Annex 1

Background Paper to the Consultation on potential strategy and priorities for research and innovation in the Horizon 2020 'Science with and for Society' Work Programme 2018-2020

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Horizon 2020 and policy background

Horizon 2020 is the biggest EU Research and Innovation programme ever with about €77 billion of funding available over 7 years (2014 to 2020)[1].

Delivering on the Commission's priorities of smart, sustainable and inclusive growth depends on research and innovation as key drivers of social and economic prosperity and of environmental sustainability. Linking EU research and innovation closer to the Commission overall policy objectives sets the framework to which Horizon 2020 research and innovation funding should contribute. This includes Commissioner Moedas' strategy on Open Innovation, Open Science and Open to the World. The general objective of Horizon 2020 is pursued through three priorities (dedicated to generating excellent science, creating industrial leadership, and tackling societal challenges) and two specific priorities ('Spreading Excellence and Widening Participation' and 'Science With And For Society').

Horizon 2020 Specific Programme

The Horizon 2020 Specific Programme[2] sets the scope and content for the implementation of the Framework Programme[3]. It defines the specific objectives of each part and the rules for implementation for the duration of the programme, while not defining the sequence of rollout of the actions and their framing. On this basis, the Commission services prepare multi-annual work programmes of which the first Horizon 2020 work programme for the period 2014-2015 was adopted on 10 December 2013 and the second Horizon 2020 work programme for the period 2016-2017 was adopted on 14 October 2015.

The Horizon 2020 work programme covers the large majority of the funding available. This bulk of Horizon 2020 comprises 18 thematic sections, which set out the funding opportunities under the different parts of the programme. Each part is self-contained, and describes the overall objectives, the respective calls, and the topics within each call.

Horizon 2020 - Part V - 'Science with and for Society'

The objective of the Part V of Horizon 2020 'Science with and for Society' is: "to build effective cooperation between science and society, to recruit new talent for science, and to pair scientific excellence with social awareness and responsibility". To that end, 'Science with and for Society' focusses on the following 8 specific activities:

a)   Make scientific and technological careers attractive to young students, and foster sustainable interaction between schools, research institutions, industry and civil society organisations;

b)   Promote gender equality, in particular by supporting structural changes in research institutions and in the content and design of research activities;

c)   Integrate society in science and innovation issues, policies and activities by incorporating the needs and values of citizens, thereby increasing the quality, relevance,

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[1] http://ec.europa.eu/programmes/horizon2020/en

[2] http://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/sp/h2020-sp_en.pdf

[3] http://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/fp/h2020-eu-establact_en.pdf

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social acceptability and sustainability of research and innovation outcomes in various fields of activity, from social innovation to areas such as biotechnology and nanotechnology, etc.

d)   Encourage citizens, including children and youth, to engage in science through formal and informal science education, and promote the diffusion of science-based activities, namely in science centres and through other appropriate channels;

e)   Develop the accessibility and the (re-)use of the results of publicly-funded research;

f)   Develop the governance for the advancement of responsible research and innovation by all stakeholders (researchers, public authorities, industry and civil society organisations), which is sensitive to the needs and demands of society, and promote an ethics framework for research and innovation;

g)   Take due and proportional precautions in research and innovation activities by anticipating and assessing potential environmental, health and safety impacts;

h)   Improve knowledge on science communication in order to enhance the quality and effectiveness of interactions between scientists, general media and the public.

'Science With And For Society' Work Programmes 2014-2015 and 2016-2017[4]

SWAFS WP 2014-2015 has been structured around 4 calls for:

1.   Making Science Education and Careers Attractive for Young People

2.   Promoting Gender Equality in Research and Innovation

3.   Integrating Society in Science and Innovation

4.   Developing Governance for the Advancement of Responsible Research and Innovation

23 projects have been selected for funding following the 2014 calls and 23 following the 2015 calls. The budgets for 2014 and 2015 were respectively MEURO 53.80 and MEURO 56.50.

SWAFS WP 2016-2017 is structured around a unique call composed of 4 main lines:

1.   Institutional Change to Support Responsible Research and Innovation in Research Performing and Funding Organisations

2.   Embedding Responsible Research and Innovation in Horizon 2020 Research & Innovation

3.   Strengthening the Science with and for Society Knowledge-Base

4.   Developing Inclusive, Anticipatory Governance for Research & Innovation

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[4] https://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society

It is expected to fund a comparable number of projects. The budgets for 2016 and 2017 are respectively MEURO 54.72 and MEURO 59.30.

'Science With And For Society' related projects and studies

More than 200 projects, studies and expert groups have been funded in FP6 Science and Society, FP7 Science in Society and Horizon 2020 Science With And For Society. Some of them of specific interest are underlined here:

Studies

Five studies were launched in 2015 in order to draw lessons from FP6, FP7 and explore specific aspects:

1.   'FP7 Ex-Post Evaluation' is meant to draw lessons from FP7 approach and funded projects.

2.   'Stocktaking and Meta-Analysis' is meant to dive into FP6 and FP7 projects to draw more specific lessons on the various approaches undertaken within the science and society dimensions.

3.   'Responsible Research and Innovation Benefits' is looking for the best way to measures the benefits from RRI through a basket of indicators.

4.   'Civil Society Organisations Simulation' is exploring the best way to engage CSOs in research and innovation through social network analysis.

5.   She Figures 2015 (expected to be published in March 2016)

Projects

All Science and Society, Science in Society and Science with and for Society projects can be found under CORDIS[5]. The following projects are just illustrative:

- RRI TOOLS is setting up and experimenting a training package in order to enhance the European capacity for implementing RRI strategies in research and innovation.
- ENGAGE2020 has been compiling a comprehensive spectrum of engagement methods for civil society.
- SEA FOR SOCIETY has developed a vision for a Blue Society thanks to a 42 month Mobilisation and Mutual Learning Action Plan involving 20 partners from research, civil society industry and policy making.
- INTEGER has developed tools for action for peer research and higher education institutions seeking to improve the position and progression of women researchers through the implementation of gender action plans.
- PARRISE centres around the theme of 'Socio-scientific Inquiry-based Learning' (SSIBL). In this project SSIBL combines Responsible Research and Innovation (RRI) with Citizenship Education (CE) and education of Socio-scientific Issues (SSI) and integrates these in Inquiry-Based Science Education (IBSE). The project will exchange and improve best practices and build a framework for the SIBBL approach.

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[5] http://cordis.europa.eu/projects/home_en.html

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Expert Groups

Several expert groups reports have proposed well thought ideas for progressing in the fields covered by SWAFS, e.g.:

- The 'Indicators for promoting and monitoring Responsible Research and Innovation' EG report[6] sees the development of indicators as a bottom-up process, guided by the collaboration between relevant stakeholders and considered eight key areas covering R&I processes, their outcomes and how such processes and outcomes are perceived;

- The 'Science Education for Responsible Citizenship' EG has produced a report[7] proposing to "enhance the educational process to better equip future researchers and other actors with the necessary knowledge, motivation and sense of societal responsibility to participate actively in the innovation process";

- Structural change in research institutions: enhancing excellence, gender equality and efficiency in research and innovation;

- Gendered Innovations: how gender analysis contributes to research;

- Gender equality policies in public research – based on a survey among members of the Helsinki Group on gender in research and innovation.

'Science With And For Society' related policy activities

Several policy activities have been developed in relation to Science With And For Society, the most recent being:

The Rome Declaration on Responsible Research and Innovation

Under the auspices of the Italian Presidency of the Council, a conference was held on 19-21 November 2014 on 'Science, Innovation and Society: achieving Responsible Research and Innovation'. At the end of the conference, the participants and organisers of the conference considering "their collective duty to further promote Responsible Research and Innovation in an integrated way" adopted the Rome Declaration on Responsible Research and Innovation[8]. The adoption of this declaration has been followed by a debate at the Council level on 4 December 2014[9] on the basis of a Presidency paper[10].

Council Conclusions on Gender in Research and Innovation[11]

The Council adopted on 1st December 2015 the "Conclusions on advancing Gender Equality in the European Research Area". It calls on Member States to address gender imbalances in

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[6] https://ec.europa.eu/research/swafs/pdf/pub_rri/rri_indicators_final_version.pdf

[7] https://ec.europa.eu/research/swafs/pdf/pub_science_education/KI-NA-26-893-EN-N.pdf

[8] https://ec.europa.eu/research/swafs/pdf/rome_declaration_RRI_final_21_November.pdf

[9] http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/146048.pdf

[10] http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2015451%202014%20INIT

[11] http://data.consilium.europa.eu/doc/document/ST-14846-2015-INIT/en/pdf

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research institutions and in decision making-bodies. To this end, Member States are invited to consider setting up targets for full professors as well as for decision-making bodies including scientific and administrative boards, recruitment and promotion committees as well as evaluation panels. The Council also highlight the importance of a better integration of the gender dimension in research content and the need to make institutional change a key element of national policy frameworks on gender equality.

Council Conclusion on Research Integrity[12]

The Council conclusions highlight the need to respect fundamental ethical principles and integrity in EU research and innovation activities. Among other things, the conclusions address the need to consider research integrity a prerequisite for achieving excellence in research, as well as the damaging socio-economic impact of research misconduct and ways to prevent it.

'Science With And For Society' Advisory Group 2014-2015

The SWAFS AG 2014-2015 concluded in its 2014 strategic paper that:

> *"the diagnosis on the relationship between science and society shows that there is a need and that the accumulated knowledge base is today sufficient for a 'scaling up' and a more general uptake of these issues among all stakeholders.*
>
> *At Community level (with the creation of 'Part V Science with and for society' and the cross-cutting issue 'Responsible Research and Innovation including Gender') the present context is rather favourable to the development and to the integration of the science and society issues across Horizon 2020."*

The SWAFS EAG suggested adopting strategic priority lines for the period 2016-17, for SWAFS Part V of Horizon 2020 as well as for the other parts of Horizon 2020:

For SWAFS/RRI strategy

Part V 'Science with and for Society' should:

1.   Reinforce SWAFS knowledge base;
2.   Promote Institutional changes;
3.   Network local, regional and national 'SWAFS' programmes.

For the other parts of Horizon 2020:

1.   Reconnect Europe to citizens by consulting citizens;
2.   Pose the right SWAFS/RRI diagnosis;
3.   Integrate SWAFS/RRI in all their activities;
4.   Promote targeted Institutional changes.

On this basis, the SWAFS AG proposed to focus on 8 topics in the SWAFS 2016-2017 work programme[13].

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[12] http://data.consilium.europa.eu/doc/document/ST-14853-2015-INIT/en/pdf

[13] Topics n° 4, 5, 6, 9, 11, 12, 13 and 14

Further references

e-book: 'RRI Opportunities in Horizon 2020'

The Network of National Contact Points (SiS-NET network) published on 12 January 2016 an e-Book on RRI Opportunities in Horizon 2020[14]. This e-book pinpoints RRI related opportunities in all other H2020 thematic areas. The e-book is meant to be a guideline of the different funding opportunities with relevance to Science with and for Society stakeholders in the different parts of the Work Programme 2016-2017. Thus it identifies topics with one or more SwafS dimension to guide SWAFS' stakeholders through the different H2020 Work Programmes.

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[14] Author: Denise Erpen, National Contact Point SwafS, https://www.euresearch.ch/fileadmin/redacteur/H2020/RRI_opportunities_in_Horizon_2020_151208.pdf