Sustainable forests for the society of the future

Scope for the 1st joint Call

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This Sumforest ERA-NET Call focuses on basic and applied research to inform policy decisions regarding multifunctional forestry and also addresses research issues spanning the whole value chain from forest management to product and service development. Proposals are expected to be transnational and the consortia must have members from at least three different partner countries who are funding the call.

The call covers the research topics listed below which have been prepared by funding agencies/organisations involved in the ERA-NET Sumforest, in collaboration with representatives from two other ERA-NETs, Foresterra and WoodWisdom-Net. Topic descriptions describe the focus areas which should be primarily addressed in the proposals submitted. Proposals may cover one or several topics and focus areas.

Innovative forms of cooperation are encouraged, i.e. interdisciplinary research and implementation across disciplinary boundaries of forest-related sciences which delivers meaningful cooperation between biophysical/natural and social scientists. Additionally, involvement of a variety of stakeholders from different geographic areas will better enable exchange of experience and expertise from varied academic backgrounds. Consortia may also describe their links and working relationships with research communities outside Europe.

Applicants for this ERA-NET Call are encouraged to pay special attention to ensuring the complementarity of their proposed research with existing or on-going research work.

The call should also contribute to the overall objectives of the ERA-NET – including the mobility of researchers and practitioners between the countries and intensify researcher training, thereby increasing the quality of European research and its implementation. Involvement of junior researchers and attention to gender balance is recommended in this Call.

Topic 1.

Comparative assessment of the sustainability performance of forest-based, other renewable and non-renewable raw material-based value chains to inform policy decisions.

Problem statement: Absence of objective and holistic comparative analyses of the sustainability credentials of forest-based, other renewable vs. non-renewable raw material-based value chains to inform policy decisions.

The Bioeconomy refers to an economy that is based on renewable natural resources to produce food, energy, products and services. Forest-, agriculture- or aquaculture-based biomass production may be able to offer sustainable solutions through a wide range of products and services to substitute fossil and mineral-based alternatives. Therefore, more raw materials from renewable resources need to be mobilised and this has to be done in a sustainable way.

Unfortunately, the range of benefits of renewable options is not sufficiently described or highlighted when it comes to supporting public policies, and the communication of these benefits in the marketplace is lacking. In fact, forest-based biomass products face unfair competition from fossil and mineral-based alternatives as the origin and sustainability of the latter is not scrutinised to the same degree as in the forest sectors despite the fact that they are derived from finite and non-sustainable sources.

The increasing awareness of the importance of sustainable solutions to mitigate climate change has contributed to a plethora of sustainability-related schemes and claims in the market place. Most industry and service sectors offer today their own approach to assess sustainability of their respective value chains. There is growing confusion in the market place regarding the credibility of these statements.

The aim of the research proposed should be to provide objective analysis between the sustainability performance of forest biomass-based

vs. fossil/mineral-based value chains. This would allow both consumers as well as policy makers to make evidence-based choices.

- The research should show how the capacity of forests to provide sustainable raw material can be increased in order to meet the requirements of the bioeconomy.
- The role of carbon in these assessments should be fully described including the respective sequestration in forests and products and substitution effects related to use of wood as well as the contribution to the bioeconomy and the circular economy.
- The work should review multidisciplinary methodologies for sustainability assessments and if appropriate, new assessment methodologies and sustainability criteria should be researched and described.
- Existing data sources for comparing the sustainability performance of forest biomass-based vs. fossil/mineral-based value chains should be utilized when possible. Results from case study comparisons should be presented.
- The research should bring novel information to the existing knowledge and be justified by gap analysis.
- The proposal will identify the relevant policy areas, related to the research proposed and provide an account of how the research will enhance the science-policy-practice interface.

In order to ensure the complementarity of their proposal with existing or on-going research work, the applicants are encouraged to familiarize themselves at least with the following projects:

http://www.globalbiopact.eu/,
http://www.eu-bee.eu/.

Topic 2.

Risk resilient forest management - Adapting forest management regimes which incorporate risk assessment related to potential climate change impacts to inform policy decisions.

Problem statement: The threat of natural, social and economic impacts of climate change - and related factors - is increasing. How can forest management be adapted to support forest resilience at regional, local and stand levels?

Changing climate will alter the basis of forest management regimes. Relationships between the different elements of the ecosystem – soil, water, flora and fauna – will all be impacted by changing temperatures, precipitation patterns and hazardous biotic and abiotic events. Climate change will increase the risks of disturbance in the provision of ecological and social and economic products and services from forests.

- The research should identify and describe new ways to define climate resilient forest management regimes applicable for different regions, forest functions and environments.
- Special attention should be paid to risk analysis methods and strategies to help avoid negative consequences of changes in climate or in the socio-economic environment.
- The research should apply different methods to predict the potential impacts of climate change on the ecological and socio-economic services of the forest sector.
- The proposal will identify the relevant policy areas, related to the research proposed and provide an account of how the research will enhance the science-policy-practice interface.

In order to ensure the complementarity of their proposal with existing or on-going research work, the applicants are encouraged to familiarize themselves at least with the following projects:

http://motive-project.net/,
http://www.arange-project.eu/,
forthcoming H2020 project ALTEFOR

Topic 3.

Investigation, appraisal and evaluation of trade-offs related to the provision of forest ecosystem services to inform policy decisions.

Problem statement: Comprehensive value assessments of forest ecosystem services are not available. As a consequence, the trade-offs between often conflicting demands on the various ecosystem services are not fully understood or available to support policy and other decision making processes. Furthermore, approaches to assess values for ecosystem services differ considerably among different stakeholder groups.

Forests offer a multitude of benefits to society. Some of these benefits – or ecosystem services - may be conflicting, while some others can be synergetic. For example, the intensification of biomass production can have negative impacts on some recreational values, e.g. scenic qualities. However, the opposite may also happen, e.g. intensive biomass production through development of forest road network may allow better hunting possibilities which contribute to improved recreational values.

In order to make sound policy decisions, the values of different ecosystem services need to be assessed. This value assessment needs to be done in a manner that ensures the results of the value assessment are comparable. Trade-offs between economic, ecological and social ecosystem services and products need to be presented in a form that allows the decision-makers at all levels to understand the value of the service provided and conceptualize the implications of the various decisions to be made. Better understanding of synergies and trade-offs between different ecosystem services will help to develop coherent and well-founded policies.

- The research should include:

  - appraisals of existing methods to assess values and trade-offs between various forest ecosystem functions.

- o the development of decision support methods applicable for assessing various aspects of multifunctional forestry.

- o results of case studies assessing trade-offs between forest ecosystem functions using the method developed in this project.

- The proposal will identify the relevant policy areas, related to the research proposed and provide an account of how the research will enhance the science-policy-practice interface.

In order to ensure the complementarity of their proposal with existing or on-going research work, the applicants are encouraged to familiarize themselves at least with the following running projects:

http://www.newforex.org/,
http://pegasus.ieep.eu/,
Additionally collaboration with projects selected under the upcoming H2020 call
http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5100-rur-05-2017.html.
should be envisaged.