



International Cooperation in Horizon 2020

EU and Africa

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Industrial Leadership

Horizon 2020 Pillar:	Industrial Leadership
Programme:	Leadership in enabling and industrial technologies (LEIT)
Call Title:	Information and Communication Technologies Call
Call Identifier:	H2020-ICT-2016-2017
Topic Title:	International partnership building in low and middle income countries
Topic Identifier:	ICT-39-2016-2017
Type of Action:	IA Innovation action
Deadline(s):	25-04-2017 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/ict-39-2016-2017.html>

Specific Challenge: To reinforce cooperation and strategic partnership with selected countries and regions in areas of mutual interest.

Targeted countries: Low and middle income countries^[1] in sub-Saharan **Africa** and ASEAN countries

Scope: Actions will address the requirements of end-user communities in developing countries. This may include technological improvements and adaptations as well as innovative service creation based on existing technologies.

Proposals could include specific technological targets such as co-design, adaptation, demonstration and validation (e.g. pilots) of ICT related research and innovation in relevant thematic areas addressed by Horizon 2020 including Content Technologies and Societal Challenges. Proposals are expected to address take up and scalability of the proposed solutions.

Activities under this topic should be led by a clearly defined user need/market opportunity for the technology being adapted; they should in particular include requirements of developing countries (at national and local level), and where possible, have the potential for wider impact by involving a number of countries from the same region. Proposals should feature an explicit element exploring technology adoption, through understanding and evaluating behavioural responses to the introduction of new technologies in different regional settings. Societal and gender issues will be taken into account. Proposals should be submitted by a partnership complementing each other with a particular focus on the participation of relevant developing country innovation stakeholders and end-user community representatives (e.g. relevant public, private, education and research, and societal sector organisations, Innovation Hubs or Living Labs).

The Commission considers that proposals requesting a contribution from the EU between EUR 1 and 2 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:

- Development of relevant technology responding to specific needs and conditions of the target country;
- Sustainable uptake of results within the targeted countries, beyond the project completion date;
- Reinforced international dimension of the ICT and Innovation aspects of Horizon 2020 and a higher level of international cooperation with low and middle income countries in ICT R&D and Innovation, focusing on areas that are beneficial to the target countries/region;
- Reinforcement of strategic partnerships with selected countries and regions in areas of mutual interest and added value in jointly addressing important issues.

Cross-cutting Priorities: Gender, Socio-economic science and humanities, International cooperation

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[1] See World Bank country classification.

Societal Challenges

Horizon 2020 Pillar:	Societal Challenges
Programme:	Climate action, environment, resource efficiency and raw materials
Call Title:	Greening the Economy
Call Identifier:	H2020-SC5-2016-2017
Topic Title:	Widening international cooperation activities on climate adaptation and mitigation
Topic Identifier:	SC5-31-2017
Type of Action:	CSA Coordination and support action
Deadline(s):	07-03-2017 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sc5-31-2017.html>

Specific Challenge: The aim of this CSA is to further open the JPI Climate to international cooperation partners, including in Latin America, **Africa** or Asia, and to encourage engagement of a wider group of EU Member States and thus contribute to creating a coherent European Research Area open to the world. In addition, this action should consolidate the alignment of the R&I agendas of national, European Commission and other key players related to climate issues. Providing integrated, qualified climate knowledge and decision support services across sectors internationally is the main target, well in line with Horizon 2020 and SFIC strategies for internationalization of European skills at a time when research and innovation requirements for the Sustainable Development Goals (2016-2030) have been launched at United Nations level.

Scope: Proposals should aim to create a framework and permanent dialogue to encourage, in a structured and strategic manner, the opening of the JPI Climate to international cooperation with key international climate research and innovation programmes, as well as funding and investment institutions. Proposals should also undertake activities to align with and support the 2030 Agenda for Sustainable Development, in particular on climate change resilience, adaptation, mitigation and disaster risk reduction. Flagship actions for possible joint funding with members of the JPI Water, JPI Urban Europe, JPI Oceans or key international cooperation partners and international programmes of strategic importance for the EU, such as the Belmont Forum, should also be identified and prepared for in advance.

This action should also organize and develop the knowledge base required to address climate challenges and EU policy priorities within a global perspective. This can be accomplished by providing open and integrated analysis of research results and recommendations to the United Nations Framework Convention on Climate Change to combat climate change and its impacts. It should aim to contribute to: strengthening resilience and adaptive capacity to climate related hazards; integrating climate change measures into national policies, strategies, and planning; improving education, awareness raising and human and institutional capacity on climate change mitigation, resource efficiency, adaptation, impact reduction, early warning and resilience to disasters; supporting

LICs/LMICs in the context of meaningful mitigation actions and transparency on implementation, operationalization and evaluation of the Green Climate Fund; promoting mechanisms for raising capacities for effective climate change related planning and management in LICs/LMICs, including focusing on women, youth, local and marginalized communities.

The Commission considers that proposals with a duration of four years requesting a contribution from the EU in the range of EUR 2 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: Projects are expected to contribute to:

- increasing the scale and ambition of research and innovation activities for climate adaptation and mitigation for a resilient and efficient Europe that will valorise their know-how on climate solutions at global level in the context of the post-2015 sustainable development agenda;
- making the JPI Climate, in close collaboration with the European Commission and others European initiatives involving Member States (such as Copernicus, JPI Water, JPI Oceans, JPI Urban Europe, GPC and SFIC), a privileged and attractive partner for global cooperation in climate research and innovation, notably in the context of the Global Framework for Climate Services, the Future Earth platform on global sustainability and the Belmont Forum;
- strengthening the role of the JPI Climate for underpinning knowledge and evidence for supporting the implementation of related EU policies and for fostering the EU's common position in the global climate-related negotiations under UNFCCC;
- implementing the Sustainable Development Goals (SDGs), in particular SDG 13 'Take urgent action to combat climate change and its impacts', as well as the conclusions of the COP21 Paris Agreement.

Cross-cutting Priorities: International cooperation, Gender

Horizon 2020 Pillar:	Societal Challenges
Programme:	Europe in a changing world - inclusive, innovative and reflective Societies
Call Title:	ENGAGING TOGETHER GLOBALLY
Call Identifier:	H2020-SC6-ENG-GLOBALLY-2016-2017
Topic Title:	Shifting global geopolitics and Europe's preparedness for managing risks, mitigation actions and fostering peace
Topic Identifier:	ENG-GLOBALLY-02-2017
Type of Action:	RIA Research and Innovation action
Deadline(s):	02-02-2017 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/eng-globally-02-2017.html>

Specific Challenge: Europe's strategic and geopolitical environment is evolving rapidly, will always be an area of change, and in a manner that increasingly raises concerns. In recent years, violent conflicts have agitated the planet, many of them located in Europe's immediate neighbouring regions. These developments take place at a time when global geopolitics is undergoing long-term transformations challenging the traditional predominance of the West, while policies of economic austerity oblige EU Member States to manage scarce resources more effectively. These trends seriously challenge the Union's capacity for guaranteeing its citizens' security - one of its principal *raison d'être* - while also jeopardizing its aspiration of promoting European values and interests abroad. In order to evaluate and promote its preparedness for playing its role as an effective security provider, to prevent escalation, to manage and understand risks and mitigation strategies for peace beyond its borders, the EU needs to understand the implications of recent global developments and assess them against its own capacities and willingness to make synergetic use of them.

Scope: The research to address this challenge should focus on one or two dimensions that have to be comprehensively addressed. The research may also cover other issues relevant for addressing the specific challenge.

1. Recent global geopolitical developments and their implications for the European Union
Research under this dimension should adopt a comprehensive understanding of security and explore uncertainty. Based on this, it should identify and investigate long-standing and novel - global and regional - external risks facing the EU and its Member States, in connection with ongoing initiatives and programmes for risk identification and early warning. Crises in its neighbourhood (in particular East Europe and the southern Mediterranean), such as the rise of radical Islamic groups exemplified by the expansion of the "Islamic State" in Syria and Iraq, but also conflicts and risks in other regions of the world such as in South Asia (e.g. Afghanistan) and Sub-Saharan **Africa** (e.g. Mali) should be examined. Research should identify the most pressing risks and areas of uncertainty

and unravel the causes, expressions and security-relevant consequences of such instable contexts.

It should examine possible inter-linkages between various geographically limited conflict situations as well as their embeddedness into regional and overarching global geopolitical developments. This necessitates a sound understanding of the political, socioeconomic, cultural and military contexts in which patterns of insecurity and uncertainty emerge, also from a historical and philosophical perspective. An inventory of contemporary risks should form the basis for identifying their implications for Europe and its security needs. Research should examine how potential risks, mitigation strategies and opportunities are perceived, and how they can, do and even should become part of novel approaches and policies in the EU, its Member States and its partners in geostrategic matters. It should investigate how the EU, its Member States and other relevant partners can act to better anticipate, prevent and respond to the identified risks, mitigation strategies and opportunities, and develop scenarios on possible EU activities using a range of policy actions and instruments, including diplomatic, economic, civilian and, if needed, military means.

2. European Union's preparedness for managing risks and opportunities, fostering peace in a crisis-ridden context

Research under this dimension should comprehensively examine the European Union's and its Member States' willingness, capacities, instruments and channels for anticipating and responding to a large array of external threats. It should contrast the EU's legal basis for external security policies, including risk analysis and management, conflict prevention and resolution, post-conflict management and peace-building, to the actual practice, both prior to and after the onset of the economic and financial crises. Analyses should draw on comparative case studies from the EU's handling of various conflicts and crises (including humanitarian ones) across the globe. Research should develop criteria for effective security cooperation in the EU, distinguishing between objectives and instruments, whether military or non-military, and contribute to the ongoing development of early-warning systems to identify emerging risks. It should also identify the political, socio-economic, technological and cultural conditions that enable or hinder the emergence of effective security cooperation in the EU. Based on this evidence, research should develop information sharing and decision support systems that facilitate cooperation, identify gaps and align the interests of diverse actors towards effective EU security policies, especially in the framework of its Common Foreign and Security Policy (CFSP). It should also provide insights on whether and how the EU can work synergistically together with individual third countries or international institutions like NATO.

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

Expected Impact: Research under this topic will lead to an up-to-date appraisal of global and regional risks and, as such, of Europe's evolving security agenda in the light of recent geopolitical developments affecting its neighbouring regions (in particular East Europe and the southern Mediterranean), and the entire globe. It will generate critical and forward-looking evidence of Europe's preparedness for effectively facing these threats, guaranteeing its citizens' security while managing risks and fostering peace abroad. Based on this evidence, it will provide recommendations on how to improve the EU's effectiveness as a domestic and global security provider.

Cross-cutting Priorities: International cooperation, Socio-economic science and humanities

Horizon 2020 Pillar:	Societal Challenges
Programme:	Health, demographic change and wellbeing
Call Title:	H2020-JTI-IMI2-2015-08-single-stage
Call Identifier:	H2020-JTI-IMI2-2015-08-SINGLE-STAGE
Topic Title:	Ebola and other filoviral haemorrhagic fevers (Ebola+) programme: future outbreaks
Topic Identifier:	IMI2-2015-08
Type of Action:	IMI2-RIA Research and Innovation action
Deadline(s):	16-03-2017, 14-09-2017, 15-03-2018 (multiple cut-off)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/imi2-2015-08.html>

Specific Challenge: The recent outbreak of Ebola virus disease (EVD) in West **Africa** underscores the vulnerability of populations worldwide to pathogens such as filoviral viruses. Currently, there are no vaccines or antiviral drugs approved for prevention or treatment of filoviral infections in humans.

Scope: This Call provides an opportunity to capture emerging scientific advances and to progress those rapidly into health care interventions. Proposals may address aspects of pre-clinical development and/or Phase 1, 2, and 3 clinical developments of vaccines (in particular multivalent), treatments and diagnosis of Ebola or other filovirus infections. Manufacturing strategies, vaccine stability during transport and storage, and/or deployment of vaccines and treatments are also in scope. Proposals for the development of adaptable platforms, which in addition to filoviruses can address multiple other priority pathogens, are also eligible.

Expected Impact: Proposals must contribute to the objectives of IMI2 and in particular to the goals of the Ebola+ programme which is a programmatic approach addressing different challenges across the entire innovation cycle and aims at leveraging input and multidisciplinary expertise across stakeholders.

Specifically, proposals must increase the readiness to respond to future outbreaks of Ebola and other filoviral haemorrhagic fevers.

An important expected impact of projects funded under this Call must be to maximise the benefit to the people in the countries at risk from future outbreaks of filoviral haemorrhagic fevers. In order to achieve this, successful applicant consortia should have the capability to accelerate their project results into health care interventions.

Furthermore, proposals are expected to take advantage of and exploit support from different stakeholders with the necessary expertise, including the mobilization of funds through the inclusion of contributing partners under the IMI scheme of public-private consortia. Such contributing partners might include EFPIA companies or organizations associated to EFPIA, and Associated Partners to IMI. The budgeted cost for the participation of such partners is expected to account for at least 40% of the total project cost.

Projects are expected to have a significant impact on global health, both at the individual and the public health level by leading to results that have a direct impact for persons at risk of exposure to filoviral diseases or for patients suffering from filoviral disease.

Societal Challenges, Industrial Leadership

Horizon 2020 Pillar:	Societal Challenges, Industrial Leadership
Programme:	Food security, sustainable agriculture and forestry, marine and maritime and inland water research, Climate action, environment, resource efficiency and raw materials, Leadership in enabling and industrial technologies (LEIT)
Call Title:	Sustainable Food Security – Resilient and resource-efficient value chains
Call Identifier:	H2020-SFS-2016-2017
Topic Title:	Research and approaches for emerging diseases and pests in plants and terrestrial livestock
Topic Identifier:	SFS-10-2017
Type of Action:	RIA Research and Innovation action
Deadline(s):	14-02-2017, 13-09-2017 (two-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sfs-10-2017.html>

Specific Challenge: Trade and the movement of goods and people have facilitated the transfer and spread of plant and animal diseases and pests, the prevalence of which is expected to increase further as a result of intensification, changes in agricultural practices and climatic variations. Emerging diseases and pests in plants or emerging infectious diseases in terrestrial animals can have a substantial impact on agricultural and forest productivity, trade and public health. **African Swine Fever** is such a highly infectious animal disease emerging in Europe, with an epidemiological situation raising serious concerns and for which a vaccine would be very useful to improve its control. Appropriate and rapid responses by decision-makers need to be informed by scientific evidence, addressing as far as possible all components of management in particular with regard to epidemiology (e.g. source, transmissibility, susceptible species), host-pathogen interactions, diagnostics, means of prevention and control, as well as risk management.

Scope: Proposals will contribute to understanding the drivers of emergence and to finding adequate responses to emerging pests and diseases in plants (work on *Xylella fastidiosa* is excluded under this call topic) and emerging infectious diseases in terrestrial animals. They will target one or more of the pests and diseases threatening EU agriculture/forestry (regulated or non-regulated, invasive or native) and causing significant economic losses, such as **African Swine Fever**. The choice of target species should consider the potential threat in terms of development and spread as well as potential impact on agricultural production, public health, or trade. Proposals should increase knowledge on the biology, development and spread of pests/diseases. They should improve methods and strategies for risk assessment, prevention and containment and enlarge the range of tools for integrated and sustainable pest/disease management. International cooperation with countries affected or threatened by the same pest(s)/disease(s) is encouraged. Proposals should fall under the concept of the

'multi-actor approach'[1] and be based on the active participation of stakeholders from research, plant/animal health authorities and the farming and business sectors. Partners from non-EU regions particularly affected by the targeted pests and disease(s) should also be involved. As regards livestock, proposals should contribute as appropriate to the objectives of the STAR-IDAZ[2] international research consortium (see SFS-12-2016). They should involve cooperation as appropriate with relevant initiatives, e.g. in the context of such as EUPHRESCO and STAR-IDAZ, and other funded projects in this field, e.g. those selected under SFS-14-2016.

Individual proposals should tackle either plant pests/diseases or animal infectious diseases. Funding will allow for support for up to two projects on plant pests/diseases and one animal diseases.

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

Expected Impact: Knowledge and solutions generated by this action should contribute to:

- understanding drivers for pest/disease emergence
- improved management of pests/diseases by the farming and forestry sectors;
- development of environmentally sound tools for the prevention, detection and diagnosis, of pests/diseases;
- reduction of economic losses by the farming and forestry sectors;
- improved food quality and food safety; and
- implementation of EU plant and animal health policies.

In the longer term, project outputs will help the agricultural sector to remain productive and contribute to food security.

Cross-cutting Priorities: International cooperation

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[1] See definition of the 'multi-actor approach' in the introduction to this Work Programme part.

[2] <http://www.star-idaz.net>

Horizon 2020 Pillar:	Societal Challenges, Industrial Leadership
Programme:	Food security, sustainable agriculture and forestry, marine and maritime and inland water research, Climate action, environment, resource efficiency and raw materials, Leadership in enabling and industrial technologies (LEIT)
Call Title:	Sustainable Food Security – Resilient and resource-efficient value chains
Call Identifier:	H2020-SFS-2016-2017
Topic Title:	Earth observation services for the monitoring of agricultural production in Africa
Topic Identifier:	SFS-43-2017
Type of Action:	RIA Research and Innovation action
Deadline(s):	14-02-2017 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sfs-43-2017.html>

Specific Challenge: The Fourth EU-**Africa** Summit of 2-3 April 2014 agreed on a roadmap for 2014-2017[1] including actions specifically targeted at delivering Earth observation services in priority domains for **Africa** such as food security. This topic aims to contribute to this roadmap by providing food supply projection and agricultural risk assessment for **Africa**. These kinds of projection remain very challenging tasks, requiring a lot of information on environmental and weather conditions, climate change, crops and livestock. This information is usually derived from both remote and in-situ Earth observation systems. The challenge is therefore to make agricultural production in **Africa** more predictable by using Earth observation assets, including – but not limited to – those made available through the Global Earth Observation System of Systems (GEOSS) and Copernicus programmes.

Scope: The action should lead to substantially increasing the use of Earth observing capabilities and supporting application systems to produce timely, objective, reliable, and transparent crop and livestock production projection at the national and regional level for the **African** continent. It should support the GEOGLAM[2] and AfriGEOSS[3] initiatives and relevant aspects of the EU's development policy. Moreover, it should design and develop methods to assess/monitor agricultural production in **Africa**, taking into account its main drivers and the longer term impacts of its dynamics. Building on the outcomes of existing EU projects stimulating innovation for global agricultural monitoring – such as SIGMA[4] –, the research and innovation activities should cover as a minimum all the following domains: crop and livestock identification and crop and livestock area estimation, crop and livestock condition and stress, yield prediction and forecasting, crop cover mapping, and the impact of extreme events on food production.

The action should foster participatory approaches to collecting relevant information and data, taking advantage of the growing number of mobile communication devices owned by **African**

citizens. The participatory approaches should also take into account, and build on, widespread women's engagement in agricultural production and food supply. There should be an emphasis on 'consensus of evidence approaches', integrating data from multiple sources including Earth observations, crop models, weather forecast, climate predictions and projections, surveys and ground observations to reach evidence-based assessments using repeatable and scientifically sound methods.

Large proof-of-concept actions, showing the capacity to deliver food supply prediction and agriculture risk assessment beyond the current state-of-the art at regional/pan-**African** level should be performed by the action. Proposals should contribute to supporting the implementation of an EU-**Africa** partnership on Food and Nutrition Security and Sustainable Agriculture and should include partners clearly representing the diversity of **African** countries.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged, in particular with **African** countries. The action should establish cooperation with institutions/networks engaged in the development of climate services in **Africa** and with agencies which have developed mapping and assessment tools used in humanitarian decision making.

The Commission considers that proposals requesting a contribution from the EU of up to EUR 10 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts.

Expected Impact: Proposals are expected to:

- move projection of food supply and agricultural risk assessment at the level of the **African** continent beyond the current capability;
- improve decision making capacity regarding food supply and management in **Africa**;
- contribute to independent and neutral evaluation of agricultural production in **Africa**;
- strengthen collaboration between EU and **African** organisations in the domain of food projection;
- increased involvement of citizens and stakeholders in food production and food supply chain management in **Africa**, taking into account the gender dimension and women's role in food production and supply;
- provide a strong Earth observation building blocks for an EU-**Africa** Research and Innovation Partnership focusing on food and nutrition security and sustainable agriculture;
- improve participation of **African** organisations in GEO and Copernicus (GMES & **Africa** initiative);
- foster cooperation with initiatives developing the Global Framework for Climate Services (GFCS)[5] in **African** countries;
- contribute to implementing the Sustainable Development Goals (SDGs), in particular SDG 2 'End hunger, achieve food security and improved nutrition and promote sustainable agriculture' and SDG 13 'Take urgent action to combat climate change and its impacts'.

Cross-cutting Priorities: International cooperation, Gender

[1] <http://www.africa-eu-partnership.org/sites/default/files/documents>

[2] <http://www.geoglam-crop-monitor.org>

[3] <http://www.earthobservations.org/afrigeoss.php>

[4] <http://www.geoglam-sigma.info>

[5] <http://www.gfcs-climate.org>