



International Cooperation in Horizon 2020

EU and New Zealand

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Societal Challenges

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:	The Asia- Pacific as a strategic region for Europe
Topic Identifier:	ENG-GLOBALLY-06-2017
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-06-2017.html>

Specific Challenge: The Asia-**Pacific** is a large and diverse region, encompassing **Industrialised Countries**, Emerging Economies and developing countries. Perhaps due to this diversity, and save a few specific cases, the European Union has lacked a strategic approach towards the region, despite strong economic interests and heightened security concerns in the area. Several EU Member States have adopted an active bilateral approach towards key partners, but the European Union has mostly failed to speak with one voice in relevant fora. Nowadays the multiple and complex challenges shared by the two regions, ranging from climate change and sustainable development to conventional and non-conventional security challenges, are opening up new opportunities for the EU to become more involved in the region beyond economic cooperation although differences remain in areas like human rights or democratic governance. In order to re-think its role and strategy for the Asia-**Pacific**, and to fully tap the potential for action at European level, the European Union needs to be supported by sound research showing the concrete implications of further engaging with and in the region in a number of sectorial and geographic areas.

Scope: The research to address this challenge should in particular focus on the following key dimensions. It is expected to either comprehensively address one of these dimensions or to combine them. The research may also cover other issues relevant for addressing the specific challenge.

1. Regional integration in South-East Asia and its consequences for Europe

South-East Asia has seen, since 1967, the most ambitious project of regional integration outside of Europe, pursued through the Association of Southeast Asian Nations (ASEAN). It has followed a different integration path to Europe, based on dialogue and non-interference rather than convergence and law. The region has an immense social, cultural and economic potential, but it still faces the challenge of developing a regional identity with both an internal dimension (how to nourish a sense of belonging) and an external dimension (how to engage with foreign powers, such as China, India, the United States, Japan and the EU). The process of nation-building in the ten ASEAN countries and other non-ASEAN countries is incomplete or nascent. It is also confronted with widespread

poverty, disruptive migration flows, inter-ethnic conflicts and even territorial disputes. For the EU to engage effectively in South-East Asia and manage the variety of countries and cultures present in the region, it is necessary to understand what ‘region’ means to the peoples of these countries within and beyond the ASEAN context. Research is thus necessary on the mobility of people, knowledge, ideologies, cultures, goods and capital within the region and their influence on the emergence of a South-East Asian identity which would help the EU and its Member States to forge coherent, adapted and culturally relevant foreign policies with all countries in the region.

To that effect, research should also underpin the implementation of the Joint Communication on EU-ASEAN relations in the different sectors and in particular in the field of sectorial cooperation.^[1]

2. Governance in and of the **Pacific** as a challenge for Europe

One of the major strategic challenges in the Asia-**Pacific** region relates to the governance of the **Pacific** itself (including Overseas Countries and Territories). The **Pacific** Islands region represents a unique diversity of nation-state formations and regional and intergovernmental mechanisms, which is experiencing major challenges regarding the protection of its exceptional natural environment, threatened in particular by climate change. The small islands developing states (SIDS) of the **Pacific** therefore have a central role in the contestation over, competition for, and conservation of some of the world’s key resources, far surpassing their modest size in terms of land mass and population. As the second largest donor of development assistance to the region, the EU’s interests and activities in the **Pacific** are highly significant and hold important potential for the future. However, the region’s new geopolitical currency is a willingness to seriously engage with emerging definitions of an equal, two-way partnership relation in **Pacific** terms that expands beyond the monetary dimension of cooperation. The EU is thus at a cross-road in its engagement with the **Pacific**. Research should examine the emerging governance structures in the region, in terms of sovereignty, state-making, policy autonomy and aid dependency, by paying close attention to issues such as trade and transport, fisheries management, climate change, biodiversity, social inclusion, democracy, blue/green growth and and political CFSP aspects. Research should also comparatively analyse the role and impact of external actors in the region, prominently focussing on the European Union and its Member States but also take account of the influence of, and the interplay with global (China, USA) and regional (Australia, **New Zealand**) powers in the region. Building on existing research, lessons should be drawn from the **Pacific** experience for devising new approaches, as well as on how Europe can effectively respond to the strategic challenge posed by the **Pacific**.

The participation of partners from third countries and regions in the targeted geographic areas in proposals submitted to this topic is strongly encouraged.

The Commission considers that proposals requesting a contribution from the EU in the order of EUR 2.5 million for each dimension 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 is expected to provide a comprehensive overview of the strategic challenges that Europe faces in the various zones of the **Asia-Pacific** region, and on a range of relevant subjects. Based on this, it will inform different foreign policy actors, processes and initiatives at EU and Member State-level either with a sectorial or geographic focus, especially by providing essential insights on the legal, cultural and socio-economic aspects surrounding their implementation.

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

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[1] JOIN(2015)22 Joint Communication to the European Parliament and the Council - The EU and ASEAN: a partnership with a strategic purpose.

Horizon 2020 Pillar:	Societal Challenges
Programme:	Health, demographic change and wellbeing
Call Title:	Personalised Medicine
Call Identifier:	H2020-SC1-2016-2017
Topic Title:	Global Alliance for Chronic Diseases (GACD) prevention and management of mental disorders
Topic Identifier:	SC1-HCO-07-2017
Type of Action:	RIA Research and Innovation action
Deadline(s):	11-04-2017 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sc1-hco-07-2017.html>

Specific Challenge: The Global Alliance for Chronic Diseases^[1] (GACD) call will focus on implementation research proposals on child, adolescent and adult age onset mental disorders^[2] including, but not limited to, dementia, depression, schizophrenia, bipolar disorders, alcohol- and drug-use disorders, etc., in low- and middle-income countries (LMIC) and/or in vulnerable populations^[3] in **High Income Countries** (HIC).

Mental health is an integral part of health as underlined in the World Health Organisation (WHO) definition of health as a 'state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.

Mental disorders represent an ever-increasing burden, to all ages of the population, challenging mental health and health systems. Depression affects 350 million people in all communities across the world and represents the third leading contributor to the global disease burden^[4]. Dementia affects 47.5 million people worldwide with 58% of people living with dementia in low- and middle-income countries^[5]. Global costs associated with mental disorders were estimated to € 2.2 trillion in 2010 and are expected to rise to € 5.3 trillion by 2030^[6].

Mental disorders place a heavy burden on individuals, families, communities and societies. They also increase the risk of co-morbidities and social exclusion. There are obstacles to achieving effective prevention, early identification and management of mental disorders and to ensuring patients' adherence to therapies. Effective management approaches exist but their implementation in LMIC and vulnerable groups in HIC is hampered by socioeconomic and contextual factors: gender; the stigma associated with mental disorders at work, in health care and communities; the role of traditional medicine in dealing with mental health including trauma; and barriers to accessing care. There is a need to strengthen the evidence base for the contextual scalability of interventions of promising or proven effectiveness for the promotion of mental health and the early identification and management of patients, taking into account the needs of different population groups across the life course.

Scope: Proposals must focus on mental disorders as defined by the WHO (see above), and must focus on implementation research in LMIC, and/or in vulnerable populations in HIC.

Proposals must build on interventions with promising or proven effectiveness (including cost-effectiveness) for the respective population groups under defined contextual circumstances. Gender-responsive interventions should be addressed, wherever relevant.

The aim should be to adapt and upscale the implementation of these intervention(s) in accessible, affordable and equitable ways in order to improve the prevention and management of mental disorders in the community in medical health care, psychosocial, and public health and other settings and fields. Interventions should meet conditions and requirements of the local health and social system context and address any other contextual factors identified as possible barriers. When economic factors prevent access to effective, low-cost appropriate medication and other management and treatment modalities, proactive policy and strategies should be encouraged to ensure the availability of such medication or other management/treatment modality or means should be found to overcome these barriers.

Each proposal should:

- Focus on implementation research addressing prevention, and/or early identification and/or management strategies derived from existing knowledge about effective interventions.
- Include a strategy to test the proposed model of intervention and to address the socioeconomic and contextual factors of relevance to the targeted region and community.
- Lead to better understanding of key barriers and facilitators at local, national and international level that affect the prevention and management of mental disorders.
- Include health economics assessments as an integral part of the proposed research, including considerations of scalability and equity.
- Propose a pathway to embed the intervention into policy and practice addressing:
 - A strategy to include policy makers and local authorities (possibly by being part of the consortium), as well as other relevant stakeholders such as community groups, patient groups, formal and informal carers and any other group, where ever relevant from the beginning of the project, which will contribute to the sustainability of the intervention, after the end of project.
 - Relevance of project outcomes/evidence for scaling up the intervention at local, national and international level and then scaled-up appropriateness with respect to the local social, cultural and economic context.
 - Aspects of stigmatisation and potential equity gaps e.g. due to gender or age.

Proposal must address one of or combinations of the following items:

- Structural interventions or evidence based policies designed to improve mental health outcomes;
- Early case detection and other secondary or tertiary prevention strategies as well as modalities of treatment, care and access to care which are amenable to scale-up. Prevention, early identification and treatment may include validated pharmacological, psychotherapeutic, psychosocial support and other approaches of relevance to mental disorders such as accessibility to and enhancing compliance with the intervention, also considering cultural context. Wherever relevant, comorbidities and their impacts on prevention and treatment strategies should be taken into account;
- Ways to empower people with mental health problems as well as professional and informal care-givers like families according to the context are also relevant;
- Exploring the scale-up of family/community engagement in patient treatment and care, without pre-empting their living.

The Commission considers that proposals requesting a contribution from the EU of between EUR 1 and 3 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: (one of or combinations of)

- Advance prevention strategies and implementation of mental health interventions, alleviating global burden of mental disorders;
- Establish the contextual effectiveness of mental health intervention(s), including at health systems level;
- Improve tailored prevention and treatment; Develop affordable management and treatment modalities for mental disorders and expand access to care;
- Inform health service providers, policy and decision makers on effective scaling up of mental health interventions at local, national and regional levels, including affordability aspects for users and health providers;
- Reduce health inequalities and inequities, including due consideration of gender and age issues where relevant, in the prevention, treatment and care of mental disorders at both local and global levels;
- Maximise the use of existing relevant programmes and platforms (e.g. research, data, and delivery platforms);
- Contribute to the United Nations' Sustainable Development Goals 3^[7], the Global Action Against Dementia and the First World Health Organisation (WHO) Ministerial Conference on Dementia^[8], the WHO Mental Health Action Plan 2013-2020^[9], and/or the 2015 European Council Conclusions on dementia^[10].

The GACD aims to coordinate research on chronic diseases at global level in order to enhance knowledge exchange across individual projects, and to better understand the impact of socio-economic, cultural, geopolitical and policy on research findings, so as to appropriately adapt health interventions to different geographical, economic and cultural settings. Research under GACD involves regular exchange of research findings and information across participating projects by means of cross-project working groups and annual joint meetings. Wherever feasible, projects should harmonise and standardise their data collection and exchange data.

Applicants must budget for annual costs of having two team members participate in one annual face-to-face meeting of the Global Research Network (location to vary annually). Attendance at this meeting is mandatory for 2 team members, with at least one participant from the LMIC team where relevant. Teams are strongly encouraged to include one junior team member in each annual meeting.

Cross-cutting Priorities: International cooperation, Gender

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[1] <http://www.gacd.org>

[2] Mental and behavioural disorders (F00-F99) of WHO's International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10): <http://apps.who.int/classifications/icd10/browse/2016/en#/V>

[3] Applicants must demonstrate that the proposed population under investigation in HIC is considered as vulnerable.

[4] WHO Fact sheet nr 369, 2012

[5] WHO Fact sheet nr 362, 2015

- [6] Bloom, D.E., Cafiero, E.T., Jané-Llopis, E., Abrahams-Gessel, S., Bloom, L.R., Fathima, S., Feigl, A.B., Gaziano, T., Mowafi, M., Pandya, A., Prettner, K., Rosenberg, L., Seligman, B., Stein, A.Z., & Weinstein, C. (2011). The Global Economic Burden of Noncommunicable Diseases. Geneva: World Economic Forum.
- [7] <http://www.who.int/topics/sustainable-development-goals/targets/en>
- [8] <http://www.who.int/mediacentre/events/meetings/2015/global-action-against-dementia/en>
- [9] WHO Mental Health Action Plan 2013-2020, in particular Objective 2, global target 2 or Objective 3, global target 3: http://www.who.int/mental_health/action_plan_2013/en;
- [10] 2015 European Council Conclusions on dementia: 'Living with dementia: improving care policies and practices': http://www.consilium.europa.eu/en/meetings/epsco/2015/12/st14968_en15_pdf

Horizon 2020 Pillar:	Societal Challenges
Programme:	Smart, green and integrated transport
Call Title:	2016-2017 Mobility for Growth
Call Identifier:	H2020-MG-2016-2017
Topic Title:	Protection of all road users in crashes
Topic Identifier:	MG-3.2-2017
Type of Action:	RIA Research and Innovation action
Deadline(s):	26-01-2017, 19-10-2017 (two-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/mg-3.2-2017.html>

Specific Challenge: The continued introduction of active safety systems has the potential to reduce accidents. Nevertheless, the risk of collision and particular crash situations will still remain. An approach will be needed that will ensure improved crash safety in those circumstances. A number of societal trends add to this challenge such as the ageing population, an increase in the number of powered and non-powered two-wheelers and the introduction of green, light, sub-compact cars.

An important step forward will be to develop fully integrated safety systems and deploy them so that they provide better protection for all road users. Emerging new vehicle types and the possible use of Cooperative Intelligent Transport Systems (C-ITS) would need to be considered. The application of advanced safety features and the development of personal safety equipment can also be seen as ways to reduce fatalities and injuries to pedestrians, cyclists and riders of Powered Two Wheelers (PTWs). In addition, simulation tools (including new virtual human body models) will need to be developed to assess new safety systems and determine their effectiveness and potential impact.

With respect to competitiveness, user protection has been an area where European industry has exhibited technology leadership, but this is now being increasingly challenged worldwide.

Scope: Proposals should focus on one or several of the following aspects:

- Vehicle based systems such as: solutions for improved crash compatibility; optimisation of restraint systems by including pre-crash information; and methods and requirements to assess safety performance in traffic of extremely low-mass vehicles.
- Personal protection such as: development and testing of focused personal safety equipment for various road user categories, to warn them adequately and/or protect them in the most safety critical situations; and integrated assessment methods for the overall safety of road users and solutions that enhance their protection.
- Crash simulation such as: computationally efficient and robust crash simulation tools; implementation of virtual testing; and development of virtual human body models of road users and situations not currently available.

Proposed actions should focus on fully integrated safety systems.

Consideration should be taken of gender aspects such as body structure and stature and other demographic factors such as the disabled (persons of reduced mobility), ageing, obesity, etc.

Participation of SMEs with proven experience in these areas is encouraged.

Links with Member State initiatives in this area are encouraged.

In line with the strategy for EU international cooperation in research and innovation^[1], international cooperation is encouraged, in particular with **Industrialised Countries** (i.e. US, Japan, Canada, Australia) and Emerging Economies (primarily China, India, Brazil). Proposals should foresee twinning with entities participating in projects funded by US DOT^[2] to exchange knowledge and experience and exploit synergies.

The Commission considers that proposals requesting a contribution from the EU of between EUR 4 and 9 million each would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected Impact: By providing an integrated approach to safety systems, actions are expected to make a direct contribution to the reduction of fatalities and severity of injuries, as well as the number of injured persons. They will deliver measures that will make the 'triangle' of European road users, vehicles and infrastructure safer. In this way, actions are expected to contribute to important savings in the health system linked with the reduction of accidents and injuries.

Proposers are expected to demonstrate how the project results will have a significant impact on road safety casualties and injuries and how they will make an effective contribution to the standardisation of products and testing techniques.

A credible strategy is expected to demonstrate the future full scale manufacturing of critical products developed in the project in Europe.

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

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[1] COM(2012)497

[2] United States Department of Transportation (<http://www.dot.gov>).

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:	Supporting international cooperation activities on agriculture soil contribution to climate change mitigation and adaptation
Topic Identifier:	SFS-50-2017
Type of Action:	CSA Coordination and support action
Deadline(s):	14-02-2017 (single-stage)

Participant Portal Weblink:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sfs-50-2017.html>

Specific Challenge: Climate change is among one of the threats for the future capacity of agriculture to cope with increased demands on food production. This challenge can be addressed, among other options, by changes in land and soil management at the farm level. There is a strong direct link between the soil management and a significant contribution of agriculture sector to climate change mitigation and adaptation (i.e. outcome of the COP21, 4 per 1000 initiative, links to SDGs). There is a strong need to develop synergies on research in this area at EU and global level. The results of this activity should contribute to climate change mitigation and adaptation debate and consider the ongoing work on Sustainable Development Goals implementation.

Scope: Proposals should cover the topic of soil carbon sequestration and its links with climate change mitigation from the perspective of agricultural sector. Other areas to be tackled should include land (use) management within the scope of this topic. Participation of initiatives such as the **Global Research Alliance** (GRA), the Joint Programming Initiative on Sustainable Agriculture, Food Security and Climate Change (FACCE) or the 4 per 1000 initiative is encouraged.

The Commission considers that proposals requesting a contribution from the EU of up to EUR 2.5 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:

- Improved understanding of agricultural soil carbon sequestration in different pedo-climatic conditions.

- International Research Community on agricultural soil strengthened
- Provide the basis for a more structured approach towards the issue, for instance with the establishment of an International Research Consortium (IRC).

Cross-cutting Priorities: International cooperation

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:	How to tackle the childhood obesity epidemic?
Topic Identifier:	SFS-39-2017
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-39-2017.html>

Specific Challenge: Childhood obesity is one of the most serious public health challenges of the 21st century and its prevalence has increased at an alarming rate in the last decades. The main problem is that overweight and obese children are likely to remain obese in adulthood and more likely to develop noncommunicable diseases like diabetes and cardiovascular diseases at a younger age. An integrated EU approach to help reduce the impact on health of poor nutrition, excess weight and obesity is a political objective. A wide range of factors interacting at various levels are known to be associated with obesity. Overweight and obesity, as well as their related diseases, are largely preventable. Starting from an early age, diet and lifestyle have a strong impact on health throughout life. Therefore, the prevention of childhood obesity needs to be given a high priority.

Scope: Within the context of improving the health of citizens and promoting sustainable economic growth, the main objective is to reduce childhood obesity and its comorbidities effectively. Proposals should focus primarily on specific target groups in the young (e.g., during pregnancy and foetal development, in infants, toddlers, most vulnerable groups in children, adolescents). To better understand the complex interactions between the factors influencing obesity in individuals and populations, it is necessary to combine the approaches and expertise from different disciplines (e.g. (epi)genetics, molecular biology, microbiome, gut-brain signalling, physiology, nutrition, physical activity sciences, information and communication technology, social sciences and humanities, education, environment, architectural and urban design, psychology). Proposals should consider a range of geographic, socio-economic, behavioural and cultural factors. Proposals should aim at innovative and efficient strategies, tools and/or programmes for promoting sustainable and healthy dietary behaviours and lifestyles. Proposals should reflect and build on existing initiatives and platforms and should provide a robust science-based impact assessment of the tools, strategies and/or programmes delivered for further consideration by policy makers. Tackling this societal challenge requires both interdisciplinary and multi-actor approaches

engaging academics, policy makers, civil society and relevant industry and market actors. The gender dimension in the research content shall also be taken in account. In line with the strategy for EU international cooperation in research and innovation, international cooperation is encouraged, in particular with the US, Australia, **New Zealand** and Canada. Proposals should fall under the concept of the 'multi-actor approach'^[1].

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: In the effort to tackle the childhood obesity epidemic, proposals should show how some, or all, of the following impacts will be achieved:

- Provide an understanding of which factors are involved and how they influence the childhood obesity epidemic.
- Provide innovative, efficient, effective, scientific evidence-based and ready-to-use tools, strategies and/or programmes to improve sustainable and healthy dietary behaviour and lifestyles in children.
- Transfer the generated knowledge and innovation to relevant stakeholders.
- Strengthen interdisciplinary research approaches and foster participatory and inclusive multi-actor approaches for long-lasting implementation of the results obtained.

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

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