the fabrication, development and application of innovative membrane processes in resource recovery strategies (water, phosphate, VFA recovery, etc.). The potential applicant is expected to have good knowledge in the field of membrane science and technologies, their properties and processing for resource recovery, as well as basic knowledge of wastewater management with unit operations and processes.

Suggested Host location: Istanbul Technical University (ITU), Environmental Engineering, TR

Contact person: Assoc. Prof. Dr. Derya Y. Imer (imerd@itu.edu.tr)

STSMs offer a possibility to get involved in this international, multidisciplinary project, to learn new methods and techniques, gain new knowledge and experience in working abroad.

WHAT IS A STSM?

Short Term Scientific Missions (STSMs) are exchange visits aiming at strengthening the existing networks by allowing individual scientists to go to an institution or laboratory in other COST country to foster collaboration, to learn new techniques or gain access to specific instruments and/or methods or techniques not available in their own institutions. They shall have a **minimum duration of 5 calendar days** that includes travel.

A STSM should specifically contribute to the scientific objectives of the COST Action CA20133. To learn about aims of COST Action CA20133, please look at Memorandum of Understanding (MoU) available on the COST website: <https://www.cost.eu/actions/CA20133/>
More information about the COST rules on the Short-Term Scientific Missions is available at the COST Annotated Rules for COST Actions ([https://www.cost.eu/Annotated Rules for COST Actions C](https://www.cost.eu/Annotated_Rules_for_COST_Actions_C)).

RULES

-The STSM applicant must be a PhD candidate or be engaged in a research programme as a postdoctoral fellow or be employed by an institution of a COST Country that has signed the MoU of the Action. Applications from **Young Researchers** (under 40 years) **are privileged**. The host institution should be actively participating in the COST Action CA20133. For the period of the STSM neither the MC, nor the COST Office nor the Grant Holder may be considered as an employer. The **grantees must make their own arrangements for all health, social, personal security, and pension matters**.

-The selection of STSM applicants is based on the scientific scope of the STSM application that must be in line with the COST Action CA20133 objectives. The selection of successful candidates is made by the STSM Coordinator following the recommendations of the WG Leaders, MC Chair and Action Core Group. The STSM Coordinator informs the Grant Holder (GH) about successful candidate and then the GH sends a grant letter generated from e-COST system to the approved applicant. The grant letter must be signed by the applicant and returned to the GH.

-A STSM grant is a fixed contribution based on the requested budget which is evaluated by the STSM Coordinator. **The grant is for travel and subsistence costs only**. It does not necessarily cover all such expenses.

- Successful applicants will receive an allowance up to €160/day and up to €600 for travel. The budget will be divided among the successful applicants in accordance with COST rules.

- After the STSM, the STSM participant must upload and submit a **scientific report** to the Host and to the STSM Coordinator within **30 days after** the end of his/her stays.

- The STSM grant will be paid after the exchange visit (acceptance of the scientific report and a letter from the Host are required). The **STSM candidates must therefore pre-finance costs** related to the STSM (travel, stay, meals). STSM applicants with an affiliation in an institution in an Inclusiveness Target Country (ITC) country can request a pre-payment of 50% of grant. This is payable under two conditions: 1) the GH has funds to cover 50% of the grant in advance, and 2) the host confirms to the GH that the mission has started. Please note that transfer of the 50% of the Grant can only take place after the mission has started; therefore, requesting a pre-payment is more effective for STSMs longer than 1 month.

APPLICATION

If you are interested in applying, complete the **on-line application available at your eCOST account** (<https://e-services.cost.eu/stsm>), after **selecting COST Action CA20133** (Grant Applications, left menu) up to **20th April 2023**. More information on the procedures is available in the STSM user guide (http://www.cost.eu/STSM_userguide).

The following supporting documents must be included in the application:

- **Cover letter**, stating to which WG STSM grant you are applying, and explaining how your work will benefit from this STSM and how the STSM will contribute to the achievement of the COST CA20133 objectives;

- **Work plan** stating to which WG STSM grant you are applying, and specifying what you intend to do (800 words), the start and end dates, and budget (accommodation/travel);

- A **written agreement** of the **host** institution;

- A **letter of support** from the **home** institution;

- **CV** (2 pages), including a list of **publications**.

SELECTION CRITERIA

Applications will be assessed by the Cost Action CA20133 WG leaders, the Core Group and the STSM Coordinator according to the following criteria:

- Adequacy of the scientific background of the applicant to the proposed workplan;
- Scientific quality and relevance of the work plan. Namely, how well it addresses the proposed topics and the COST Action CA20133 objectives;
- Anticipated outcomes in respect of COST Action CA20133 objectives;
- Contribution to personal development of the candidate;
- Other criteria include early career, gender balance and geographical inclusiveness.

After the STSM

The grantee is obliged to upload a short scientific report and submit to the host institution (for information) and to the STSM Coordinator or MC Core Group (for approval) within 30 days after the end date of the STSM. The report must contain the following information:

- Purpose of the STSM;
- Description of the work carried out during the STSM;
- Description of the main results obtained;
- Future collaboration with the host institution (if applicable);
- Foreseen publications / articles resulting from the STSM (if applicable);
- Confirmation by the host institution of the successful execution of the STSM;
- Other comments (if any).

Please note that **failure to submit the scientific report on time** will effectively **cancel the grant**.

The STSM Coordinator will inform the GH about the acceptance of the report. Afterwards, the GH will execute the payment of the fixed grant directly to the grantee or to home institution as stated in the application form.