Euro-Mediterranean Cooperation in Science and Innovation: 20 Years of the Barcelona Process

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The Barcelona Declaration, the Association Agreements between the EU and the south Mediterranean countries, together with the Union for the Mediterranean 'Paris Declaration,' constitute the framework for cooperation policy development between the EU and the southern Mediterranean countries. This paper intends to highlight the milestones of such cooperation in Science and Innovation, reviewing the existing instruments and programmes, appraising the challenges and opportunities and proposing measures for future actions. In conclusion, the author highlights the importance of developing the sense of co-ownership for the cooperation, introducing structural and institutional reforms and building the capacity of youth in the southern Mediterranean countries and capitalizing on the value added of brain circulation. Two specific cooperation initiatives were singled out: The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) and the Common Euro-Mediterranean Innovation Agenda.

Key Words: Euro-Mediterranean cooperation, partnership in research and innovation, instruments and programmes, PRIMA

The southern Mediterranean region, including Morocco, Algeria, Tunisia, Libya, Egypt, Palestine, Israel, Jordan, Lebanon and Syria, is a region of strategic importance to the EU. These countries also referred to as the Mediterranean Partner countries (MPCS), constitute Europe's southern neighbourhood as defined by the European Neighbourhood Policy (ENP). The MPCS face common societal challenges including, but not limited to, water and food security, environment conservation and energy supplies, migration and brain drain, social exclusion, unemployment of youth and political instability. These challenges if not timely addressed will heighten

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the economic and political turmoil and may eventually lead to lawlessness and violent conflicts, as witnessed in some of the worst affected countries of the region. Such instability already affects Europe's security whether from illegal migration, flow of refugees from conflict zones or through spill over of violence across the Mediterranean.

This notion is not new; actually the Europe 2020 strategy (European Commission 2010) regards cooperation with neighbourhood countries on societal challenges as central to Europe's efforts to better help its own development policy. Many of these challenges could be effectively addressed through joint Euro-Mediterranean initiatives and actions utilizing Science, Technology and Innovation (STI) to drive the economy and bring about inclusive and sustainable growth.

The launching of the Barcelona Process with its Declaration in 1995 created a scheme for Euro-Mediterranean cooperation and partnership aiming at establishing an area of peace, stability and prosperity. It proposed a framework to support dialogue among cultures of the region, to disseminate a culture of human rights and democratic citizenship and to promote economic development along the southern rim of the Mediterranean, thus shaping the EU policy toward the southern Mediterranean Countries. This provided the initial impetus for Euro-Mediterranean cooperation in Science, Technology and Innovation (STI).

In 2003, the EU launched a new policy instrument, the European Neighbourhood Policy (ENP), which addressed through its financial instrument, the European Neighbourhood and Partnership Instrument (ENPI), cooperation with the neighbouring countries of the EU in geographical areas. The Mediterranean countries represent the Southern Neighbourhood area. This was followed by signing association agreements between the EU and the individual southern Mediterranean countries, with underlying action plans serving as an implementation and follow-up tool. Signing the Association agreements opened the door for the Mediterranean Partner Countries (MPCS) to establish Science and Technology Cooperation Agreements with the EU. To date, Morocco, Algeria, Tunisia, Egypt

and Jordan, in addition to Israel and Turkey have concluded such agreements.

The Union for the Mediterranean (UfM) launched in Paris in July of 2008 aimed at reinvigorating the partnership between the EU, Associated countries and the southern Mediterranean countries. The new process, being governed by a joint Presidency from the EU and the MPCS, sets a practise of co-governance and co-decision making. Higher Education and Research were underlined as one of the six priority areas of the UfM. This was accompanied by inaugurating the Euro-Mediterranean University (EMUNI) hosted in Slovenia to facilitate achieving a common Euro-Mediterranean area of Higher Education and Research.

The Barcelona Declaration (1995), the Association Agreements, together with the Union for the Mediterranean 'Paris Declaration' ('Joint Declaration of the Paris Summit for the Mediterranean' 2008), constitute the framework of cooperation between the EU and the MPCS, acting as reference points for the cooperation policy development.

PURPOSE OF THE PAPER

Today, 20 years after the initiation of the Barcelona process, with many programmes, instruments and projects in place, it is time to reflect critically on how this partnership has developed and decide on how to proceed with a shared vision towards true Euro-Mediterranean cooperation in STI. With the above in mind, this paper intends to highlight the milestones of EU-MPCS cooperation in STI, appraise its progress and propose measures for future actions. As such, this paper could serve as a framework for policy makers and a brief guide for practitioners.

POLICY FRAMEWORK

The mainstay of EU-MPC policy dialogue is the Group of Senior Officials in Research and Innovation (EU-Med GSO), formerly known as Monitoring Committee for Euro-Mediterranean Cooperation in Research and Innovation (MOCO). The GSO was initially established along the Barcelona process in 1995 and later, in 2008, it started to

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function as an instrument under the UfM. This committee, which brings together representatives of Ministers of Research from 43 Euro-Med countries, is considered as the Euro-Mediterranean Senior Officials Meeting (SOM) for Research and Innovation.

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The GSO has been regularly holding annual meetings from 1995 until present time. It has been instrumental in identifying challenges and proposing actions to enhance Euro-Med STI cooperation. It has also played an important role in reviewing the course and providing guidance for EU-funded STI cooperation projects, in particular the regional coordination and support actions (InCo-Nets). Under the UfM, it has also served as the body which endorses R&I, projects for funding. Perhaps, its most significant task has been assigned by the 1st Euro-Mediterranean Ministerial conference for Higher Education and Research, which was held in Cairo in June 2007; the GSO was mandated to review the progress of the implementation of the conference paper, 'The Cairo Declaration.'

Another platform for Euro-Med policy dialogue is provided by the EU-funded INCO-Net projects, which coordination and support actions (CSA) under FP7. Besides serving as a platform for policy dialogue and coordination, the InCo-Nets raise awareness and build the capacity of research and innovation communities in the target region (MPC) in order to enhance the engagement and participation of the different stakeholders in cooperation along the Framework Programme. The MIRA (FP7 Mediterranean Research and Innovation action, coordinated by CSIC in Spain from 2008–2012), MED-SPRING (FP7 Mediterranean Science Research and Innovation Gateway, coordinated by CIHEAM Bari in Italy from 2012–2016) and more recently MERID (H2020 Middle East Research and Innovation Dialogue, coordinated by EMUNI in Slovenia from 2015–2018) represent successful examples of such projects.

In addition to the Bi-regional InCo-Nets, the FP7 has also funded bilateral CSA (BILATS). These are calls targeting cooperation with specific countries with which the EU has Science and technology agreements ('Agreement of Scientific and Technical Cooperation between the European Community and the Kingdom of Morocco' 2004; 'Agreement of Scientific and Technical Cooperation between

the European Community and the Tunisian Republic' 2004; 'Agreement of Scientific and Technical Cooperation between the European Community and the Arab Republic of Egypt' 2005).

THE CAIRO DECLARATION

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The first and only meeting of the Euro-Mediterranean Ministers of Higher Education and Research was held in Cairo, Egypt on June 18, 2007, under the title 'Towards a Euro-Mediterranean Higher Education and Research Area.' The conference was co-chaired by Germany, representing the rotating Presidency of the Council of the Eu, and the host country, Egypt. Coming 12 years after the onset of the Barcelona Process and endorsing a comprehensive paper, the 'Cairo Declaration,' this meeting represents a milestone in Euro-Mediterranean cooperation in Higher Education and Research.

The Cairo Declaration ('Towards a Euro-Mediterranean Higher Education and Research Area' 2007) represents an ambitious comprehensive document with a set of clear objectives and underlying concrete deliverables for attaining those objectives. Stressing the need to move toward the creation of an Euro-Mediterranean Research and Innovation Area, the Declaration advocated modernizing the R&D policies and supporting institutional capacity building in the MPCS. It also emphasized the need to enhance the participation of the MPCS in the EU's Framework Programme of Research and Innovation, while taking into account their particular needs and the mutual interest and benefit. Promoting Innovation in the MPCS by enhancing exploitation of the Research outputs by society and Industry, in addition to favouring mobility of researchers were also underlined. There has not been another Ministerial meeting since, therefore the Cairo Declaration continues to constitute the main regional policy framework for cooperation in research.

In May 2011, addressing the on-going popular uprisings in the Mediterranean, the EU issued a Joint Communication by the EU External Action and the European Commission 'A New Response to a Changing Neighbourhood' (European Commission 2011) stressing the need for a new approach to strengthen the partnership between the EU and the ENP countries. The MPCS were offered a 'Partner-

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ship for Democracy and Shared Prosperity.' This partnership focused on three main pillars; democratic transformation, partnership with the civil society and inclusive and sustainable growth. Working towards the development of a 'common knowledge and innovation space' (CKIS) was underlined as a cooperation priority.

A month later, in June 2011 during the 15th meeting of the Euro-Mediterranean GSO in Szeged, Hungary, under the co-presidency of Egypt and France, the MPC representatives underlined their desire to introduce co-ownership of EU-MPC actions in research and innovation with the underlying principles of demand-driven and impact-driven cooperation based on co-decision making and co-funding of joint actions of mutual interest and shared benefit.

The unfolding revolutionary events in the region appear to have generated the requisite political interest and impetus to push the regional research cooperation agenda forward. The European Commission's Directorate General for Research and Innovation organized in April 2012 an important conference with the key regional stakeholders in order to further define 'An Agenda for Renewed Partnership.' This event reinforced the ongoing discussions towards developing a new support framework to enhance innovation at national and regional level in the Southern Mediterranean. Following this event, Article 185 of the 'Consolidated Version of the Treaty on the Functioning of the European Union' (2012) was proposed as a suitable instrument to tackle the global challenges of the Mediterranean region in an integrated way. The Article 185 TFEU states: 'In implementing the multiannual framework programme, the Union may make provision, 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.'

At the margins of the Informal Competitiveness Council held in June 2012 in Nicosia, several EU member states led by Italy announced an initiative to work towards an article 185 TFEU, launching the 'Partnership in Research and Innovation in the Mediterranean Area' (PRIMA). The PRIMA initiative received a further endorsement during two subsequent Competiveness Councils held un-

der the Greek Presidency (May 2014 in Brussels) and the Italian Presidency of the Council of the (December 2014 in Napoli). The PRIMA proposal is currently undergoing impact assessment by the EU.

Following the decisions of the December 2013 meeting of the EU-Mediterranean GSO, a working group to define a Common Euro-Mediterranean Innovation Agenda was established, chaired by Egypt. The first draft of this agenda was presented in April 2014 in a workshop organized by the Commission in Brussels. The agenda was endorsed by the subsequent EU-Med GSO in September 2014. The common Euro-Mediterranean Innovation agenda aims to:

- Unleash the innovative potential in the region in order to make direct use of research and innovation for socio-economic development in the medium and long term;
- Address the vital needs of the region for funds and technical assistance in the sphere of innovation and commercial exploitation of research results;
- Initiate a suitable support framework to enhance innovation at national and regional level in the Southern Mediterranean in line with the Common Knowledge and Innovation Space priority;
- Prioritise financing of innovative entrepreneurs, with a special focus on youth and women;
- Support the establishment of multilateral partnerships with MS, Southern Mediterranean countries, International Financial Institutions (IFIS), private sector, civil society and other stakeholders.

INSTRUMENTS & PROGRAMMES

The backbone of EU-MPCS cooperation in Research is the EU Framework Programme for Research and Innovation, FP7. Its launch coincided with the signing of the S&T Agreements and furthering the bilateral policy dialogue through the Joint Science and Technology Cooperation Committees with several of the MPCS. In addition, the MPCS participation in FP7 was facilitated by the InCo-Nets, MIRA

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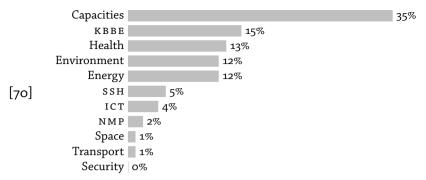


FIGURE 1 MPCS participation in FP7 by theme (adapted from European Commission 2014)

and MED-SPRING, which played an important role in raising awareness of Mediterranean research communities, building their capacities and suggesting topics for cooperation based on mutual interest of EU MS and MPCS.

As of February 2014, about 580 institutions from the MPCS had signed grant agreements within the FP7, working along more than 400 projects with a total EU contribution of around 60 Million EUR. Figure 1 (European Commission 2014) shows that the majority of the participation was in the sub-programme of Capacities, including coordination and support actions. Within the Collaborative Research sub-programme, 4 thematic areas stand out as the main areas of cooperation, in order of participation they are, Food, Agriculture & Biotechnology, Health, Energy and Environment including water.

The Euro-Mediterranean Industrial Cooperation Programme, managed by Directorate General Enterprise in consultation with the Working Party on Euro-Mediterranean Industrial Cooperation, is an instrument created under the Barcelona Process and it is financed by the provisions of the Bilateral Association Agreements and the ENI.

The Competiveness and Innovation Framework Program (CIP) was open to the participation of MPC along FP7 through the Entrepreneurship and Innovation Programme (EIP). CIP is currently part of H2O2O.

The ENPI Regional Indicative Programme for Euro-Mediterranean



Partnership is the most important instrument for regional cooperation. It was supported by a scheduled total funding of 343,3 Million Euro for the period 2007-2010, following the priorities defined in the Barcelona Process, later redefined under the UfM in the Marseilles summit of November 2008. Here, again, RTD is a high priority in several actions, notably the Mediterranean Strategy for Sustainable Development, including the 'Horizon 2020' project aimed at decontaminating the Mediterranean Sea, the integration of the energy, transport, ICT and research markets. The funding earmarked for the activities of sustainable development for the year 2009 was 69 Million Euro, and for 2010 was 47 Million Euro. This Programme is the most important financial instrument for the EU-MPC regional cooperation. The development of this ENPI through the RDI programmes is providing a substantial input to the capacity building in several MPCS.

ENPI Cross-Border Cooperation (CBC) is based on earlier experiences under 'TACIS' and 'Phare' Programmes providing pre-accession support to Eastern European States, Interreg, providing funding for inter-regional cooperation in Europe and the MEDA Programme which was the main instrument implementing cooperation measures with southern Mediterranean countries in the period of 1996–2006. The core policy objectives of CBC on the external borders of the Union are to support sustainable development along both sides of the EU's external borders, to help ameliorate differences in living standards across these borders, and to address the challenges and opportunities following on EU enlargement or otherwise arising from the proximity between regions across our land and sea borders. The ENPI-CBC 'Mediterranean Sea Basin Programme' had a budget of 173 million Million Euro (ENPI and MED n. d.).

The Facility for Euro-Mediterranean Investment and Partnership (FEMIP) was created in 2002 and provides funding for private sector development in the Mediterranean region aimed at sustainable economic growth. Tentatively, a capital of about 32 Million Euro/year is allocated to FEMIP for technical assistance and risk capital. However, in the 2005 summit of Barcelona, a Neighbourhood Investment Fund, built on the FEMIP, was allocated 700 Million Euro (roughly

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100 Million Euro/year) to be used to lend to the ENP, including the MPC, acting as a leverage to multiply the financial engagement by other actors, notably the MS (ENPI and MED n. d.).

Technical Assistance and Information Exchange Programme (TAIEX) provides short-term technical assistance and advice on convergence with EU legislation, best practices and standards and on related administrative capacity needs, technical training and peer assistance, as well as a data base and information network that facilitates the monitoring of approximation measures. MPC partner countries have taken up this demand-driven instrument, which is key in supporting the transition and reform processes.

OBSTACLES AND RECOMMENDATIONS

The policy framework, instruments and programmes outlined above demonstrate that a lot of consideration has been given to EU-Mediterranean cooperation and partnership since the advent of the Barcelona Process in 1995. Substantial progress has been achieved, especially in participation in joint initiatives and projects. However, the cooperation across the Mediterranean still suffers considerable structural weaknesses and there are remaining obstacles in the face of building the desired partnership.

The main obstacle for a structured scientific cooperation lies in the *lack of 'symmetry' between the cooperating systems*. The cooperation system is complex, and includes, besides the scientific capacity and mutual interests, which are basic requirements, matching of administrative and financial procedures. The main consequence of non-compatible cooperating systems is a growing frustration and demotivation of the partners.

The heavy and cumbersome administration of the European research funds suffered by the European participants is even more agonizing for Mediterranean participants. We are witnessing in the recent years progressive retreat of excellent scientists from the MPCS from the Framework Programme due to their incapability to handle the administrative aspects of participating in EU-funded projects. These scientists receive little or no administrative support from their institutions. More must be done to improve the process

of cooperation in its multiple dimensions: scientific, administrative and financial

The difficulty of establishing partnerships among asymmetrical cooperating systems, with frequently uneven capacities, requires effective coordination and harmonisation between the cooperating partners and instruments. This coordination is not only lacking between the national systems across the Mediterranean, but is also inadequate between the bi-lateral and bi-regional cooperation instruments, including still between the EU instruments themselves. However, this does not preclude *structural measures* and *institutional* reforms that the MPCS have to undertake in order to modernise their STI governance and augment their absorption capacity of funds. Another important factor, particularly emerging with the recent popular revolts in the Mediterranean, is the sense of ownership for the cooperation, particularly by the MPCS, which should be further developed. The cooperation fields should be more demanddriven and the instruments and programmes redesigned to be more impact-oriented. The impact should be perceived by the civil societies on both shores of the Mediterranean in order to attain that sense of co-ownership and partnership.

A wider participatory approach based on co-decision making and co-management of programmes/projects funds is needed. For this to happen, co-funding of joint activities by the MPCS is essential to develop this sense of ownership and determine the cooperation areas and instruments that are both demand driven and impact oriented. This is indeed the will of most, if not all, MPCS expressed in several occasions from 2011 onwards. This also constitutes the basis of the PRIMA initiative, which many of the EU member states and MPCS are proposing.

However, any initiative to be effective it has to address the different components of the research and innovation ecosystem in a comprehensive and inclusive manner. Among others, the transition towards a knowledge-based economy in MPCS requires:

• Establishing Institutional frameworks capable of swift management of the resources used for research and the efficient

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utilisation of knowledge and its transformation into business ideas and supporting of entrepreneurship.

- Capacity building of the academic community to create, share and use knowledge, with special emphasis on professional training and promoting Doctorate Programs in high priority areas dictated by the demands of the industrial and business sectors.
- Investment in dynamic infrastructures, including information infrastructures and systems, for the industrial and research sectors.
- Setting up national research and innovation programs to create synergies between the research and business sectors.
- Developing regional demand-driven innovation and entrepreneurship programmes that would engage the growing population of youth in the MPCS.

CONCLUSIONS AND FUTURE PERSPECTIVES

The popular uprisings in the south Mediterranean since January 2011 have driven the region in the throes of major political, economic and societal transformations, the results of which are yet to be witnessed. Democracy and citizens' empowerment; viable economic, trade and employment models; sustainable social inclusion and education and research policies are emerging as fundamental areas of transformation in the region.

Meanwhile, the major critical challenges facing the Euro-Mediterranean region, including the refugees' crisis and the recent surge in fundamentalism and terrorism, urgently necessitate rethinking the EU's strategy towards its southern neighbours. However, the time might not be better. The occasion of the 20th anniversary of the Barcelona Process and the on going review of the ENP provide an opportunity to reorganise the EU-Mediterranean and the UfM's cooperation strategy to address such dynamic transformations and critical challenges.

Education, Research and Innovation should be at the heart of this strategy. This is vital not only to pursue a sustainable development agenda in the MPCS, based on the principles of the knowledge econ-

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omy, but also to capitalise on *science diplomacy*, which is a source of Europe's soft power, as an effective tool and a sound catalyst for the desired cooperation areas. The perception of citizens regarding the benefits of science, its universal nature, and its detachment from ideological, socio-political or religious conflicts, empowers its role as a valuable cooperation strategy. Furthermore, *fostering the societies'* knowledge, educating its youth and building its innovation capacity will, on the long term, bring about the desired democratic transformation and inclusive economic growth, which will in turn combat extremist ideologies and violence.

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Considering the fact that youth comprises about half of the population in the Southern Mediterranean and their important role as catalysts for development and change, empowering youth provides a unique opportunity to constructively build the region's future. Specific actions directed to building the capacity of youth should be an integral part of any EU strategy for the South-Mediterranean, not only to limit illegal migration, but more importantly to encourage the value-added of *brain circulation* and avoid those young individuals falling victims to extremist ideologies.

On a final note, the PRIMA initiative utilizing article 185 of the TFEU and The Common Euro-Mediterranean Innovation Agenda are the result of a lengthy and vigorous process of high-level policy dialogue and hard work, in which the MPCS developed a sense of co-ownership and co-decision making. It is of utmost importance that these initiatives are supported for implementation within a comprehensive strategy for EU-Mediterranean cooperation based on the principles of co-ownership, co-responsibility with co-funding of impact-driven actions of mutual interest and shared benefit.

NOTES

1 For the purpose of this paper the South Mediterranean region includes the ENP countries in the South. However, it should be noted that Israel was associated to FP7 and is associated to Horizon 2020, making its situation completely different from the one of the other countries not associated to the Framework Programme, therefore it is not covered by the paper. Similarly, Turkey, is not covered as one of the MPCS, since it is a Candidate to EU membership – and is also associated to Framework Programme.

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