



International Cooperation in Horizon 2020

EU and European Neighbourhood Policy Countries

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In addition to the topics mentioned herein the European Commission flagged the following calling topics (listed on page 11 in the [Roadmap for EU-Southern Neighbourhood S&T cooperation](#)) as being particularly and thematically suitable for international STI cooperation with European Neighbourhood Policy countries.

Industrial Leadership

Horizon 2020 Pillar:	Industrial Leadership
Programme:	Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing
Call Title:	Industrial Sustainability
Call Identifier:	h2020-nmbp-st-ind-2018-2020
Topic Title:	Catalytic transformation of hydrocarbons (RIA)
Topic Identifier:	CE-NMBP-24-2018
Type of Action:	RIA Research and Innovation action
Deadline(s):	23-01-2018, 28-06-2018 (two-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/ce-nmbp-24-2018.html>

Specific Challenges: Advanced chemical energy conversion, storage and transportation will play a key role in enabling the EU to develop a low-carbon economy and provide more flexibility. As such, increasing the exploitation of natural gas, stranded resources and biogas is creating new opportunities for the utilisation of low cost light alkanes. High value can be added through improved catalytic transformations to C2-C4 olefins, C-C coupling and/or C1 chemistry together with significant impact towards the climate action targets agreed in COP21. The integration of catalysts and process design will be instrumental in creating process improvements and flexibility as well as tackle the global climate challenges.

Scope: Development of novel catalytic materials and routes for the valorisation of currently unexploited light hydrocarbons resources, bio- or stranded gas for chemical and energy production. Proposals should cover at least one of the following:

- Selective direct conversion of light hydrocarbon resources (C1-C4 alkanes) to mono-olefins and/or butadiene, with improved performance (on energy/carbon bases) and competitive costs compared to existing industrial processes;
- Conversion of non-transportable gas resources to liquid hydrocarbons (not passing through CO/H₂ formation);
- Novel energy-efficient and cost-competitive routes for the direct utilisation of light alkanes in the production of high-value chemicals;

- Assessment of environmental and safety issues and should involve industries in a leadership role as well as validate the feasibility of the proposed route in industrial relevant environments.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is particularly encouraged in particular with countries from the Broader EU Neighbourhood (e.g. **European Neighbourhood** Policy countries, Iran and Iraq) among others.

Activities should start at TRL 3 and achieve TRL 5 at the end of the project.

The Commission considers that proposals requesting a contribution from the EU between EUR 5 and 7 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected Impact: Novel catalysts and routes for the valorisation of currently unexploited light hydrocarbons resources will:

- Reduce the dependence from the current fossil fuel resources (>30% reduction of current use of fossil fuels for the equivalent production);
- Improve industrial competitiveness by novel processes with improved energy efficiency (OPEX). Reduction of greenhouse gases emissions and investment costs (CAPEX) by >20% with respect to current production route;
- Novel and scalable catalysts and catalytic processes which can handle feedstock variability.

Relevant indicators and metrics, with baseline values, should be clearly stated in the proposal.

Cross-cutting Priorities: International cooperation

Societal Challenges

Horizon 2020 Pillar:	Societal Challenges
Programme:	Food security, sustainable agriculture and forestry, marine, maritime and inland water research and the bioeconomy
Call Title:	Sustainable Food Security
Call Identifier:	h2020-sfs-2018-2020
Topic Title:	Genetic resources and pre-breeding communities
Topic Identifier:	SFS-28-2018-2019-2020
Type of Action:	CSA Coordination and support action
Deadline(s):	13-02-2018 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sfs-28-2018-2019-2020.html>

Specific Challenges: Genetic resources (GenRes) play a crucial role in agricultural activities and sustainable forest management in Europe. They hold the key to the adaptation of plants and animals to a changing and more variable climate, yet their diversity remains largely underused in current breeding, farming and forest management. Conservation efforts (in-situ, ex-situ) aim to capture, preserve and make available a substantial share of these global assets. However, access to resources is often limited by the quality of the material and the information provided by the various conservation sites. With increasing concerns over biodiversity loss and genetic erosion, there is a need to step up collaborative efforts to expand and improve the preservation as well as the use of plant and animal GenRes in farming and forestry.

Scope: A range of activities implemented by a wide range of stakeholders will seek to enhance management and use of GenRes and implement global commitments in this area. While the focus of activities is on Europe, international resources and activities shall be taken into account.

Proposals should address the following sub-topic:

A. [2018]: Joining forces for GenRes and biodiversity management (CSA)

Activities will provide a framework in which the existing mosaic of European, national/regional structures can join forces to develop and implement ambitious approaches and strategies for the management of crop, forest and animal GenRes. In addition to advancing individual roadmaps, inventories and information tools for crop, forest and animal GenRes, cooperation between the different communities shall foster

GenRes conservation within a wider (agro) biodiversity context. Particular care shall be taken to building and Widening capacities across Europe and **neighbouring countries** (including Mediterranean countries), exchanging best practices, harmonising standards as well as sharing resources and data.

The Commission considers that proposals requesting a contribution from the EU of up to EUR 3 million for sub-topic A and EUR 7 million for sub-topic B would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected Impact: Activities will enhance the status of genetic resources and increase effectiveness of conservation efforts, in particular in Europe.

In the short to medium term work will:

- result in the development and/or implementation of integrated strategies for conservation and use of crop, forest and animal GenRes as well as for wider biodiversity (sub-topic A);
- enhance user oriented services provided by networks involved in plant (agriculture and forestry), and animal GenRes management (sub-topic A);
- help establishing high quality, harmonised standards for the management and description of GenRes across Europe (and beyond) (sub-topics A and B);
- increase the quantity and quality of data in established information systems for crop, forest and animal GenRes (sub-topics A and B);
- promote innovative ways of sharing resources and services between genebanks/in-situ conservation sites in Europe and beyond (sub-topics A and B);

In the long term activities will allow tapping into the vast potential of GenRes more effectively in order to meet current and future needs of food security, the delivery of non-food products from primary production and support the different functions of forestry.

Delegation Exception Footnote: It is expected that this topic will continue in 2020

Cross-cutting Priorities: Open Science, International cooperation