European Commission

INCEPTION IMPACT ASSESSMENT			
TITLE OF THE INITIATIVE	Partnership for Research and Innovation in the Mediterranean Area (PRIMA)		
LEAD DG – RESPONSIBLE UNIT – AP NUMBER	RTD-I.2	**DATE OF IIA**	12/2015
LIKELY TYPE OF INITIATIVE	To be determined according to the Impact Assessment outcome		
INDICATIVE PLANNING			
ADDITIONAL INFORMATION			

This Inception Impact Assessment is provided for information purposes only and can be subject to change. It does not prejudge the final decision of the Commission on whether this initiative will be pursued or on its final content and structure.

A. Context, Subsidiarity Check and Objectives

Context

- *How does this new initiative relate to past and possible future initiatives, and to other EU policies?*
- *Has existing policy been evaluated? Is it part of the REFIT agenda?*
- *Consider recently adopted initiatives whose effects will only materialize after their implementation and other initiatives under preparation (also of other policy fields) touching upon the same problem. Describe how policy coherence is ensured.*

See Toolbox Tool #1 'Principles of Better Regulation'

A proposal for the participation of the Union in a joint research and innovation programme, through an Article 185 of TFEU, was submitted by nine EU Member States on 22 December 2014, following adoption of Conclusions by the Council on 5 December 2014. The proposal focuses on the development and application of innovative solutions for food systems and water resources in the Mediterranean basin. The Member States involved in the preparation of the PRIMA Joint Programme proposal are Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Slovenia and Spain. Third country participants comprise: Algeria, Egypt, Jordan, Lebanon, Morocco, Tunisia and Turkey. Two hundred M€ have been committed by some participating countries and by Czech Republic and by Luxembourg for the initiative over a 10 year period starting in 2018.

The proposal is relevant in the framework of the Barcelona Process. Following the European Council in Lisbon (June 1992), the European Union established a new framework for its relations with the countries of the Mediterranean basin with a view to forming a Euro-Mediterranean partnership. This partnership became a reality at the Barcelona Conference of November 1995, which brought together the Ministers for Foreign Affairs of the EU Member States and the Mediterranean non-member countries. A Monitoring Committee (MoCo) for Euro-Mediterranean cooperation was created in 1995 to monitor and promote cooperation in RTD. This group (renamed 'Mediterranean Group of Senior Officials in Research and Innovation', GSO) has met 12 times between 1995 and 2008 and plays a key role in the implementation of projects in the successive EU Framework Programmes.

In the context of the Commission's Communication "Barcelona process: Union for the Mediterranean"[1], the EU-Med GSO adapted its functioning to the new landscape in order to reinforce its role, and contribute efficiently to the implementation of the objectives of the Union for the Mediterranean (UfM) in the area of research and innovation. This setup for R&I is part of the broader Euro-Mediterranean Partnership and, the multilateral branch of the European Neighbourhood Policy focusing on Southern neighbourhood countries.

PRIMA is also relevant to several other actions and policies:

- This initiative would contribute to President Juncker's priority for Europe as a global actor and a reinforced neighbourhood, in line with the Communication from the European Commission of 14 September 2012, "Enhancing and focusing EU international cooperation in research and innovation: a strategic approach"[2], which establishes a focus on fostering integration into – or alignment with – the European Research Area for the Neighbourhood.

[1] COM(2208) 319 final of 20.5.2008.
[2] COM(2012) 497 final.

- The Post-2015 Development Agenda and the Sustainable Development Goals (SDGs), adopted in September 2015. PRIMA would contribute to SDGs, especially numbers 6, 2, 9 and goal 17[3] when it comes to strengthening multi-stakeholder partnerships, and fostering international cooperation in R&I and knowledge sharing in mutually agreed terms. The EU has promoted very actively the role of Science, Technology and Innovation in the new agenda as demonstrated by the Council Conclusions of May 2015[4] and the Commission Communication of February 2015[5].
- The Common Agricultural Policy (CAP), which first objective (article 39 of the Treaty on the Functioning of the European Union, TFEU) is "to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour". PRIMA precisely aims at providing and implementing innovative solution to ensure water and food security in a sustainable way. Among the different factors of production, water is (and will be) the most critical one in the Mediterranean basin.
- The "Blueprint to safeguard Europe's water resources" that aims to strengthen and fill the gaps in EU water policy, so as to make a real impact right across Europe. By addressing all users of water, as well as interactions between water and food, PRIMA will help to give a wider international perspective to the EU water policy and extend it implementation potential to the Mediterranean region. As water quantity is affected by climate change, the initiative providing solutions to water scarcity and food system, could contribute to the climatic challenge. Research and Innovation Policy: One of the three pillars of Horizon 2020, the biggest EU Research and Innovation programme ever, is "tackling societal challenges". Sustainable water management, agriculture and food security are explicitly mentioned under H2020 Societal Challenges 2 and 5[6]. Horizon 2020 is a programme open to the world; organisations from third countries, like Southern and Eastern Mediterranean ones, are allowed and encouraged to participate. In addition, Horizon 2020 is committed to allocate 60% of its budget to support sustainable development.

Complementarities with on-going and future actions in research and innovation with a focus on Euro-Mediterranean cooperation will be evaluated and fed into the impact assessment. At the same time coordination between PRIMA and other current and planned European-led initiatives (amongst others, Joint Programming Initiatives, Nexus Dialogue, EU-Africa High Level Policy Dialogue) will be ensured.

In addition, the interaction with other European policies such as regional, neighbourhood, rural development, environment, agriculture and water policy, ongoing European and National research initiative will be assessed during the impact assessment exercise. In particular, funding from ESIF Programmes, including the ones covered by the European Territorial Cooperation objective (Interreg) will be taken into consideration in order to exploit synergies while avoiding overlapping.

Coordination will be sought with the EU Strategy for the Adriatic and Ionian Region (EUSAIR), which covers four EU MS[7] involved in the PRIMA initiative and that has an important focus on transnational research and innovation networks to boost high-skilled employment, growth and competitiveness, as a cross-cutting aspect over the four pillar identified in its Action Plan.[8]

Moreover the impact assessment will analyse complementarities with several ongoing initiatives focused on water and agriculture in the Mediterranean region, like:

- The Mediterranean component of the **EU Water Initiative (MED EUWI)**, which aims to assist developing countries of the region to meet water-related challenges for the achievement of the Millennium development Goals and sustainable development.
- **European Neighbourhood and Partnership Instrument** (**ENPI**) to be renamed European Neighbourhood Instrument (ENI)[9] cover some actions that are focus on water-related issues: the **Sustainable Water Integrated Management** (SWIM) programme, that provides technical assistance centred on the dissemination and effective implementation of sustainable water management policies and practices; **SWITCH Med** that involves actors playing a role on sustainable consumption and

[3] Goal 2 and 6 say respectively "End hunger, achieve food security and improved nutrition and promote sustainable agriculture", and "Ensure availability and sustainable management of water and sanitation for all". Goal 9 refers to "Build resilient infrastructure, promote sustainable industrialization and foster innovation", in particular "Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending". Goal 17 reads "Strengthen the means of implementation and revitalize the global partnership for sustainable development".

[4] "A New Global Partnership for Poverty Eradication and Sustainable Development after 2015", 9241/15.

[5] COM(2015)44final of 5.02.2015.

[6] Council Decision of 3 December 2013 establishing the specific programme implementing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020), 2013/743/EU.

[7] EUSAIR covers namely HR, GR, IT and SI, http://ec.europa.eu/regional_policy/sources/cooperate/adriat_ionian/pdf/com_357_en.pdf

[8] Action Plan: http://ec.europa.eu/regional_policy/sources/cooperate/adriat_ionian/pdf/actionplan_190_en.pdf

[9] Budget of €11.2 billion over the period 2007-2013 and a proposed amount for the ENPI – of €18 billion in 2014-2020.

production in the Mediterranean region and includes demonstration activities; the multilateral cross-border cooperation **'Mediterranean Sea Basin Programme'** of which the AQUAKNIGHT project and the Promoting Sustainable Groundwater Resources in the Mediterranean Basin project. [10]

- **European Neighbourhood Partnership for Agriculture and Rural Development (ENPARD)**, launched in 2011 as a response to the "Arab Spring", and aimed at improving rural livelihoods, increasing productivity and food safety, and developing organisational and institutional capacities.
- Relevant projects funded by past and ongoing Framework Programmes for Research and Innovation and other EU funding projects, like the **LIFE** programme.
- Major EU partnering initiatives such as: the **European Innovation Partnerships (EIP) on Water** and **Agricultural Productivity and Sustainability,** the **Joint Programming Initiatives (JPI) on Water** and **Agriculture, Food Security and Climate Change,** and the **Water Supply and Sanitation Technology Platform (WssTP).**
- Other relevant non-EU initiatives in place, like the **World Bank's Water Partnership Programme**, the **Global Water Partnership Mediterranean**, the FAO's regional Initiative on **Water Scarcity in the Near East and North Africa**, or the **Water Demand Initiative for the Middle East and North Africa (WaDImena)** coordinated by the International Development Research Centre (IDCR) and supported by the International Fund for Agricultural Development (IFAD) and the Canadian International Development Agency. **Plan Bleu,** a regional activity centre implemented in the framework of the Mediterranean Action Plan of the United Nations Programme for the Environment and the Convention for the protection of the Marine environment and Coastal Region of the Mediterranean (Barcelona Convention).

The PRIMA initiative is not part of the REFIT programme.

Issue

- *Describe the reasons behind the initiative. What is the issue/problem(s) it is expected to tackle?*
- *Describe the size of the problem and its main drivers.*
- *Describe who is affected and how (stakeholder mapping)*
- *Explain why this is a problem at EU level and describe how it is likely to develop in the future in case no policy action is taken.*

See Toolbox Tool #11 'How to analyse problems'

Sustainable management of food systems and water resources are key challenges affecting the Mediterranean area. Mediterranean countries[11] have reached a situation of hydric stress with 180 million people considered 'water poor'. Rising demographic trends in the Southern Mediterranean Countries are expected to increase the severity of this problem over the coming decades. According to the 2015 Global Risks Report[12] of the World Economic Forum, water crises are listed as the number one risk that could undermine economic growth impacting several countries or industries within the next 10 years. In the future, geopolitical tensions over access to strategic water resources could become more systemically impactful, and water shortage coupled with poverty and societal instability could weaken intra-state cohesion.

On a global scale, competition for access to natural resources will continue to intensify[13], as will the associated risks, in terms of market volatility, geo-political tensions and instability. This is because large-scale exploitation and extraction of natural resources will remain highly concentrated in a small number of producer countries. Managing scarcity will be the principal challenge for food and water supply in the 2030 perspective. Demand for food is expected to be 50 % higher than in 2008. This rise is mainly due to the improving living standards of the fast-growing middle class in the major emerging economies. The reduced availability of agricultural land will pose another major challenge in terms of productivity capacity to satisfy the increasing demand for food.

World Bank estimates that by 2025 climate change will be responsible for shortfalls in food harvests or water that will affect 1.4 billion people. Unless some significant technological break-through occurs, water shortages will have a major impact on agriculture, especially in those countries like in the Mediterranean region, where most of water consumption is for food production. Agriculture in the Mediterranean region faces a double stress — from increasing water demand and decreasing water availability[14]. Climate change and rapid demographic trends[15]

[10] Besides "Mediterranean Sea Basin Programme" (ENI-CBC-MED), two transnational programmes involve some of the MS participating in the PRIMA initiative: Interreg ADRION (HR, GR, IT, SI, AL, BA, ME, RS) and Interreg MED (ES, PT, FR, IT, GR, MT, HR, SI, CY, UK – Gibraltar, AL, BA, ME).

[11] Refers to areas in Algeria, Croatia, Egypt, Italy, Spain, Tunisia and Morocco. Source/ Plan Bleu, Seaside tourism and urbanisation/environmental impact and land issues, 2012.

[12] http://reports.weforum.org/global-risks-2015/executive-summary/

[13] Report of the European Strategy and Policy Analysis System (ESPAS) project launched in 2011 with a view of identifying long-term global trends that are likely to face the European Union in the coming decades, as well as the potential policy challenges which may result, despite the slowdown in the world's population growth. http://europa.eu/espas/pdf/espas-report-2015.pdf

[14] IPCC, 2014, *Climate Change 2014: Impacts, Adaptation and Vulnerability, Vol. I Global and Sectoral Aspects.*

also place additional pressures on the natural resources of this region and on the capacity of countries to provide affordable food and good quality water to their inhabitants.
In 2030, between 1.9 and 2.6 billion people are likely to suffer from a lack of water. Energy demand is another important issue. These pressures are interconnected and there is a large potential therefore to increase overall resource use efficiency by addressing the water/food/energy nexus.

Experience and knowledge accumulated through completed and ongoing FP6 and FP7 projects and several foresight studies[16] indicate that research and innovation can contribute to enhance the resilience of food systems and water resources: major challenges affecting the Mediterranean area. According to these studies water is by far the most important but vulnerable resource in this area where agriculture uses more than 70% of the available water resources.
Southern and Eastern Mediterranean countries and their population are now the most affected by this issue. However, water is already becoming a tangible problem in Southern Spain, Italy, Southern France, Greece and EU islands such as Malta and Cyprus. By 2050, in terms of water scarcity and climate conditions, Southern EU agriculture conditions could be similar to those of North Africa[17].

In several Mediterranean countries the agricultural sector is often relevant in terms of employment: 57% in Egypt, 40% in Morocco, 33% in Tunisia, 22% in Greece or 21% in France and Spain in 2014. In 2011, it represented 29% of total jobs in Egypt in 2011, 40% in Morocco, 13% in Greece but only 3% in France and 4% in Spain. Rural poverty is an issue in Southern and Eastern Mediterranean countries. In Egypt, 15.3% of the rural population lives below the national poverty lines[18].

Climate change, rapid demographic transitions and global competition trends place additional pressures on the natural resources of this region and on the capacity of countries to provide affordable food and good quality water to their inhabitants.

Several initiatives have been launched at the Union level, mainly coordination and support actions and ERA-NET schemes, for supporting national and regional work programmes on water and food.

However, these efforts lack a strategic cross-border programme collaboration and coordination and do not address issues related with the following problems.

1. Insufficient development and implementation of innovative solutions: Despite the progress in terms of water-saving technologies and strategies in irrigated agriculture, the actual level of field implementation of the most innovative technologies and methodologies is still considered insufficient to significantly contribute to reducing fresh water consumption in Mediterranean irrigated agriculture[19]. This is related to the need to enable expertise and skills to implement technologies and methodologies, cooperation and exchanges mainly focused on knowledge and technology transfer, development of solutions adapted to local situations. Egypt uses 86% of its fresh water withdrawals for agriculture, while France, with a similar agricultural added-value, 12% only. Egypt loses about 50% of its fresh water through poor maintenance of infrastructures and distribution problems, with also pollution issues[20]. These data illustrate that water resources are not used in the most efficient way. This is not only an issue in Southern and Eastern Mediterranean countries. The same problems and inefficient practices appear, even if less frequently, in Europe (e.g. effect of decreased water supplies and mild winter on fruit production, supplementary irrigation, saline intrusions in the coastal zone, transportation losses) and could become more important in the future due to climate change.

2. R&I governance issues to address common and inter-related problems: There is not enough multi-level and multi-actor integration to address common issues. The challenges of water security and food production in the Mediterranean region are transnational and multi-sectoral. They require trans-disciplinary research and integrated solutions. A systemic approach that reduces trade-offs and builds

[15] In the EU-27, the population in the age group from 15 to 64 will fall by 6.5 %, from about 330 million in 2010 to 310 in 2030. This decline contrasts with an increase in the comparable age group in the SEMCs (South and East Mediterranean countries) by more than 31 %; the total in this cohort will increase from 195 million to 250 million over the period. http://espas.eu/orbis/sites/default/files/generated/document/en/euromed2030.pdf

[16] EuroMed-2030, Long term challenges for the Mediterranean area, Report of an Expert Group, http://espas.eu/orbis/sites/default/files/generated/document/en/euromed2030.pdf.
[17] IPCC, 5th Assessment Report, 2013.
[18] World Bank Indicators.
[19] Bosello, F.; Lamaddalena, N.; Osberghaus, D. and Varela Ortega, C. (2013) "Perspectives in Resource Management and Climate Change Adaptation in the Southern and Eastern Mediterranean", MEDPRO Policy Paper No. 6 / March; Molle, F.; Wester, P. and Hirsch, P. (2010) "River basin closure: Processes, implications and responses. Agricultural Water Management, 97: 569-577; Ruf, T. and Mathieu, P. (2001) "Water rights and the institutionnal dynamics of irrigated systems between State, market and community action". International Journal of Water, 1(3-4): 243-249.
[20] Ferrari, E.; McDonald, S; and Osman, R. (2014) "Water Scarcity and Irrigation Scarcity in Egypt", paper prepared for the 17th Annual Conference on Global Economic Analysis “New Challenges in Food Policy, Trade and Economic Vulnerability”, June 18-20, 2014, Dakar, Senegal. At: https://www.gtap.agecon.purdue.edu/resources/download/7118.pdf.

synergies across the food and water sectors is missing. Such approach should not only look at food and water on isolation but should address underlying policies, regulations, financial and planning issues and promote a coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social benefits in an equitable manner without compromising the sustainability of vital ecosystems.

3. Unattractive environment for private sector in the Mediterranean area: Investing in the water sector can be complex and requires a deep knowledge of current legislation and technological developments. The water sector is characterised by a relative "scarcity" and slow pace of innovation development and application. The low value placed on water as a natural resources and insufficient cost recovery from different agricultural, industrial, commercial and domestic users, particularly in comparison to other utilities (e.g. energy, telecoms[21]), is a handicap for attracting private investments. At the same time, the growing imbalance between increasing demand and current supply makes the water sector ready for investments. In Europe water is one of the few economic sectors that has grown during the economic crisis (e.g. the "water reuse, conservation and irrigation equipment" sector presented global growth rates of 6% - 12%, with up to 16% achievable in emerging markets)[22].
   Therefore, it seems that there is a need for institutional exchange of best practices, trainings, networking among the Mediterranean countries to facilitate and accelerate the change supporting long-term investment on relevant potential sectors (water, agriculture and food).

4. Insufficient investments in R&I: One of the reasons of inefficiencies in the use of water, especially in agriculture, are the insufficient investments in R&I. In this context, the public sector plays a critical role as regulator, public service provider, river basin agency and/or contracting authority able to stimulate the demand for innovation demand and the take-up of new technologies and processes.
   Coming back to the previous example, France invested in 2012 2.26% of its GDP in R&I, whereas Egypt expended 0.43%. Logically, the innovation capacities of those two countries diverge radically. Within EU's Mediterranean Member States, differences are also significant: Spain invested 1.3% of its GDP in R&I in 2012 and Greece, just 0.69%[23]. Benefits from collaborative R&I through the Framework Programme appears to be scarce as the participation of Southern and Eastern Mediterranean countries is not fully exploited.

Research and innovation have a prominent role to play in helping Mediterranean countries to cope with those challenges and provide solutions. However, drawback identified, such as lack of coordination, collaboration and investments, would need to be better addressed bringing together key stakeholders such us public authorities, business and research community.

PRIMA being an R&I proposal, will affect the following stakeholders: universities, research centres, public authorities (at local, regional and national levels), NGOs, industry players including SMEs, in both the EU and Southern and Eastern Mediterranean countries.

In addition, the initiative would build on networks and players described in the previous section, like the EIPs on Water and Agriculture, JPIs Water and FACCE, and the Water Supply and Sanitation Technology Platform (WssTP). Furthermore, other regional players who are active in the field of the water-food nexus are also expected to be directly or indirectly involved in the PRIMA initiatives. Among the others, the following one can be mentioned: the Consultative Group on International Agricultural Research (CGIAR), a global partnership of 15 centres that unites organisations engaged in research for a food secure future, with the support of the Commission since 1977; the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) and the Multilateral Development Banks.

Subsidiarity check

- *Indicate the legal basis giving the EU the right to act*
- *If your policy field falls under the exclusive competence of the EU, use the standard formulation: "The initiative falls under the exclusive competence of the EU according to Article xx of the Treaty on the Functioning of the European Union (TFEU). Therefore, the subsidiarity principle does not apply".*

[21] The Foreign Direct Investments (FDI) in the agricultural sector and the agro-food industry in Southern and Eastern Mediterranean countries reached $11 billion between 2003 and 2011. Compared with other sectors, those industries have a moderate importance. They are usually ranked 7th, far behind energy, automobile, telecommunications or construction and civil engineering. See: Cheriet, F. and Rostoin, J.L. (2014) "Mediterranean agriculture and agro-food trade: caught between American giants and emerging Asian countries", at VV.AA: *Mediterra*, Paris: International Centre for Advanced Mediterranean Agronomic Studies.

[22] Ernst and Young, Market study on financial instruments to support innovation in the European water sector. - See more at: http://www.eip-water.eu/innovfin-%E2%80%93-eu-finance-innovators#sthash.Ziawsttu.dpuf.

[23] World Bank Indicators.

- *Necessity check & Added-value test*

See Toolbox Tool #3 'Legal basis, subsidiarity and proportionality'

Article 181 TFEU stipulates that "the Union and the Member States shall coordinate their research and technological development activities so as to ensure that national policies and Union policy are mutually consistent". It also allows the Commission, in close cooperation with the Member States, to "take any useful initiative" to promote such coordination.

EU Member States do cooperate in the field of R&I, within the EU's Framework Programmes and beyond, even though not fully accomplished yet, the European Research Area is nowadays more than an ideal objective. Despite possibility of participating in the Framework Programmes under favourable conditions, cooperation with and between Southern and Eastern Mediterranean countries is far from being achieved. A preliminary assessment of R&I projects in the Mediterranean supported by the last Framework Programmes shows a low participation of Southern and Eastern Mediterranean countries and the promotion of mostly problem-specific approaches and solutions, rather than broad or integrated applications. Demonstration projects in the region were also bound to specific prerequisites that limited their flexibility. Evidence shows that cooperative R&I is more efficient, both in terms of research outcomes (e.g. higher ranked publications) and of innovation (more likely exploitation).

Article 185 TFEU stipulates that "in implementing the multiannual framework programme, the Union may make provisions, in agreement with the Member States concerned, for participation in research and development programmes undertaken by several Member States, including participation in the structures created for the execution of those programmes".

In that sense, Article 26 of the Framework Programme Regulation states that Horizon 2020 shall contribute to the strengthening of public-public partnerships, as and when appropriate, where actions at regional, national or international level are jointly implemented within the Union. Public-public partnerships may be supported in particular through:

(a) an ERA-NET instrument;

(b) the Union participation in programmes undertaken by several Member States in accordance with Article 185 TFEU where it is justified by the scope of objectives pursued and the scale of resources required.

The challenges of water security and food production in the Mediterranean region are transnational and multi-sectorial and require integrated solution-oriented R&I that cross disciplinary boundaries and involve co-creation of knowledge and co-delivery of outcomes with economic operators and civil society.

The collaboration of national research programmes to address challenges which no Member States can tackle alone, while avoiding duplication of research funding is a key element of the EU research policy. The EU shall encourage transnational research and innovation by exploiting synergies between national and international programmes, strategically aligning different sources of national and other funds at EU level.

In fact, the scaling of national efforts in addressing common challenges within a defined geographical space might be more appropriately addressed at EU level. Member States would not be in a position to leverage national efforts to the same scale and the overall objectives being sought would be undermined by overlap and by a sub-optimal allocation and use of resources.

To do so, the Commission can stimulate and participate in Public-Public Partnerships to address grand challenges as set out in the Communication on Partnering in Research and Innovation to leverage Member States' contributions.

In that sense, the EU can catalyse the action of such stakeholders, based on its experience managing cooperative R&I through the Framework Programmes and its different instruments (e.g. Public-Private Partnerships, Co-Fund actions, Article 185 initiatives). The EU involvement has the capacity of attracting further funding, the R&I community, industry, and other stakeholders ("leverage effect"). In the medium-term, such cooperation could even lead to further measures undertaken by the participating countries, beyond R&I policy (e.g. more efficient regulation or better coordination in the management of resources).

Main policy objectives

- *What is the initiative aiming at? What should be achieved?*
- *What is the link to the problem (coherent intervention logic)?*
- *Beware of too specific objectives which could pre-empt a 'preferred' option*

See Toolbox Tool #13 'How to set objectives'

The general objective of PRIMA is to reinforce cooperation in Research and Innovation in Mediterranean countries in order to contribute to the challenges of sustainable food production and water provision in the Mediterranean region.

The PRIMA specific objectives are:

- To support the common development of innovative solutions and promote their application in improving the efficiency and sustainability of food production and processing and water provision in the Mediterranean basin;
- To support stability and socio-economic development in the Mediterranean Area, within the framework of a reinforced Euro-Mediterranean cooperation and the European Neigbourhood Policy;
- To facilitate the creation of knowledge-based jobs and competences in the Mediterranean Area.

In addition, the following operational objectives are relevant:

- To find context-adapted solutions to increase water efficiency in the agro-food chain, and reduce losses and wastes;
- To support the common development of smart and sustainable farming systems to maintain natural resources and to increase production efficiency;
- To test and stimulate application of context-tailored water-saving solutions, in particular in agriculture;
- To improve land and water sustainability in arid and semi-arid watersheeds;
- To conceive and implement innovative business models in the agro-food sector to stimulate growth and jobs;
- To innovate in the Mediterranean food products based on Mediterranean diet heritage while enhancing the links between nutrition and health;
- To elaborate and implement new policies and protocols for water management;
- To attract further investments for the development and application of innovative solutions.

B. Option Mapping

- *What are the various ways to achieve the policy objectives? What legislative and non-legislative instruments could be considered? Always consider 'no EU action resp. no change in EU action' (baseline)*
- *Consider options which have been proposed by stakeholders and/or are likely to be proposed during the legislative process but do not discard a priori options with little support or facing strong opposition*

See page 23 of the Guidelines and Toolbox Tool #14 'How to identify policy options' and Tool #15 'The choice of policy instruments'

Policy Option 1: Co-fund action

A financial contribution could be provided through a planned 5 years (2018 – 2022) Programme Co-fund action. This would allow the EU to co-finance calls for proposals or programmes jointly implemented by Member States.

A Programme Co-fund action can be either an ERA-NET Cofund or a European Joint Programme (EJP) Cofund. The ERA-NET Cofund allows to supplement a joint call for proposals that leads to the funding of trans-national research and innovation projects. In addition to the joint call, the ERA-NET also supports the preparation and implementation of other joint activities that contribute to the coordination of national research programmes, such as additional joint calls without Union co-funding, workshops, meetings and studies.

It is possible to use a series of ERA-NET Cofund actions to co-fund a series of joint calls for transnational proposals. ERA-NET Cofund allows in principle to tackle research and innovation programmes. However, since it relies on existing national programmes that often address only research, the participation of end-users and industry at project level cannot be ensured for all participating countries. Only few ERA-NETs have so far explicitly targeted industry. A clear focus on demonstration activities has only been pursued for the energy ERA-NET Cofund actions, resulting in a low level of country participation due to the fact that only few national programmes could be identified. Many countries support innovation activities with financial instruments (e.g. loans), which are not eligible for co-financing with the ERA-NET Cofund actions.

The EJP Cofund allows to support the implementation of a joint programme of activities ranging from research to coordination and networking activities, including training activities, demonstration and dissemination activities. Although it is possible to launch a call for proposals, the main focus is direct research and innovation activities of the participating programmes, normally governmental research organisations participating on the basis of their institutional funding. This excludes in practice the participation of end-users and industry in the resulting activities.

A Programme Co-fund action would leverage national programmes with a Mediterranean focus, while existing Joint Programming Initiatives (JPI on Agriculture, Food security and Climate Change, JPI Water challenges for a changing world) would contribute towards the issues being targeted by the initiative with a broader European scale.

A Programme Co-fund action would allow the increasing support to the Euro-Mediterranean research and

innovation cooperation. In addition to the funding of networking and coordination activities, the EU would also contribute to the funding of research activities. The governance of a programme Co-fund actions builds on the consortium members (legal entities) that sign the grant agreement with the European Commission, with equal rights for all participating countries. Participants typically represent working level of ministries or funding agencies. The Commission has the role of monitoring and supervising the implementation of the action according to the description of work.

The action would allow the Member States and the Mediterranean countries to link their research programmes and participate in joint activities, in particular the funding of transnational collaborative research projects.

To a certain extent it would therefore support the alignment of national R&I agendas and policy dialogue. This collaboration among countries that are all facing similar problems such as water resource management and food production is needed. Moreover, given the fact that water management, a fundamental factor for food production, is often a cross-border issue, encouraging the cooperation among countries would help to promote and secure effective, equitable and durable solutions and avoid cross-border tensions and conflicts. The action should contribute to pooling resources and increasing the level of funding to address challenges which no country could tackle alone. Both types of Programme Co-fund actions would allow substantial leverage of the Union contribution towards contributions from the participating states.

From a legal perspective this option would be implemented by including a call for proposals for a Programme Co-fund action in the Horizon 2020 Work Programme (WP), subject to approval of the WP by the Programme Committee and adoption by Commission Decision.

Policy Option 2: Participation of the Union to a programme jointly undertaken by participating states through an "Article 185 TFEU"

Article 185 TFEU implies that the participating states integrate (rather than coordinate) their research efforts by defining and committing themselves to a joint research programme. The Union would provide financial support to the joint research programme, by co-funding the efforts from national budgets/ programmes.

This option requires a high level of commitment of the participating countries to scientific, management and financial integration. This implies the existence of a strategic research agenda jointly defined and agreed among the Participating States. It would also require a dedicated implementation structure which centrally manages the programme and the adoption of common rules for the implementation of the programme.

Article 185 TFEU would allow to involve different types of actors (ministries, funding agencies, research organisations) and to cover a broad range of activities (multiple calls for proposals and other activities) for a significant period of time (around ten years). This would lead to greater coherence and integration of national and Union programmes and research policies and could ensure a long-term commitment in a well-structured and integrated partnership. The use of Article 185 TFEU would have a highest leverage effect, compared to other instruments, on raising and securing national public funds on a stable multiannual basis.

Article 185 TFEU would support a durable integration of national research programmes at scientific, management and financial levels and as such it would contribute to achieving the scale of effort and impact needed to address the PRIMA objectives. It would allow to address common challenges more effectively by establishing a long-term, comprehensive and stable framework of cooperation, exploiting synergies between national programmes and strategically aligning different sources of national and other funds at EU level. The governance structure of the programme which would involve high level representatives from participating countries would allow addressing issues at a more strategic level and would facilitate the cross-sectoral and transdisciplinary approach that is needed to solve common problems.

It could therefore help to provide a more coordinated and comprehensive planning and R&I governance.

Article 185 TFEU would allow the use of a wide range of EU instruments and actions (Research &Innovation Actions, Coordination and Support Actions, etc.) that would allow the involvement of different types of actors, including SMEs and industries. Eligibility for participation and funding would follow Horizon 2020 rules, thus ensuring identical conditions for participation and funding. This would improve the collaboration between the different stakeholders, in particular the public sector and the business sector.The lessons learnt from previous and ongoing initiatives (AAL, Bonus, EDCTP, EMPIR and Eurostars) can be taken into account: the participating states have developed over the past years a better understanding on implementation and financial management of these large scale initiatives that are already partially reflected in the current proposals (e.g. funding with a mixed mode that uses part of the Union contribution in a real common pot to facilitate selection of proposals according to the ranking list).

Compared to the current situation, and in line with the Council conclusions of 5 December 2014, this option would constitute a step forward towards further integration and the establishment of a long-lasting and sustainable cooperation mechanism at regional level.

From a legal perspective, this option requires fulfilment of the conditions and criteria set out in article 26 of

Horizon 2020 Framework Regulation on Public-Public Partnerships for identifying and proposing an article 185 initiative, as well as the adoption of a specific legislation jointly by the Parliament and the Council, through the ordinary legislative procedure.

Even though Article 185 TFEU refers specifically to participation of the Union in programmes undertaken by several Member States, it does not preclude participation of non-EU countries alongside EU Member States in the programme, on condition that the basic act establishing an Article 185 TFEU initiative contains an opening clause for third countries and provided that such participation is covered by a relevant international agreements.

To allow engagement on equal footing of interested Mediterranean Partner Countries (MPCs) with EU Member States, international agreements would be needed to extend rights and obligations from the joint research and innovation programme to the MPCs participating in the programme. Such agreements would have a purely bilateral nature regulating obligations of these countries vis-à-vis the Union. More information on the implementation can be found in the paragraph further below "Implementation plan".

The impact assessment exercise will carefully carry out a cost benefit analysis of the different options.

To avoid double funding between H2020 and ESIF funds, both policy options will take into account the Staff Working Document (SWD (2014)205 final) and annexes which contains explanations on the basic rules and principles for obtaining synergies and combining the different funds. It contains recommendations to the relevant actors as well as to the European Commission on how to facilitate synergies and practical examples (including ERA-NET and Article 185).[24]

Baseline scenario

The "baseline scenario" should always be developed and used as the benchmark against which the alternative options should be compared. As such, it should take account of both national and EU policies in place and reflect possible developments of these in the absence of new EU-level action. It should also try to anticipate important technological or societal developments such as the pervasive role of the internet and other ICTs.

No EU decision for a Union participation and financial contribution to this initiative would be adopted.

Furthermore, no provision would be made in EU research policies, programmes or funding to support the Euro-Mediterranean cooperation. The Euro-Mediterranean R&I cooperation would not receive specific EU financial support once the on-going FP7 projects finish in 2017, other than participation of Mediterranean countries in Horizon 2020.

The activities under the scope of PRIMA might be carried out in the context of other existing intergovernmental initiatives, such as the ones described in section A (e.g. Plan Bleu, CGIAR, CIHEAM, Multilateral Development Banks), actions that hardly cover R&I.

There are also bilateral agreements between European countries and relevant Mediterranean countries. For example, Germany has bilateral programmes with Egypt and Tunisia (respectively GERF and TUNGER); France deals with several bilateral programmes such as MISTRALS (Mediterranean Integrated Studies at Regional and Local Scales); and Italy also runs bilateral actions with 11 Euro-Mediterranean partners in the concerned fields. If no EU intervention was proposed to support the Euro-Mediterranean cooperation, individual Member States would be left to pursue bilateral approaches.

Absence of EU intervention could either result in MS launching the initiative themselves or stopping it, as financial commitments have been done for the policy option two. This might represent a missed opportunity for the EU to act as a catalyzer of R&I activities and policies and to lead in a sector that represents one of the main societal challenge.

Options of improving implementation and enforcement of existing legislation or doing less/simplifying existing legislation

- *Describe possible options or explain why this is not relevant*

The initiative does not relate to any existing legislation to be implemented, enforced or simplified.

Alternative policy approaches

- *Describe e.g. different policy content / approaches to reach the objective or explain why this is not relevant*

Another possible approach could be the Joint Technology Initiative (JTI), on the basis of Article 187 of the TFEU. JTIs are public-private partnerships that support trans-national cooperation in key areas where research and technological development can contribute to European competitiveness and quality of life. They aim at increasing the scale and impact of research investment, improving the level of coordination and integration and

[24] http://ec.europa.eu/regional_policy/sources/docgener/guides/synergy/synergies_en.pdf

raising the technological content of industrial activity are essential if Europe is to be a strong, technologically innovative economy.

Considering the nature of the proposed joint programme, this option is discarded for two main reasons:

– There is no strong commitment from industry, a basic requisite to launch a JTI.

– PRIMA is so far a political initiative, led by EU and non-EU States.

Alternative policy instruments

- *Describe e.g. non-regulatory alternatives; self- or co-regulation: market-based solutions, regulatory alternatives; international standards, and their mix or explain why this is not relevant*

Common R&I on water and affordable food access is hardly covered by current policies, which are more focused on development support and technology transfer. As explained in section A, some of multilateral organisations dealing with activities related to PRIMA priorities are FAO, the World Bank, or IFAD (International Fund for Agricultural Development), as well as other actions funded by the EU.

There are also bilateral agreements between European countries and relevant Mediterranean countries..

Alternative/differentiated scope

- *Consider differentiated scope e.g. is the "think small first" principle taken into account; are micro-enterprises excluded from the scope of any proposed legislation or explain why this is not relevant*

No regulatory burden is expected for micro-enterprises, except information costs. SMEs are likely to rather benefit from the initiative; please refer to the section “Likely impacts on SMEs”.

Options that take account of new technological developments

- *All new initiatives should be "digital and internet ready" and operate effectively both in the digital and the physical worlds*
- *Describe possible options or explain why this is not relevant*

The initiative would consider opportunities offered by Information and Communication Technologies (ICT). For example:

– Technologies like satellite imagery and remote sensing (e.g. Sentinel), smart sensors, geographical information systems and other web based services can provide real time information on crop status and improve water use in agriculture, as well as supporting the development of smart and sustainable farming systems.

– Internet may create synergies to better exploit EU-Mediterranean existing web platforms dealing with water and agriculture issues. Internet can improve dissemination and exploitation of PRIMA outputs, reaching rural and/or remote areas (provided they have access to electricity and Internet).

– PRIMA should capitalise on the open access information provided by GEO/GEOSS or Copernicus, and further develop and exploit web-based citizens' observatories.

Preliminary proportionality check

- *Even when the EU has exclusive competence or the subsidiarity test is positive, any EU action must be proportionate i.e. not go beyond what is necessary to solve the problem. Outline the proportionality of the foreseen EU action.*

See Toolbox Tool #3 'Legal basis, subsidiarity and proportionality'

The Treaty establishes that:

- The EU and the Member States must coordinate their research and technological development activities and policies (Article 181 TFEU).
- The EU can participate, “in agreement with the Member States concerned, (…) in research and development programmes undertaken by several Member States, including participation in the structures created for the execution of those programmes” (Article 185 TFEU).
- The CAP should “increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production” (Art. 39 TFEU).
- Sustainable development is repeatedly mentioned in the Treaties: as a basic objective of the EU in the new Article 3 Treaty on the European Union (TEU); in Article 21 TEU concerning the external action of the Union; and in Article 11 TFEU setting out the integration principle.

PRIMA aims precisely at supporting the development of innovative solutions and promote their application in

improving the efficiency and sustainability of food production and processing and water provision in the Mediterranean basin This objective falls under the goals of the EU established by the TEU and the TFEU and, due the trans-national nature of the problem and the uneven capacities of the participating countries, it is unlikely that Member States can address it alone.

The two options considered ("Co-Fund Action" and "Article 185 TFEU") are part of Article 26 of the Regulation establishing Horizon 2020. None of those options would represent a supplementary financial cost for the EU, since the EU contribution to PRIMA is already covered by the Horizon 2020 budget. However, option 2 would require a dedicated implementation structure to ensure the overall implementation of the joint programme and negotiation and conclusion of international agreements allowing for participation of MPCs in the programme. The creation of such a structure, as well as putting in place the relevant international agreements or amendments, would imply administrative costs that must be evaluated in the impact assessment. In turn, it would facilitate the participation of non-EU countries on equal footing, ensuring neutrality, transparency and autonomy.

PRIMA is a proposal from nine Member States together with Mediterranean neighbouring countries. Both options leave much scope for national decision, both in the initiative and in its implementation. The EU would mainly play a catalyser role. In that sense, PRIMA may respect the principle of proportionality.

C. Data Collection and Better Regulation Instruments

Data collection

- *What information and data are required? How and when will they be gathered?*
- *How far can available data be used (e.g.: available evaluations, impact assessment analysis or studies)?*

See Toolbox Tool #2 'Evidence Based Better Regulation'

The Impact Assessment requires:

- An analysis of evaluations of previous actions in the water and food sectors, both in the EU and in Southern and Eastern Mediterranean countries. This is relevant to avoid overlaps and create synergies between different policies. Section A provides a list of relevant policies to be assessed and stakeholders to be consulted. In addition, the countries involved in the PRIMA proposal can provide further information of their existing actions and their results.
- Current and past R&I projects are likely to be a relevant sources of evidence. For instance, the above-mentioned ERA-NETs ARIMNET2 (2014-2017), ERANETMED (2013-2017), FORESTERRA (2012-2015) or MED-SPRING (2013-2016).
- There is a large literature on water and agriculture in the Mediterranean, often supported and/or published by relevant organisations operating in the field like CGIAR or CIHEAM. R&I outputs of water and food production R&I projects, including foresight ones, funded by the Framework Programmes must also be reviewed.
- In terms of quantitative information, the following sources will be consulted and analysed: EUROSTAT, the World Bank database, United Nation's Comtrade, FAO.
- It is also necessary to extract lessons from initiatives like the Article185 BONUS, which interim evaluation was published in October 2014. In particular, it provides data that would help to estimate the financial leverage.
- An external expert group has been created. It is a multidisciplinary team that includes economic and econometrics, social and environmental specialists. It should provide feedback to refine operational objectives, and especially to estimate quantitatively, through econometric modeling, the costs, benefits and impacts of each option.

Consultation approach

- *Describe the key elements of the proposed consultation strategy. Which stakeholders and information gaps will be targeted (consistency with "who is affected" - part A) and over which time frame?*
- *A standard sentence 'The launch of stakeholder consultations related to this initiative will be announced in the consultation planning that can be found at http://ec.europa.eu/yourvoice/consultations/docs/planned-consultations_en.pdf. If the consultation has already been launched or is already closed a link to the relevant website should be included.*

See Toolbox Tool #50 'Stakeholder Consultation Tools'

The consultation strategy focuses on:

- An online public consultation that will be announced in the consultation planning that can be found at http://ec.europa.eu/yourvoice/consultations/docs/planned-consultations_en.pdf. It will be launched in the first third of 2016.
  The following categories of stakeholders are expected to contribute to the consultation process:,

research organisations, universities, large businesses, SMEs, business associations, national administrations, local/regional administrations, non-governmental administrations and individual citizens. More in detail, the stakeholders described in section A of the present document will be directly informed and encouraged to participate, including through "position papers". In addition, public authorities (e.g. Ministries in charge of Agriculture, Science and Technology, Infrastructures, Economy, Social Affairs), International Organisations and Development Banks, industry associations and relevant enterprises, financial bodies and NGOs that operate in the field will also be directly contacted. The structure and content of the questionnaire will be discussed and validated by the Inter-service Group.

- A stakeholder event which will be organised in February or March 2016, in parallel to the online public consultation. The focus and invitation list for this stakeholder event will be discussed and agreed within the Inter-service Group.

The purpose of both initiatives is to reach out and engage different stakeholders by listening to their views and feedback Both initiatives are also intended to ensure the inclusiveness and full transparency of the process.

An external Expert Group has been set up to support the Commission services to carry out the Impact Assessment especially with regard to the desired economic, environmental and social impacts of the proposed initiative and policy options, taking into account the impacts on the integration of national research and innovation systems in a common initiative.

Concerning the stakeholder consultation process, the role of the Expert Group will be limited to:

a. provide advice and inputs on the questionnaire of the online public consultation;
b. provide inputs on the structure and objectives of the stakeholder event(-s);
c. potentially participate as speakers/moderators in the stakeholder event(-s);
d. support the ISG in the dissemination of the different consultation activities.

Will an Implementation plan be established?

Implementation plan for policy option 1

From a legal perspective this option would be implemented by including a call for proposals for a Programme Co-fund action in the Horizon 2020 Work Programme (WP), subject to approval of the WP by the Programme Committee and adoption by Commission Decision

Implementation plan for policy option 2

From a legal perspective, this option requires fulfilment of the conditions and criteria set out in article 26 of Horizon 2020 Framework Regulation on Public-Public Partnerships for identifying and proposing an article 185 initiative, as well as the adoption of a specific legislation jointly by the Parliament and the Council, through the ordinary legislative procedure.

Moreover, to allow engagement on equal footing of interested Mediterranean Partner Countries (MPCs) with EU Member States, international agreements would be needed to extend rights and obligations from the joint research and innovation programme to the MPCs participating in the programme. Such agreements would have a purely bilateral nature regulating obligations of these countries vis-à-vis the Union. The way MPCs would cooperate with each other and with the relevant EU MS as participating states in the art 185 initiative would be in particular determined by their participation in the governance at programme level, in accordance with the art 185 Decision. For MPCs associated to Horizon 2020 participation in Article 185 initiatives is already regulated on the basis of an association agreement to the Horizon and no additional international agreement would be required.[25] For those MPCs which are not associated to the Horizon (i.e. Algeria, Egypt, Jordan, Morocco and Lebanon) brief international agreements or amendments to already existing bilateral agreements on cooperation in science and technology would be needed[26]. Whatever the format, the purpose of these international agreements or amendments would be to extend the legal regime from the relevant Article 185 Decision to participating MPCs.

Finally, the implementation of the initiative requires the participating states to designate legal entity as dedicated implementation structure (DIS) that receives and manages the Union contribution (indirect management of Union

[25] Among the third country participants involved in preparation of the PRIMA proposal Turkey is associated to Horizon 2020 since 1 January 2014, while negotiations of the association agreement with Tunisia finished in late 2015 and the Agreement is expected to enter into force in the course of 2016. While Israel was not directly active in preparation of the proposal, it also is among countries associated to the Horizon since 1 January 2014.

[26] Bilateral agreements on cooperation in science and technology already exist between the Union and Algeria, Egypt, Jordan and Morocco. An appropriate amendment could be included in them. Participation of Lebanon in PRIMA would necessitate negotiations and conclusion of a new brief international agreement between Lebanon and the EU.

funds). For this standardised practices have been developed by DG RTD (ex-ante assessment of DIS, templates for Delegation Agreements, transfer of funds agreement, Annual Work plans etc.) that support the efficient preparation and implementation.

See Toolbox Tool #32 'The Implementation Plan'

D. Information on the Impact Assessment Process

See Toolbox Tool #4 'What steps should I follow for an IA?'

- *When will the IA work start?*
- *When will you set up the ISG and what DGs will be invited? Please write here the full name of the DGs allowing external stakeholders to understand who'll be involved in the preparation.*

An Inter-Service Group chaired by DG Research & Innovation was set up in October 2015 including the following DGs : Secretariat-general, DG for Budget; DG for Agriculture and Rural Development; DG Migration and Home Affairs; DG Communication networks, Content and Technology; DG for International Cooperation and Development; European External Action Service; DG for Regional and Urban Policy; Legal Services; the Humanitarian aid and Civil Protection department; DG for Neighbourhood and Enlargement Negotiations; DG for Environment; Joint Research Center; DG Health and Food Security and DG for Maritime Affairs and Fisheries.

A public Stakeholders' consultation will be launched beginning 2016 lasting for 12 weeks and the Stakeholders' event will be organised in Brussels in February/March 2016.

The IA process should last until second quarter of 2016.

E. Preliminary Assessment of Expected Impacts

See Toolbox Chapter 3 'How to identify impacts in IAs, evaluations and Fitness Checks' and Toolbox Chapter 8 'Methods, Models and Costs & Benefits

- *For each type of impacts (grey rows): describe for each option (if possible) or for the overall initiative the expected impacts (positive and/or negative), give an indication of their significance and explain who would be affected and how.*
- *If a type of impact is not expected, please explain.*

This section contains the best information available and will be more developed as more information comes along from the ISG.

It will be complemented with further information and clarifications that the PRIMA Participating States have been invited to provide[27].

Likely economic impacts

The Mediterranean is characterised by historical agri-food exchanges. The EU is the main market for Southern and Eastern Mediterranean products, while the region represents 9% of the EU's agri-food imports and 14.9% of the exports[28]. The relevance of the agri-food market for EU primary sector is probably a consequence of historical and geopolitical reasons. The Euro-Mediterranean Free Trade Area, within the Barcelona Process initiated in1995, did not covered agro-food products.

However the traditional EU trade leadership in the region is eroding in the last decade. The Mediterranean countries' agricultural and agro-food imports have more than doubled (x 2.4, in current dollars) between 2000 and 2010, but the EU's market share has diminished by 8.4%. There is a diversification of Southern and Eastern Mediterranean countries suppliers, from Eastern European countries (Russia and Ukraine), the Pacific region (Asian and Oceanian countries) and the Americas[29].

Water resources, critical for agriculture and the whole Mediterranean economies, are increasingly under pressure, due to a combination of factors like demographic growth, climate change, development of new activity sectors (e.g. tourism), etc. The competition for water between agriculture, drinking water and other uses like industry or tourism is more and more severe. Water used for irrigation represents 70% of the total water used for human related activities in the Mediterranean area, and this percentage extends to more than 80% of total water uses in Morocco, Greece, Egypt, Cyprus, Syria, Tunisia and Turkey[30].

Considering that in Mediterranean agriculture an average of 2.500 M³/ha are needed on a seasonal basis, adopting solutions allowing a water saving of only 10% would result in 250 M³ of water that could be used for the

[27] The additional information might be used to update the Inception Impact Assessment if relevant.

[28] DG AGRI, Agri-Food Statistical Factsheets, at: http://ec.europa.eu/agriculture/trade-analysis/statistics/outside-eu/regions/agrifood-mediterranean-basin-countries-excluding-eu_en.pdf

[29] Cheriet and Rostoin, op. cit., based on UN Comtrade database.

[30] FAO, Aquastat database.

irrigation of new cropping areas, or for other uses. Improving water efficiency is a specific objective of PRIMA. Increasing irrigation water efficiency would reduce agriculture production costs, enhancing the competitiveness of the sector, and would make more water available to for other uses.

'Water collection, treatment and supply' itself is a relevant and growing economic sector, with an annual turnover of almost €60 billion, 373,000 employees, and 14,000 enterprises of which 97% SMEs in the EU in 2010 (Eurostat database, NACE Rev.2 division 36).

One of the reasons of inefficiencies in the use of water, especially in agriculture, are the insufficient and uneven investments and, therefore, capacities, in R&I (see section A). Collaborative R&I between EU and non-EU players is rather limited, despite the fact collaborative R&I has proven to be more efficient, both in terms of scientific outcomes[31] and in terms of innovation (i.e. the Community Innovation Survey shows that enterprises that received the support of FP7 perform between 2 and 3 time better than others in terms of exploitation of innovations). Southern and Eastern Mediterranean countries benefit from such collaborations supported by the EU's Framework Programmes to a limited extent only. Their participation in FP7 was merely symbolic, despite region-specific actions like ERANETMED. PRIMA is expected to address this issue, facilitating collaboration of the whole R&I community (from scientists to industry) at all shores of the Mediterranean. This is not only likely to increase research and innovation capacities, but also to produce and exploit innovations that would directly create growth and jobs.

But developing new technologies and strategies through R&I is not sufficient. Technologies do exist, but they are not sufficiently implemented. To address this issue, PRIMA aims at going beyond technology transfer, which is the traditional cooperation approach for Science and Technology, not always successful. The objective of the initiative is to mutually develop innovative solutions, adapted to the users' needs in their own contexts in order to promote their adoption for improving the efficiency and sustainability of food productions and water provision. Such co-creation is a critical element of PRIMA, based on the assumption that commonly developed solutions, with participation of local stakeholders, would lead to better implementation results.

In that sense, it is expected that the initiative would attract further R&I (private) investments, creating new business opportunities. The funding from the EU and/or regional countries should leverage further public and private investments. Another positive factor is the attractiveness of the water sector for investors[32].

The Impact Assessment will estimate quantitatively the expected impacts in terms of investment, growth and jobs, through econometrical modelling. It will take into account direct impacts on the water, agriculture and agro-food sectors, but also the indirect ones (e.g. for related sectors like the relevant manufacturing industries, mainly SMEs, and service providers).

In line with Tool Nr. 16 of the Better Regulation toolbox, further areas of potential economic impacts such as the wider macroeconomic context will be explored in more detail in the impact assessment.

Likely social impacts

The Mediterranean region is extremely heterogeneous in terms of population and consumption. Southern and Eastern Mediterranean countries represent 57% of the region's population and 25% of its agro-food imports. EU's Mediterranean countries, respectively 39% and 73%.

This gap is even more evident at country level. In 2011, Slovenia spent almost 2,000 dollars per capita on agricultural and food imports (multiplied by 3.2 between 2003 and 2011), France 1,100 (x 1.7), Croatia 600 (x 2), Morocco 200 (x 2) and Libya 135 (stable), whereas the world average is 250 dollars per capita (x 2.2)[33].

Rural population is very significant in several Mediterranean countries and present strong poverty issues (see section A). However, access to food is sometimes even more difficult in cities, where the image of families with kids looking for food or something valuable in waste landfill sites is very common. With this background, it is no coincidence that the “Arab Spring” was triggered by riots for bread. Access to basic agro-food products is critical to fight poverty, inequality and to reach socio-political stability. The goal of PRIMA is precisely increasing efficiency and sustainability of food production and water provision, as a pre-condition for socio-economic development.

PRIMA is also expected to address migration pressures. Literature shows that migrants tend to be better educated than the population as a whole in source countries[34]. This includes tertiary educated people, like scientists or engineers, leading to the well-known "brain drain" phenomenon. However this general trend is not

[31] Halevi, H. and Moed, H. (2014) "10 years of research impact: top cited papers in Scopus 2001-2011", in Research Trends, Issue 38, September 2014. At: http://www.researchtrends.com/wp-content/uploads/2014/09/4135-Research-Trends-Issue-38-v3-singles-online.pdf

[32] See for instance: http://www.impaxam.com/sites/default/files/investing_in_water_global_opportunities_in_a_growth_sector_all_final.pdf

[33] Cheriet and Rostoin, op. cit., based on UN Comtrade database.

[34] Docquier, F. and Marfouk, A. (2006) "International Migration by Educational Attainment", in Özden, C. and Schiff, L. (ed.) International Migration, Remittances and the Brain Drain, Washington, World Bank and Palgrave Macmillan; te Velde, D.W. (2005) "Globalisation and education: what do the trade, investment and migration literatures tell us?", ODI Working Paper, London.

confirmed in all countries. In Morocco, for instance, the higher the education level attained, the lower the intention to migrate[35].

The main reasons to migrate are socio-economic, i.e. unemployment and, especially, the aim of improving standards of living. Evidence shows that being employed does not prevent migration. Fieldwork studies have demonstrated that although unemployed people are more likely to consider migration, those who have a job, including theoretically good ones like managers or professionals, present also high levels of intentions to leave their country[36].

An enhanced cooperation on R&I in the agro-food and water fields, that are critical for the Mediterranean countries, is likely to create opportunities for young and educated people, reducing their propensity to migrate. Enhanced R&I cooperation is also likely to improve the skills of potential educated migrants and increase the knowledge about the situation in Southern Mediterranean for researchers and technicians from the Northern Europe, in a context where climate change pressures will also affect Europe relatively soon.

In line with Tool Nr. 16 of the Better Regulation toolbox, further relevant areas such as societal impacts in third countries will be explored in the impact assessment.

Likely environmental impacts

As explained above, Mediterranean countries have currently reached a situation of hydric stress where water resources are insufficient in quantity and quality to answer to human and ecosystems needs.

Most climate change scenarios for the region call for decreased rainfall and higher temperatures, while the population will continue to increase until 2030. Water shortages are expected to worsen in the future due to increasing demand for urban uses, energy production and other human related activities such as agriculture, industry and tourism.

The primary objective of PRIMA is to develop and adopt innovative solutions for improving the efficiency and sustainability of food production and water provision. The initiative focuses on mutually developed R&I, adapted to the local needs and specificities. Integration of national programmes and co-creation of solutions is likely to enhance their implementation. In particular, improving water efficiency is the pillar for a sustainable agriculture in the Mediterranean region. But agriculture itself must be based on sustainability principles, taking into account issues like biodiversity, soil erosion, etc. This requires a systemic approach and a strong coordination to avoid actions fragmented and mutually counter-productive.

Technological solutions are necessary, but hardly sufficient. Water is a public good; other incentives for an efficient use need to be created (e.g. price signals, prices, property rights). This need goes beyond the scope of PRIMA, but a stronger cooperation of public authorities and stakeholders in the water and agro-food fields could lead to more comprehensive policy decisions in the medium or long term.

Impacts on resource efficiency will be assessed through econometrical modelling, taking into account the impact of R&I actions (in particular, collaborative ones supported by the EU) on resource efficiency trends. To do this analysis, it is planned to use data at macro and micro levels.

In line with Tool Nr. 16 and 31 of the Better Regulation toolbox, further relevant areas such as water quality and resources as well as sustainable consumption and production will be explored in more detail in the impact assessment.

Likely impacts on simplification and/or administrative burden

The impacts on simplification and/or administrative burden may depend on the option chosen.

A coordinated, integrated and long-term approach between EU and national programmes for R&I could reduce the administrative burdens of managing fragmented research projects. However the creation of any new structure to manage PRIMA as well as negotiation and conclusion of international agreements needed for participation of MPCs in PRIMA would represent costs that should be assessed and compared between the different options, based on previous similar experiences.

For stakeholders ("PRIMA users"), any of the options to be analysed is unlikely to increase the administrative burden. Information costs (in the broad sense) could slightly increase compared with those already existing under Horizon 2020 (baseline scenario). In any case this would mainly depend on the option chosen and its practical implementation.

Likely impacts on SMEs

Adoption of eco-innovation and sustainable business models, together with the reorganization of marketing chains in order to concretely implement the potential sustainability, may then represent the chance for SMEs to

[35] European Training Foundation (2013) Migration and Skills in Armenia, Georgia and Morocco. Comparing the Survey Results. Turin, ETF. At: http://www.etf.europa.eu/web.nsf/pages/Migration_and_skills_Armenia_Georgia_Morocco.

[36] Alquézar, J. et al. (2010) Migration and Skills. The experience of migrant workers from Albania, Egypt, Moldova and Tunisia. Washington, World Bank-European Training Foundation.

increase their competitiveness and give their contribution to the struggle of sustainability issues. This is particularly relevant in the Mediterranean area, where Micro, Small and Medium Enterprises constitute a significant economic and employment driver, representing around 70% of total workforce and 99% of overall enterprises in the region[37]. The 'water collection, treatment and supply' sector alone represents almost 13,700 SMEs in Europe with 138,700 employees (breakdown: micro, 20.6 thousands; small, 33.4 thousands; and medium, 84.4%[38].

A more detailed analysis along the 'SME test (Tool Nr. 19)' will be carried out in the impact assessment. In particular the assessment of likely economic impacts will be breakdown by micro, small, medium and large enterprises.

Likely impacts on competitiveness and innovation

The main economic sectors that would be affected by PRIMA are agriculture, agro-food industry and water, together with R&I organisations (universities, research centres, research and technology organisations). An indirect impact can be foreseen in sectors like machinery for those fields.

The expected impacts would also be direct and indirect:

- Direct, through the solutions co-developed and exploited in the market with PRIMA's support. New products services and processes are likely to be co-designed and commercialised by beneficiaries, and those solutions would then lead to an increase of water and resource productivity.
- Indirect, through the increase of the participants' capacity to innovate: increased knowledge of the markets' needs, increased knowledge about techniques and methodologies, establishment of multi-disciplinary collaborative networks, etc.

Impacts of R&I activities usually take several years. There are cases in which projects funded by the EU exploit results before or just after they end (3-5 years), but this is rather exceptional. In R&I, continuity of efforts is necessary to make the competitive advantages, direct and indirect, permanent. This implies that PRIMA would require a long-term stability to be really fruitful in terms of competitiveness and innovation.

In addition, there could be obstacles to innovation that PRIMA itself cannot address: regulatory barriers, supply of skills to implement the solutions (in several Southern and Eastern Mediterranean countries, educational levels are low), access to capital, etc. A collaborative PRIMA, with the commitment of public authorities, could contribute to identify such barriers and address them outside the framework of the initiative.

Further key questions linked to research and innovation and sectorial competitiveness will be explored in the impact assessment in line with Tool Nr. 17 and 18 of the Better Regulation toolbox. An special emphasis will be placed on quantifying those impacts, in line with what has been described in the sub-section "Economic Impacts".

Likely impacts on public administrations

The impact on public administrations may depend on the option selected. Additional costs could come from the establishment of an ad-hoc, new management structure. In turn, such a new structure could reduce national administrative burdens, through coordinated actions.

The impacts on public administrations will be analysed in the impact assessment, using existing cases as main reference.

Likely impacts on third countries, international trade or investment

The 2015 *Global Risks Report* of the World Economic Forum identifies water crises as the number one risk that could undermine economic growth impacting several countries or industries within the next 10 years. In the future, geopolitical tensions over access to strategic water resources could become more systemically impactful, and water shortage coupled with poverty and societal instability could weaken intra-state cohesion. This risk is particularly acute and real in Northern Africa and the Middle East.

PRIMA might be an opportunity for the EU and Southern Mediterranean Partners to join forces in a R&I partnership that may have major implications to the future wellbeing of populations across the shores of the Mediterranean Sea, in line with the Sustainable Development Goal (SDG) number 17 (see below). The initiative is supported by a strong political will within Southern and Eastern Mediterranean Countries as well as by financial resources to match their ambition to play a major role in this partnership. One critical point to reach PRIMA's objectives will be that partners collaborate as equals, both for decision-making and for their contribution. As of December 2014, a total of € 200 million cash contributions have already been committed ex-ante by twelve EU and non-EU countries. Equivalent in-kind contributions are foreseen in addition, especially

[37] Euro- Med Development Center for Micro, Small and Medium Enterprises, 2012, presentation at the Workshop on challenges and opportunities for the textiles and clothing sector in the Euro-Mediterranean region, based on Eurostat data.
[38] Eurostat database.

contributions in the form of salaries of permanent researchers and equipment/infrastructures. These contributions are long-term national commitments (10 years) subject to the use of an Article 185 TFEU. The financial commitment will have to be further discussed and formalized before an eventual legal act is proposed based on the impact assessment results.

PRIMA would be really successful if it will incentivise a substantial financial leverage, also attracting private investors.

Probably the main beneficiaries of PRIMA would be countries from Southern and Eastern Mediterranean, because they face stronger issues and have more needs. Most solutions co-developed with PRIMA's support are likely to be primarily implemented in Southern and Eastern Mediterranean countries, contributing to a more efficient use of resources, food security, sustainability and skills development. For EU countries, PRIMA can provide a competitive advantage for further trade and investments.

PRIMA would contribute to SDGs, especially numbers 6, 2 and 9, as well as goal 17 when it comes to strengthening multi-stakeholder partnerships and fostering international cooperation in research and innovation. The EU has promoted very actively the role of Science, Technology and Innovation in the new agenda as demonstrated by the Council Conclusions of May 2015 and the Commission Communication of February 2015.

Likely impacts on migration have been described in the section "Social Impacts".

A more detailed analysis addressing potential impacts on external trade, investment, and developing countries will be carried out in the impact assessment, in line with Tool Nr. 22 and 30.