

Towards the Ninth European Framework Programme for Research and Innovation

Position Paper from the Norwegian Universities





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The Norwegian universities are following the development of the next European framework programme for research and innovation with anticipation. The universities are deeply committed to European collaboration in the areas of research, innovation and education and urge for a strengthened ninth European framework programme for research and innovation. In this position paper, we highlight some issues that we find particularly important.

1. **Missions Governance:** Europe would benefit from the missions being governed in a transparent way throughout their lifespan, as well as being based on excellence as sole selection criteria.
2. **Mission on Oceans:** Europe would benefit from defining a mission on Blue Growth whereby the oceans would provide 10 % of the global food production by 2027.
3. **Fundamental Science:** Europe would benefit from the further strengthening of fundamental research through the European Research Council and Marie Skłodowska Curie Actions.
4. **Open Science:** Europe would benefit from an open science policy that integrates all aspects of research and innovation.
5. **Social Science and Humanities (SSH):** Europe would benefit from a dedicated Global Challenge on SSH, as well as the inclusion of SSH as a crosscutting issue in other parts of the programme.
6. **European Innovation Council (EIC):** Europe would benefit from the EIC specifically targeting breakthrough innovation.

An open and transparent governance of missions based on excellence

We would like to congratulate the European Commission and Professor Mariana Mazzucato on the report *Mission-Oriented Research & Innovation in the European Union*. We find the recommendations in the report inspirational and timely in addressing the global challenges of the 21st century, and we fully support the criteria for selecting missions.

We would like to emphasise the importance of keeping the governance model of the missions at the level of the EC and/or the Members States/Associated Countries. Moreover, to ensure that the missions achieve their ambitious goals, we believe that it is essential that specific measures are established to allow effective exchange between the individual projects within a specific mission. Further, the selection of projects must be transparent and based on excellence as the guiding principle. Finally, we urge that the missions are open to the inclusion of bottom-up proposals at low to medium Technology Readiness Levels (TRL).

The Ocean to provide 10 % of the food and feed by 2027

We strongly advocate for a major emphasis on Blue Growth in the next framework programme and propose a dedicated mission aimed at creating the necessary scientific and societal changes needed to ensure that the oceans provide 10 % of the global food production by 2027. Currently, only about 2 % of overall calorie intake for humans comes from the ocean.

The UN Sustainable Development Goals (SDG), specifically SDG 2 “*End hunger, achieve food security and improved nutrition and promote sustainable agriculture*”, address the urgent need to feed the world’s growing population. Land-based resources are increasingly over-stretched while nutritional and other needs of the world population are growing, meaning that it is crucial to reinforce our focus on ocean resources to achieve SDG 2. To avoid over-stretching ocean resources, it is of utmost importance that ocean resources are sustainably managed, in line with SDG 14 “*Conserve and sustainably use the oceans, seas and marine resources*”.

More sustainable food and feed from the ocean will require a shift in attention to the utilization of lower trophic levels, both in aquaculture and in harvesting, as described in *Food from the Oceans*. Much research is needed on new species for aquaculture, aquaculture and feed production technology, biotechnology, fishery policies, as well as ecosystem functioning and potential harvest of underutilized resources near the basis of the biological production. Moreover, research on life cycle analysis, reducing waste and waste handling, and institutional arrangements for blue governance, is critical. The next generation of ocean research for sustainability must deeply integrate the perspectives of ethics, humanities, social sciences, political sciences, circular economy and law, including but not limited to the perspectives of responsible research and innovation.

A strengthening of the European Research Council and Marie Skłodowska Curie Actions

We strongly support the further strengthening of fundamental research through the European Research Council (ERC) and Marie Skłodowska Curie Actions (MSCA) in the next framework programme.

The ERC has been an undisputed success in stimulating academic excellence and boosting fundamental research in Europe. The ERC’s fundamental principle - projects defined and driven by individual researchers on the sole criterion of excellence - has made it a global beacon of scientific excellence. The strong and direct European competition guarantees added value that complements

national funding instruments. The rapidly changing global knowledge system amplifies the need for such a European instrument. Hence, the ERC principle of 'excellence only' needs to be cultivated and given secure and long-term framework conditions. A doubling of the budget for the ERC is one such condition. This will help to counteract critically high rejection rates, which are a major threat to the continued success of the programme. The ERC's scientific autonomy is key to its success, which also makes it an example of good scientific practices and principle of openness and transparency.

We also strongly underline the key role of the MSCA in supporting the career development and training of European researchers. The MSCA is an indispensable tool for incorporating scientific excellence into higher education in Europe. Strengthening the funding of fundamental research will nourish the science basis that provides future frontier scientists with the skills and competences that Europe needs. Integrating fundamental research into teaching at European universities will also improve the quality and relevance of higher education and boost students' skills and creativity. Through the candidates that graduate from European universities, the ERC and MSCA will have strong and long-term societal and scientific impact beyond the life span of the next framework programme.

Open Science as a cornerstone

We recommend that open science be a cornerstone of the next framework programme. Following the recommendations of the Lamy report, we believe that the programme will benefit largely from an integrated open science policy, increasing the circulation of knowledge, sparking innovation and stimulating collaboration globally. We would like to see the implementation of open science in the research and evaluation system of the programme, with obligations on open access and open data included in all funding programmes.

Further, we support the idea of a European university label for institutions that actively and successfully promote open science, open innovation and openness to the world. Institutions acquiring the label must document open science skills for project leaders, offer training programs in open science, implement the DORA-principles, support open innovation through digital solutions and promote open science throughout the entire research cycle. These principles should also be fully adapted and implemented in the evaluation processes. The involvement of citizens in projects and stimulating public engagement should be an embedded part of research projects.

We further support that collaborative research and innovation projects include training activities for the next generation of researchers and innovators, and that applications for funding must document open science skills for project leaders and include training activities in open science for project members. To maximise the benefits of open science, the research project needs to be carried out in accordance with best practice for open data management (FAIR data) and open dissemination of research documents.

We strongly support the evolution towards a system that encourages the sharing of knowledge as early as possible to accelerate scientific developments and the valorisation of scientific knowledge. This includes publication of data management plans as well as preprint publishing of results and publishing of research data. The principles stated in the DORA declaration and Leiden Manifesto on Open Metrics are a prerequisite for the real integration of open science. We believe that these principles need to be fully adapted and implemented in the FP9 evaluation processes.

A Global Challenge on Social Science and Humanities (SSH) addressing Europe's social dimension

We support the inclusion of a dedicated Global Challenge on SSH in the next framework programme, as well as the inclusion of SSH as a cross-cutting issue in other parts of the programme. Only in this way will the framework programme truly contribute to solving the challenges Europe is facing.

We would also like to propose that the importance of SSH is reflected at the level of evaluation. Currently, under the SSH flagged topics approximately 20% of funded projects fail to integrate contributions from the SSH. This problem can be linked to the insufficient involvement of SSH experts in the evaluation process. We therefore suggest that SSH experts are included as evaluators for all relevant project proposals.

Both the Lamy report and the Mazzucato report support public engagement in the next framework programme. We would like to underline the importance of democratic engagement of citizens in European institutions and commitment to its values. Europe is currently going through social changes in terms of demography, migration, lack of trust, digitalization, globalization and challenges to the European political order(s). The SSH are needed to comprehend the social forces that are shaping society. We call for a more ambitious research investment in shaping a democratic, dynamic and inclusive Europe.

As it is stated in the Joint Communication to the European Parliament and the Council *Towards an EU strategy for international cultural relations*, Europe needs a strategy to put 'cultural cooperation at the centre of the EU's diplomatic relations with countries around the world'. Intercultural dialogue, freedom of expression, mutual understanding and respect for fundamental values are indispensable for social, democratic and economic development, security, fighting radicalisation and building trust. The next framework programme should emphasise research on culture, and its role in a changing, secure and inclusive European society.

An integrated European Innovation Council (EIC) supporting breakthrough innovation

We are looking forward with interest and expectation to the development of the EIC. We would like to see the instruments under the EIC to be closely integrated with the other parts of the framework programme, and more so than is the case for Horizon 2020.

We expect the EIC to be an efficient mechanism for the creation of breakthrough innovation and cross-sectoral transfer of innovation and technology that will also supply universities already strongly oriented towards entrepreneurship and innovation with stimulating and effective implementation tools.

For the EIC to have a strong impact on society, we believe that it should rely on an eco-systemic approach to innovation for new ventures to flourish. In this, we support and expect the EIC to build on the achievements of established EU funded innovation-oriented initiatives like the European Institute of Innovation and Technology Knowledge and Innovation Communities (EIT KICs).