

# Roadmap for EU - Southern Neighbourhood S&T cooperation

## 1. SOUTHERN NEIGHBOURHOOD as a partner of the EU

The European Union and its Southern Neighbours share a rich common history and heritage as well as several opportunities and common challenges. With total trade amounting to 174 billion euros in 2016, Southern Mediterranean countries in aggregate rank 5th as trading partners of the EU. Our proximity also means that a stable EU Neighbourhood in political, socio-economic and security terms is critical. The European Neighbourhood Policy (ENP) seeks to build effective partnerships between the EU and its Southern Neighbours, framed by the values of democracy, the rule of law and respect of human rights.

While the ENP frames the bilateral policy of the EU with each Neighbourhood country, it also prioritises the Union for the Mediterranean (UfM) to channel regional cooperation efforts. The UfM provides a platform for multilateral cooperation initiatives with Southern Neighbours among other UfM Member Countries. It promotes economic integration among Member Countries in areas that include the business environment, energy and climate action, water and environment, urban development, higher education and research.

The Southern Neighbourhood countries included in this roadmap are Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestine and Syria. Israel and Tunisia are not included as they have been associated to Horizon 2020 since 1 January 2014 and 1 January 2016 respectively.

[Latest EU-SOUTHERN NEIGHBOURHOOD Summit]

At the second Regional Forum of the UfM held on 23-25 January 2017 in Barcelona, the UfM Member States endorsed a roadmap that addresses the potential of youth for stability and development<sup>1</sup>. The roadmap singles out priorities such as employment and business development, education and youth employability, women's socioeconomic empowerment, mobility and the territorial dimension. It also sets the stage for a deeper regional political dialogue to address common challenges such as terrorism, radicalisation and irregular migration.

The commitment to support inclusive human and sustainable development was reiterated at the third Regional Forum of the UfM held on 8 October 2018 in Barcelona. While taking stock of the implementation of the UfM roadmap endorsed in 2017, the UfM Member States also assessed the progress made in areas such as energy and climate action, higher education and research, environment and water management, urban development, digital economy and connectivity, depollution, integrated resource management and trade. In addition, all 43 UfM Member States committed to intensify joint efforts to address common challenges and create common opportunities in the Euro-Mediterranean region.

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<sup>1</sup> Mediterranean in Action: Youth for Stability and Development, URL: <http://ufmsecretariat.org/ufmregforum/>

*[EU-SOUTHERN NEIGHBOURHOOD non-S&T cooperation agreements]*

The EU established association agreements with a number of countries in the region covering a broad range of areas including political dialogue, trade, economic, social and cultural issues. To date the EU has established association agreements with the Palestinian Authority (in force: 1 July 1997), Tunisia (1 March 1998), Morocco (1 March 2000), Israel (1 June 2000), Jordan (1 May 2002), Egypt (1 June 2004), Algeria (1 September 2005) and Lebanon (1 April 2006).

In addition, in 2011 the Council adopted negotiation directives for Deep and Comprehensive Free Trade Agreements (DCFTAs) with Egypt, Jordan, Morocco and Tunisia which would essentially integrate these countries into the EU single market. Negotiations for a DCFTA were launched with Morocco in 2013 and Tunisia in 2015.

*[EU-SOUTHERN NEIGHBOURHOOD S&T cooperation agreements]*

The year 2017 saw the first meeting of Research Ministers of UfM Member Countries since 2007. Held on 4 May 2017 in Valletta, the Ministerial Conference on Strengthening Euro-Mediterranean Cooperation through Research and Innovation coincided with the culmination of inter-institutional negotiations that led to the adoption of the Decision of the European Parliament and the Council on the Union's participation in PRIMA<sup>2</sup>.

The resulting Valletta Declaration<sup>3</sup> sets out the Ministerial Conclusions that commit to the implementation of PRIMA through a common research and innovation agenda in the key fields of agro-food systems and water management and a higher degree of integration between UfM countries. In addition, the Research and Innovation Initiative for Blue Jobs and Growth in the Mediterranean Area (BLUEMED) will further develop and shape a common vision for the Mediterranean and promote integration among UfM countries in marine and maritime research and innovation. In the area of migration research, the Ministers acknowledged the need for common platforms, methodologies, and shared data collection and analysis.

Preparatory work for the Ministerial Conference took place during two meetings of the Euro-Mediterranean Group of Senior Officials in Research and Innovation (EU-MED GSO) that took place on 22 November 2016 and 25 January 2017. The Ministers also charged the EU-MED GSO with implementing the Valletta Declaration.

Meanwhile negotiations with third countries that are not associated to Horizon 2020<sup>4</sup> proceeded in earnest with a view to the timely conclusion of bilateral international agreements setting out the terms and conditions of their participation in the Partnership for Research and Innovation in the Mediterranean Area (PRIMA). The signature of the Agreement between the EU and each of Algeria<sup>5</sup> and Egypt<sup>6</sup> took place on 26 October 2017 and

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<sup>2</sup> Decision (EU) 2017/1324 of the European Parliament and of the Council of 4 July 2017 on the participation of the Union in the Partnership for Research and Innovation in the Mediterranean Area (PRIMA) jointly undertaken by several Member States

<sup>3</sup> [https://www.eu2017.mt/Documents/Declarations/Declaration\\_EuroMed%20Cooperation%20in%20Research%20and%20Innovation.pdf](https://www.eu2017.mt/Documents/Declarations/Declaration_EuroMed%20Cooperation%20in%20Research%20and%20Innovation.pdf)

<sup>4</sup> Note that the Association to Horizon 2020 provided Israel, Tunisia from the Southern Neighbourhood as well as Turkey with direct access to participate in PRIMA since the respective Association Agreements with these countries allow them to participate in 185 TFEU initiatives such as PRIMA.

<sup>5</sup> Agreement for scientific and technological cooperation between the European Union and the People's Democratic Republic of Algeria setting out the terms and conditions for participation of the People's Democratic Republic of Algeria in the Partnership for Research and Innovation in the Mediterranean Area (PRIMA)

27 October 2017 respectively. The signature of the agreement with Jordan took place on 10 November 2017. More recently, the agreement with Lebanon was signed on 27 February 2018 and the agreement with Morocco was signed on 10 April 2018.

Country-level bilateral Science and Technology Cooperation Agreements (S&T Agreement) between the EU have been established with Morocco (2005), Egypt (2008), Jordan (2010) and Algeria (2013). Since the previous edition of the Roadmap, the EU has held meetings of the Joint Science and Technology Cooperation Committee (JSTCC) with Algeria on 26 October 2017 and Egypt on 27 October 2017 on occasion of the signature of the Agreements between each of these countries and the EU setting out the terms and conditions of the participation in PRIMA.

*[R&I landscape in SOUTHERN NEIGHBOURHOOD]*

Of the Southern Mediterranean countries included in this edition of the roadmap Egypt, Jordan, Morocco and Syria are lower middle income countries while Algeria, Lebanon and Libya are upper middle income countries. The total population reaches 185 million and includes a large youth population. For example in Egypt, which has the largest population among Southern Mediterranean countries, about one in three people are aged fifteen or younger. Unemployment remains a major challenge in the region with unemployment rates hovering around 10%. Unemployment is particularly high among youth reaching the 25% mark in many countries in the region.

The current economic outlook remains challenging for all countries included in this roadmap. Algeria's reliance on oil export revenues combined with prolonged low level of oil prices is expected to impact its GDP growth, estimated to stay below the 2% threshold for 2019-20, down from around 4% in 2016. Meanwhile Egypt has undertaken an ambitious reform programme backed by the IMF since November 2016, but faces inflation (around 14%) and significant pressure on public finances. Lebanon and Jordan continue to suffer from spillovers from the Syrian conflict, resulting in a deceleration in their economies and an increase in unemployment (close to 20% in both countries). However both countries have proved resilient notwithstanding high public debt levels (2016 - %/GDP: Lebanon: 144%; Jordan: 95.1%). The conflict in Syria is estimated to have resulted in a 63% fall in GDP between 2010 and 2016 in addition to major human loss with an estimated 400.000 casualties and more than half of the Syrian population having been displaced. In Libya GDP is estimated to have shrunk cumulatively 47% since 2012 while the budget deficit remained high at around 34% percent of GDP in 2017. Libya is also impacted by low oil prices and oil production levels, reaching only a fifth of the country's potential, as well as by supply shortages of goods and services. Per capita GDP in Palestine has been mostly on a downward trend since 2012, recently accelerated by a significant decline in donor support. The unemployment rate was 32.4 percent in the second quarter of 2018, the highest rate in two decades. Finally, Morocco's economic growth remains sluggish in 2018, mainly due to decline of agricultural value-added growth from 14.8% in 2017 to 2.5% in 2018, which is only partially compensated by non-agriculture activities. Its overall unemployment rate declined to 9.1% in 2018, but remained high among the urban young (23.1%) and educated (16.5%).

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<sup>6</sup> Agreement for scientific and technological cooperation between the European Union and [Egypt] setting out the terms and conditions for participation of [Egypt] in the Partnership for Research and Innovation in the Mediterranean Area (PRIMA)

**Table 1: Southern Neighbourhood Countries – Overall R&D Landscape**

Country	Population <sup>1</sup>	GDP <sup>2</sup> (per capita)	GERD <sup>3</sup> (as % of GDP)	R&D personnel per million habitants <sup>4</sup> (researchers per million habitants)
<b>Algeria</b>	40.4	584.0 (14687)	241.1 (0.07%)	508 (415)
<b>Egypt</b>	93.4	999.0 (10891)	7,217.9 (0.72%)	2526 (1396)
<b>Jordan</b>	7.7	82.8 (10880)	263.3 (0.43%)	1568 (1197)
<b>Lebanon</b>	6.0	81.5 (13938)	- -	- -
<b>Libya</b>	6.3	- (14154)	- -	182 (74)
<b>Morocco</b>	34.8	274,0 (7821)	1,483.6 (0.71%)	1469 (1385)
<b>Palestine</b>	4.8	22.2 (5009)	95.533,9 (0.49%)	1972 (1026)
<b>Syrian Arab Republic</b>	18.6	- (-)	- -	- -

<sup>1</sup>In million; values of 2016.

<sup>2</sup>In billion PPP current international \$; values for 2015.

<sup>3</sup> In million current PPP \$. 2005: Algeria; 2008: Jordan; 2010: Morocco; 2013: Palestine; 2015: Egypt.

<sup>4</sup>Head Count. 2005: Algeria; 2009: Libya; 2013: Palestine; 2014: Morocco; 2015: Egypt, Jordan;

Source: DG Research and Innovation, Dir. C -International Cooperation

Data: UNESCO Institute for Statistics, retrieved on 12/10/2017

As a result efforts geared towards fiscal consolidation in most countries are putting public expenditure under pressure. The partial data provided in Table 1 above shows total population and gross domestic product data as well as expenditure on research and experimental development (GERD) measures in Southern Mediterranean countries. While GERD/GDP ratios appear to be in line with average values for upper middle-income (0.55%), except for Algeria (0.07%) and lower-middle income (0.34%) countries, they fall below the targets set as individual national policy objectives for 1% or above.

Based on the most recent data available, Algeria and Libya also trail behind average for upper-middle income countries in the number of researchers per million inhabitants (average: 792.86)<sup>7</sup>, while Egypt, Jordan, Morocco and Palestine all report above average figures (lower-middle income researchers, per million inhabitants: 449.14).

<sup>7</sup> The Global Innovation Index 2017 – Innovation Feeding the World, tenth edition

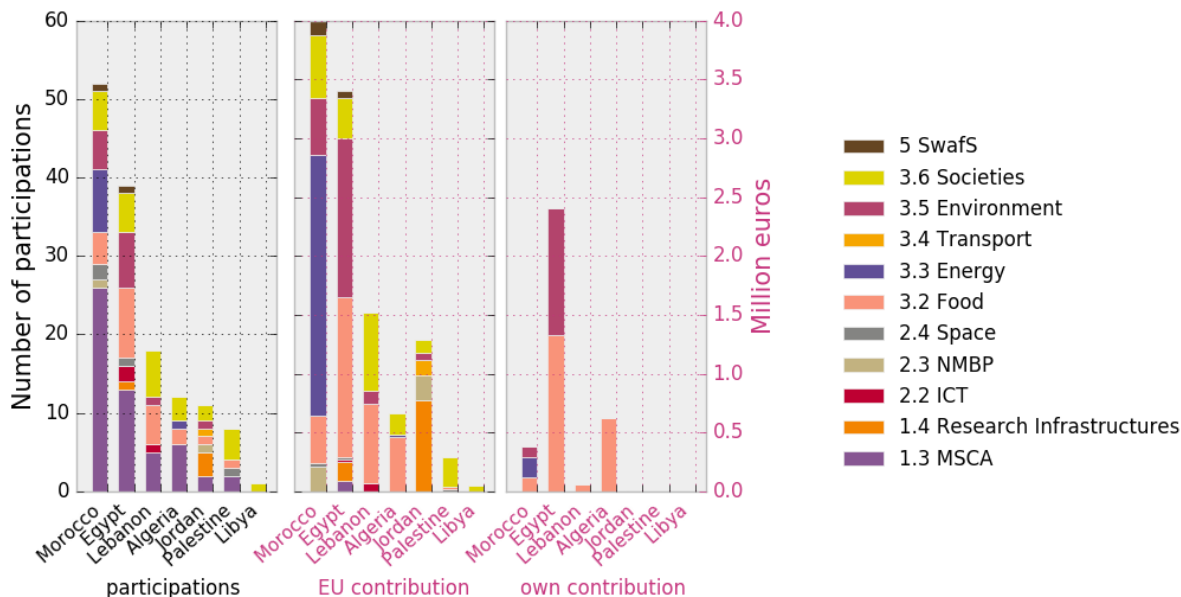
## 2. State of play of EU-SOUTHERN NEIGHBOURHOOD S&T cooperation

### 2.1 On-going FP7 and Horizon 2020 cooperation

In FP7 applicants from Southern Neighbourhood countries (excl. Israel and Tunisia) were involved 2429 times in 1281 eligible proposals in collaborative research actions. Of these, there were 406 participations by entities from the Southern Mediterranean (excl. Israel and Tunisia) in 194 successful projects with an EU contribution to Southern Mediterranean beneficiaries (excl. Israel and Tunisia) amounting to €43.8 million.

Based on data collected in October 2018, applicants from Southern Neighbourhood (excl. Israel and Tunisia) countries were involved in Horizon 2020 708 times in 415 eligible proposals to collaborative<sup>8</sup> actions. 54 proposals were mainlisted, leading to a success rate of 13.0% (as compared to 15.8% overall). Southern Neighbourhood (excl. Israel and Tunisia) entities have 87 participations in 50 signed grants, receiving €11.6 million from the EU while €3.7 million is the non-EU budget of beneficiaries from this region.

**Figure 1: Participation of Southern Neighbourhood countries in Horizon 2020**



Note: Participations of beneficiaries, third-parties and partner-organisations.  
 Source: DG Research and Innovation - International Cooperation  
 Data: CORDA (JRC, EIT and art.185 not included); extraction date: 15/10/2018

In the Research Infrastructure dimension, at multi-lateral level, the EU has also provided support towards the setting up the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME), whose

<sup>8</sup> Here referring to non-bottom-up, internationally open, collaborative actions, i.e. all actions except for ERC, MSCA, actions under the SME Instrument and Access to Risk Finance.

South Med membership includes Egypt, Israel, Jordan and the Palestinian Authority. The EU has observer status in SESAME. The EU continues to engage building human capital in the Middle East to exploit the SESAME infrastructure while training SESAME staff both in the technical aspects of using of a modern light source facility and in building awareness about the positive impact of SESAME among a broad public.

In the context of broader cooperation with Africa and global STI cooperation, the involvement of Southern Mediterranean countries varies according to the area. For example:

Belmont Forum: (Apart from France and Italy) no Mediterranean research & innovation funding agencies are members of the Belmont Forum. This forum supports multi-national collaborative projects addressing R&I challenges in areas such as food security, ecosystem services, freshwater security, and coastal resilience. With over 20 major funding agencies from 4 continents, the Belmont Forum is the largest and most operational international partnership of research funding organisations and science councils invested in interdisciplinary and transdisciplinary research to inform human action and adaptation to global environmental change. As it is the case for Horizon 2020, the Belmont Forum strongly adheres to open access to research data principles. For the EU & Associated States, the EC (H2020) and funding agencies from France, Germany, Italy, the Netherlands, Sweden and the UK and are members. The EU-Mediterranean Partnership could gain from more Mediterranean R&I funding agencies becoming members of the Forum.

Future Earth: Launched at the Rio+20 Summit in 2012, Future Earth is a 10-year international research initiative that will develop the knowledge for responding effectively to the risks and opportunities of global environmental change and for supporting transformation towards global sustainability in the coming decades. It is sponsored by the International Council for Science (ICSU), the International Social Science Council (ISSC), the Belmont Forum, the UN Educational, Scientific, and Cultural Organization (UNESCO), the UN Environmental Programme (UNEP), the UN University (UNU), and the World Meteorological Organization (WMO). With more than 70.000 researches linked to it world-wide, Future Earth is evolving also into a virtual interface for scientists from 6 continents and has the potential of becoming a prominent context for EU and non-EU researchers, research bodies and research funding agencies exchanging STI visions with each other. Although a regional hub in the Mediterranean is being established, Mediterranean countries are still under-represented in this initiative.

## **2.2 Current framework conditions for EU-SOUTHERN NEIGHBOURHOOD S&T cooperation**

Framework conditions are mostly relevant to bilateral aspects of cooperation with Southern Mediterranean countries rather than at a regional level. Issues such as the protection of intellectual property rights, competition rules or the liberalisation of public procurement are addressed in bilateral association agreements the EU has established with Southern Mediterranean countries<sup>9</sup>.

During FP7 cooperation with Southern Mediterranean countries included a strong component of competence building and the creation of networks among research and innovation communities with funding in a wide range of projects reaching 20.1 million euros (excl. Israel and Tunisia), Support to competence building, networking and

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<sup>9</sup> Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestinian Authority,

coordination continues in Horizon 2020, although to a lesser extent with 2.5 million euros of EU funding provided to Southern Mediterranean participants to date.

Researcher mobility is promoted through Marie Skłodowska-Curie Actions (MSCA), part of the EU's Research Framework Programme, Horizon 2020. Up to October 2018, Southern Neighbourhood (excl. Israel & Tunisia) entities have participated 54 times in MSCA actions (2 in Individual Fellowships (IF), 47 in the RISE, 2 in the ITN, 1 in the COFUND programme, as well as 2 in the MSCA-NCP programme). A total of 383 nationals of this region have participated in MSCA actions.

Finally 3 nationals from Southern Neighbourhood countries have acquired a grant from the European Research Council.

Meanwhile EU Member States had until May 2018 to transpose an EU Directive on the conditions of entry and residence for third-country nationals for the purposes of research, studies and training, which will facilitate the entry of non-EU nationals for the purposes of carrying out research in a host organisation established in the EU. Those non-EU nationals are allowed to stay for an additional nine months to look for a job or set up a business in the host EU country after the completion of their research or study.

### 3. Priorities for the future in S&T cooperation

#### 3.1 Areas of future S&T cooperation agreed at latest Joint Committee/High Level Dialogues

The focus of EU-Southern Mediterranean cooperation focusses on the thematic areas summarised below.

- **PRIMA** aims to build research and innovation capacities and to develop knowledge and common innovative solutions for **agro-food systems and water management and provision** in the Mediterranean area. Its overall objective is to make these more climate resilient, efficient, cost-effective and environmentally and socially sustainable, and to contribute to solving water scarcity, food security, nutrition, health, well-being and migration problems upstream. As an added value Participating States will seek to align national R&I programmes, involve a critical mass of actors and resources and strengthen R&I capacities in the region. These priorities will be implemented through the PRIMA programme as from its launch on 1 January 2018.
- Efforts in the area of marine and maritime research have taken a new dimension with a focus on governance through the **BLUEMED** initiative that not only directed resources towards research and innovation actions in BLUEMED-related fields but is now also developing as a means for policy coordination across the countries of the Mediterranean area. BLUEMED will strive to work through dedicated platforms<sup>10</sup> while developing an operational network of research funders and key players in BLUEMED-related sectors. Building on the existing

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<sup>10</sup> Currently addressing knowledge, economy, technology and policy angles of BLUEMED-related topics involving all countries of the Mediterranean area.

Strategic Research and Innovation Agenda<sup>11</sup> BLUEMED will act in a wide range of areas including the integration of Mediterranean countries beyond EU founder countries<sup>12</sup>, integration of policies on data collection and access, Blue skills and employment among other areas..

- A **Blue Bioeconomy Public-Public Partnership** (topic: BG-02-2018) will be developed with a view to mobilising investments by aligning national and regional innovation research agendas across different blue bioeconomy sectors. Participating national and/or regional research programmes will pool financial resources with a view to implementing joint calls for proposals resulting in grants to third parties. Activities shall address a range of areas including the exploitation of aquatic biomass, achieving zero waste or optimising waste materials from fisheries and aquaculture, the use of biotechnology and ICT in the blue bioeconomy from different trophic levels for use in food and other value chains.
- In the area of **migration** the priorities are in addressing emerging trends in international protection of asylum seekers, with special reference to Jordan among other countries (topic: MIGRATION-08-2019). In addition, the study of medium and long-term socioeconomic dimensions of mass displacement when people driven by forced migration are in camps or hosting areas or settle in unprotected and underprepared urban settings (topic: MIGRATION-09-2018) targets in particular participants from Africa and the Middle East. These are just two of a range of topics that will address migration research (Call MIGRATION within the work programme "Europe in a changing world – Inclusive, innovative and reflective societies"). Topics will address the analysis of drivers, existing governance structures, improving forecasting, modelling, and institutional arrangements needed to establish a global governance for migration.
- Global **governance and violent extremism** in the broader MENA region and the Balkans (topic: SU-GOVERNANCE-10-2019) will be addressed to understand the interplay between religion, politics and identifies at both country and regional levels. This topic will fund empirical and interdisciplinary research needed for a better understanding of the historical, geopolitical, socioeconomic, ideological, cultural, psychological and demographic factors that drive violent extremism.
- In the context of preserving, managing and leveraging our **cultural heritage**, cooperation with Neighbourhood Countries will focus on establishing an international network to promote heritage-led innovation for sustainable development and provide expertise and assistance, particularly where cultural heritage is at risk (topic: LC-CLA-05-2019). The network composed of a wide range of stakeholders will seek to address various topics including the identification and promotion of heritage-led initiatives, the identification of knowledge gaps in the field of heritage preservation and management, and the analysis of regulatory, economic, social and technical barriers.

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<sup>11</sup> URL: [http://www.bluedmed-project.eu/wp-content/uploads/2016/12/Bluedmed-SRIA\\_A4.pdf](http://www.bluedmed-project.eu/wp-content/uploads/2016/12/Bluedmed-SRIA_A4.pdf)

<sup>12</sup> The "Research and Innovation Initiative for Blue Jobs and Growth in the Mediterranean Area (The BLUEMED Initiative)" aims to advance a shared vision of a Mediterranean Sea that is healthy, productive, resilient, understood and valued so as to promote the well-being and prosperity of our citizens and future generations and boost socio-economic growth and jobs. It was jointly developed by Cyprus, Croatia, Greece, France, Italy, Malta, Portugal, Slovenia and Spain and presented by the Italian Presidency during the Competitiveness Council of 04-05 December 2014.



- In the area of **research infrastructures** the development and installation of a dedicated beam-line in SESAME will be supported (topic: INTRASUPP-01-2018). This will help strengthen the links to the European network of analytical facilities with particular reference to new synchrotrons currently under development. The objective is to consolidate research activity in SESAME and to strengthen its profile in the region.
- In the area of **security research** cooperation is sought in developing a deeper understanding of how novel technologies and social media impact border control. These may depend on a variety of human factors, social and societal issues (topic: SU-BES01). This will address modelling, predicting and dealing with migration flows to avoid tensions and violence.
- In the context of **developing sustainable chemistry, smart materials and intelligent recycling**, a topic on catalysis technologies (topic: CE-NMBP-24-2018) targets cooperation with EU Neighbourhood countries, Iran and Iraq among others. This topic will address a range of angles including the direct conversion of light hydrocarbon resources, the conversion of non-transportable gas resources to liquid hydrocarbons, novel energy-efficient and cost-competitive routes for the direct utilisation of light alkanes in the production of high-value chemicals and the assessment of environmental and safety issues.
- In the context of the EU-Africa cooperation, support will be provided to the **EU-Africa Research and Innovation Partnership on food and nutrition security and sustainable agriculture** (FNSSA) in order to create a platform for exchange and to seek synergies between different funding mechanisms implementing the R&I Partnership on FNSSA (topic: SFS-33-2018). The nutrition performance of African farming systems, strengthening the agro-biodiversity (including integrated aquaculture systems) and food diversity will be addressed (topic: LC-SFS-34-2019) as part of joint efforts to tackle nutritional imbalances, including under-nutrition and diet-related, non-communicable diseases, together with sustainable agricultural production (SFS-35-2019-2020).
- In the context of **EU-Africa cooperation, renewable energies** will be addressed initially through a coordination and support action (topic: LC-SC3-JA-4-2018) with a view to preparing for a common strategic joint research and innovation programme on renewable energy technology (topic: LC-SC3-JA-5-2019). The latter will focus on the adaptation of renewable energy generation technologies to the African environmental, including the social and economic conditions of their utilisation, of and on improving the innovation capabilities in Africa with the ultimate goal of providing affordable access to renewable energy and of improving the innovation cycles.
- In the context of **EU-Africa cooperation** in the area of **Climate action** will address climate services tailored for Africa and the impact of climate change in shaping population migration patterns (topic: LC-CLA-05-2019). Climate services will focus on the water, energy and land use sectors with a view to developing and implementing climate adaptation strategies in Africa. In terms of migration, a multidisciplinary approach is required to identify and describe climate parameters, develop analytical methodologies and demonstrate how these relate to human migration patterns.

- In the context of **EU-Africa cooperation**, cooperation in the area of **Transport** (topic: LC-GV-05-2019) will focus on urban mobility and sustainable electrification in large urban areas in developing and emerging economies. Cooperation in this area will aim to develop innovative solutions toward private and public electricity mobility, increasing mobility and energy efficiency, the development of networks and charging infrastructure as well as to perform demonstration and pilot activities around innovations in the area of electrified mobility. It will also address sustainable planning, plans for financing deployment and replication across a larger group of urban areas and countries.

### **3.2 Potential new areas of future S&T cooperation proposed at latest Joint Committee/High Level Dialogue, through SFIC, or by thematic services**

- The Valletta Declaration<sup>6</sup> calls for the development of further priorities for cooperation, including in areas of high industrial relevance. In this context novel innovation paradigms, particularly frugal innovation, that address societal needs in a sustainable and affordable way could encourage the take-up of new solutions coming from industrial enabling technologies with the involvement of relevant stakeholders and target value chains. In the area of transport cooperation could be enhanced in the fields of competitive, green ports and hinterland connectivity transport and logistics networks.
- In addition to currently planned cooperation activities and as an input to and EU's commitment in implementing the Paris Agreement as a follow-up to COP21, the EU and the Southern Mediterranean have also agreed to pursue cooperation in the area of renewable energies, possibly in solar energy as well as wind power and Mediterranean-specific biomass as a means to meet significant forecast increases in energy demands in the region while transitioning to low-carbon energy and improving energy security and efficiency.
- In the area of health, potential areas for cooperation are rare diseases, infectious diseases and non-communicable diseases such as diabetes, cancer and obesity. A number of multi-lateral initiatives including the Global Research Collaboration for Infectious Disease Preparedness<sup>13</sup> (GloPID-R) and the Global Alliance for Chronic Diseases<sup>14</sup> (GACD) may provide the right setting for cooperation with Southern Mediterranean countries. Egypt has joined GloPID-R and expressed interest to GACD. Other countries from the Southern Mediterranean might follow.
- Closer cooperation in the context of the Belmont Forum is desirable. The Belmont Forum, created in 2009, is a global partnership of 21 research funding organisations and science councils investing in the advancement of interdisciplinary and transdisciplinary research in the field of global environmental change challenge.

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<sup>13</sup> [www.glopid-r.org](http://www.glopid-r.org)

<sup>14</sup> [www.gacd.org](http://www.gacd.org)

**ANNEX: HORIZON 2020 WORK PROGRAMME 2018-20 TOPICS EXPLICITLY ENCOURAGING COOPERATION WITH THE SOUTHERN NEIGHBOURHOOD**

Topic identifier /Year	Topic title
<i>Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing</i>	
CE-NMBP-24-2018 (closed)	Catalytic transformation of hydrocarbons (RIA)
<i>Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy</i>	
BG-02-2018 (closed)	Blue Bioeconomy Public-Public Partnership
SFS-33-2018 (closed)	Support to the implementation of the EU-Africa Research and Innovation Partnership on Food and Nutrition Security & Sustainable Agriculture (FNSSA)
LC-SFS-34-2019	Food Systems Africa
SFS-35-2019-2020	Sustainable Intensification in Africa
<i>Secure, clean and efficient energy</i>	
LC-SC3-JA-4-2018 (closed)	Support action in preparation of a Joint Programming activity
LC-SC3-JA-5-2019	Joint Programming with EU and African partners for a R&I actions in the area of renewable energy
<i>Smart, green and integrated transport</i>	
LC-GV-05-2019	InCo flagship on "Urban mobility and sustainable electrification in large urban areas in developing and emerging economies"
<i>Climate action, environment, resource efficiency and raw materials</i>	
SC5-19-2018 (closed)	International network to promote cultural heritage innovation and diplomacy:
LC-CLA-05-2019	Human dynamics of climate change
<i>Europe in a changing world – inclusive, innovative and reflective societies</i>	
MIGRATION-08-2019	International protection of refugees in a comparative perspective
MIGRATION-09-2018 (closed)	Addressing the challenge of forced displacement
SU-GOVERNANCE-10-2019	Drivers and contexts of violent extremism in the broader MENA region and the Balkans
<i>Research Infrastructures</i>	
INTRASUPP-01-2018 (closed)	Policy and international cooperation measures for research infrastructures
<i>Secure societies - Protecting freedom and security of Europe and its citizens</i>	
SU-BES01-2018-2019-2020	Human factors, and social, societal, and organisational aspects of border and external security: - Sub-topic 1: [2018] Detecting security threats possibly resulting from certain perceptions abroad, that deviate from the reality of the EU - Sub-topic 2: [2019] Modelling, predicting, and dealing with migration flows to avoid tensions and violence