Gaps and opportunities for a better governance of innovation policies from the Interreg MED perspective

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1. INTRODUCTION

This part of the report analyses gaps and opportunities for better governance of innovation policies in the MED Area from the perspective of the Interreg MED Programme and the Panoramed project.

By better governance of innovation policies in this report we mean enhanced coherence of innovation policies from four different but complementary perspectives:

- **Horizontal coherence** refers to the need for individual objectives, instruments and projects developed by different entities to be mutually reinforcing. It means strengthening the inter-connectedness of policies and actors and promoting shared perspectives and roadmaps focused on societal challenges. Horizontal coherence also means identifying and correcting misalignments in policy mixes (European Environment Agency, 2019) and considering social, environmental and economic value on the same footing.

- **Vertical coherence** refers to actions designed and implemented at different scales of multilevel governance, i.e. international, national and sub-national levels of government, and to the need to ensure that the different approaches and policy choices of these different actors reinforce each other.

- **Temporal coherence** is about ensuring that policies and initiatives contribute to longer-term commitments and continue to be effective over time, without being contradicted by short-term decisions.

- **Territorial coherence** is ensured when initiatives are connected with the dynamics of territories, in terms of direction, space and time.

The gaps and opportunities analysis is the result of months of work on five different lines:

1. **Review of academic literature, policy papers from the European Commission and other strategic documents to define a conceptual framework for the gaps and opportunities analysis.**

2. **Analysis of MED strategies, projects and practices to identify gaps and opportunities in the Mediterranean Area (MED Area) using this conceptual framework. The white papers and the strategic papers produced by Interreg MED communities were a valuable source of information.**

3. **Identification and analysis of innovative good practices that generate new shared value based on the blue bioeconomy. The good practices are related to: the use of technologies and R&I infrastructures; participatory governance and co-management models; the participation of clusters; opportunities for social entrepreneurship; and opportunities for the Southern Mediterranean.**
4. Experts’ contributions. Three experts drafted reflections based on analysis of both existing academic literature and projects and initiatives.

5. Focus groups and interviews and discussions with Panoramed partners and experts and other Interreg MED actors. The preliminary results from the gaps and opportunities analysis were shared and discussed at the Panoramed innovation camp organised in Barcelona on 17 and 18 October 2019. Five opportunities were identified by which Interreg MED and Panoramed could contribute to improving the governance of innovation policies in the MED Area. They are as follows:

- Reinforcing the common understanding of MED societal challenges
- Optimising the use of R&I infrastructures and the synergies among R&I programmes and projects
- Recognising and enhancing the contribution from local communities to MED societal challenges
- Increasing support from public administrations to emerging business models for shared value
- Increasing the impact of innovation policies by taking into account social needs

The structure of this part of the gaps and growth opportunities report is the following: after this introduction, Section 2 presents the main programmes and strategies implemented in the MED Area and their interaction, together with the main objectives in the Interreg MED Programme and Panoramed. Section 3 defines a conceptual framework to identify and analyse the gaps and opportunities. The framework identifies three drivers to advance towards the sustainable development goals (SDGs). These are:

- Research and innovation to support transitions
- New business models for shared value (social, economic and environmental)
- Multi-actor governance models

Section 4 analyses innovative good practices generated by Panoramed experts in the field of the blue bioeconomy. Section 5 presents the main conclusions from the three experts’ reports. Section 6 discusses some findings from the analysis of the work done by the Interreg MED horizontal projects and thematic transnational communities. Finally, Section 7 identifies opportunities to improve the governance of innovation policies in the MED Area and possible lines of action to address them and the related gaps, from the Interreg MED perspective. This analysis is the result of months of discussions with MED experts and actors.

This second part of the report is complemented by the following documents:

- Analysis of the blue bioeconomy innovative good practices, provided by experts
- Participatory governance for the development of the blue bioeconomy in the Mediterranean Region
- How clusters can contribute to social and environmental challenges through the creation of shared value
- Marine biotechnology as a tool for creating shared value in the Mediterranean
2. MAP OF STRATEGIES AND PROGRAMMES IN THE MED AREA

The Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025 provides a strategic policy framework and a common vision for the Mediterranean, which as follows (UNEP/MAP, 2016):

“A prosperous and peaceful Mediterranean region in which people enjoy a high quality of life and where sustainable development takes place within the carrying capacity of healthy ecosystems. This is achieved through common objectives, strong involvement of all stakeholders, cooperation solidarity, equity and participatory governance.”

The MSSD is an ambitious strategy that aims to harmonise the interactions between socio-economic and environmental goals, adapt international commitments to regional conditions, guide national strategies for sustainable development, and stimulate regional cooperation between stakeholders in the implementation of sustainable development. Moreover, as shown in table 1, its six objectives are aligned with the sustainable development goals (SDGs). It is important in this context to mention that the European Union, as shown in the communication on the next steps for a sustainable European future (European Commission, 2016), is committed to sustainable development and aims to be a frontrunner in implementing the 2030 Agenda and thus the MSSD goals.

Table 1. Linking the objectives of the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD) to the Sustainable Development Goals (SDG)

<table>
<thead>
<tr>
<th>Mediterranean strategy for sustainable development 2016-2025 objectives</th>
<th>Sustainable development goals (SDG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ensuring sustainable development in marine and coastal areas</td>
<td>SDG 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</td>
</tr>
</tbody>
</table>
| 2. Promoting resource management, food production and food security through sustainable forms of rural development | SDG 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture  
SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss  
SDG 6. Ensure availability and sustainable management of water and sanitation for all |
| 3. Planning and managing sustainable Mediterranean cities | SDG 11. Make cities and human settlements inclusive, safe, resilient and sustainable |

<table>
<thead>
<tr>
<th>Mediterranean strategy for sustainable development objectives</th>
<th>Sustainable development goals (SDG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDG 7. Ensure access to affordable, reliable, sustainable, and modern energy for all.</td>
<td>4. Addressing climate change as a priority issue for the Mediterranean</td>
</tr>
<tr>
<td>SDG 13. Take urgent action to mitigate climate change and its impacts</td>
<td>5. Transition towards a green and blue economy</td>
</tr>
<tr>
<td>SDG 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</td>
<td>SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation</td>
</tr>
<tr>
<td>SDG 12. Ensure sustainable consumption and production patterns</td>
<td>SDG 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</td>
</tr>
<tr>
<td>SDG 17. Strengthen the means of implementation and revitalise the global partnership for sustainable development</td>
<td>SDG 1. End poverty in all its forms everywhere</td>
</tr>
<tr>
<td>SDG 3. Ensure healthy lives and promote well-being for all at all ages</td>
<td>SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</td>
</tr>
<tr>
<td>SDG 5. Achieve gender equality and empower all women and girls</td>
<td>SDG 10. Reduce inequality within and among countries</td>
</tr>
<tr>
<td>SDG 6. Improving governance in support of sustainable development</td>
<td>SDG 7. Cross-cutting sustainable development goals related to social issues</td>
</tr>
</tbody>
</table>


At operational level, the Mediterranean is a very heterogeneous cooperation area with a great diversity of geographical, socio-economic and political contexts. In this area, many EU and internationally funded programmes, projects, networks, organisations and platforms coexist, albeit sound common or coordinated governance is lacking to a certain extent.

The six most relevant EU programmes and strategies related to the Mediterranean are Interreg MED, ADRION, BlueMed, the WestMED Initiative, EUSAIR, ENI CBCMED and PRIMA. When considering the objectives and thematic focuses of each of these initiatives (table 2), it can be stated that the first five cover all 6 MSSD objectives, while PRIMA covers 4 of them (2, 3, 4 and 6), because it is not focused on either marine and coastal areas (MSSD Objective 1) or on the marine blue economy (MSSD Objective 5). Accordingly, then, they all are aligned with the SDGs.
The Governing Document of the Interreg Mediterranean Programme (2016) states that the objective for the 2014-2020 period is to improve the basis for enhanced cooperation in the Mediterranean Region and to establish a wider strategy covering the whole programme space with sub-areas such as the Adriatic/Ionian macroregion and the Western and Eastern Mediterranean areas. To achieve this goal, certain actions were recommended for implementation:

- Joint data sharing
- Research into complementarities among projects
- Joint capitalisation events for specific themes

The Panoramed project was created as a pilot in 2017 in order to enhance cooperation within Interreg MED and with the other EU cooperation programmes and initiatives.

**Figure 1. EU Cooperation Territorial Coverage in the MED**

Note: The BLUEMED Initiative (2019), which is not included in the map, involves 16 countries: Italy, France, Malta, Portugal, Spain, Greece, Croatia, Slovenia, Algeria, Morocco, Cyprus, Egypt, Israel, Jordan and Turkey.

<table>
<thead>
<tr>
<th>EU Program</th>
<th>Main objective</th>
<th>Thematic focus</th>
</tr>
</thead>
</table>
| Interreg MED | To promote sustainable growth in the MED Area by fostering innovative concepts and practices and a reasonable use of resources and by supporting social integration through an integrated and territorially based cooperation approach. | Innovation  
Low carbon economy  
Natural and cultural resources  
Governance |
| BLU MED Initiative | To tap the full potential of the marine and maritime sectors, structuring transnational cooperation to create new ‘blue’ jobs and to improve social wellbeing, sustainable prosperity and the environmental status of the region and its surroundings. | Key enabling knowledge for the Mediterranean  
Key sectoral enablers in the Mediterranean  
Enabling technology and capacity creation for the Mediterranean  
Cross-cutting enablers for blue jobs and blue growth |
| WestMED Initiative | To foster sustainable blue growth and jobs, improve safety and security and preserve ecosystems and biodiversity in the western Mediterranean region. | A safer and more secure maritime space  
A smart and resilient blue economy  
Better governance of the sea |
| ENI CBC-MED | To foster fair, equitable and sustainable economic, social and territorial development, which may advance cross-border integration and valorise participating countries’ territories and values. | Business and SMEs development  
Technological transfer & innovation  
Social inclusion & fight against poverty  
Environment & climate change |
| PRIMA | To achieve, support and promote integration, alignment and joint implementation of national R&I programmes under a common research and innovation strategy to address the diverse challenges in water scarcity, agriculture, food security. | Management of water  
Farming system  
Agro-food value chain |
| EUSAIR | To promote economic and social prosperity and growth in the region by improving its attractiveness, competitiveness and connectivity. | Blue growth  
Connecting the region  
Environmental quality  
Sustainable tourism  
Strengthening R&D, innovation and SMEs |
2.1. The Interreg MED and Panoramed

The Interreg MED Programme is a European transnational cooperation programme adopted by the European Commission and co-financed by the European Regional Development Fund and the Instrument for Pre-Accession Assistance Fund. It provides funds for cooperation projects developed and managed by public bodies — and in some cases by private entities — in the European regions of the Mediterranean. Its territory covers 57 regions in 13 European countries. For 2014-2020, the total budget of the programme is 275,905,320 euros, of which 233,678,308 euros come from ERDF and IPA funds from the European Union, and 42,227,012 euros from national counterparts (national public and private funding) (Interreg Mediterranean Programme, 2016). As stated above, Interreg MED addresses all 6 MSSD objectives and the SDGs through — at the time of drafting this report — around 100 (co)funded projects.

The Interreg MED Programme is articulated by 4 axes, 7 thematic objectives, 8 MED thematic communities and one governance platform (see table 3 and figure 2).

Table 3. The Interreg MED Programme 2014-2020

<table>
<thead>
<tr>
<th>Axis</th>
<th>Thematic objectives</th>
<th>MED Communities (Governance Platform in axis 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovation</td>
<td>1.1. To reinforce the joint work between clusters and networks across Mediterranean countries trying to create innovative solutions to unlock the potential of a healthy and productive sea</td>
<td>Blue growth</td>
</tr>
<tr>
<td></td>
<td>1.2. Aims to a greener development model built on an environmentally friendly use of resources</td>
<td>Green growth</td>
</tr>
<tr>
<td></td>
<td>1.3. To improve the innovation capacities of public and private stakeholders from cultural and creative industries and social innovation</td>
<td>Social &amp; creative</td>
</tr>
</tbody>
</table>
### Axis 2. Low carbon economy

2.1. To increase capacity for better management of energy in public buildings at transnational level

2.2. To increase the share of renewable local energy sources in energy mix strategies and plans in MED territories

2.3. To increase capacity to use existing low carbon transport systems and multimodal connections among them

### Axis 3. Natural and cultural resources

3.1. To enhance the development of a sustainable and responsible coastal and maritime tourism in the MED area

3.2. To maintain biodiversity and natural ecosystems through strengthening the management and networking of protected areas

### Axis 4. Governance

4.1. To support the process of developing multilateral coordination frameworks and strengthening the existing ones in the Mediterranean for joint responses to common challenges

Source: own elaboration.

**Figure 2. Panoramed’s working path**

Source: Panoramed (2019b).
Through the articulation of **MED communities** around diverse thematic objectives, Interreg MED provides spaces to experiment in new forms of collaboration and practices among public administrations, academia, companies and civil society from different regions to tackle common challenges, focusing on the articulation of new shared expectations and visions, the building of new networks and the shaping of new markets which eventually will challenge dominant current practices (see section 6 for more information).

In this context, under axis 4, the Panoramed project is the governance platform of Interreg MED that supports the process of strengthening and developing multilateral cooperation frameworks in the Mediterranean region for joint responses to common challenges and opportunities. Its specific objectives are (Panoramed, 2019a):

- Enhancement of the institutional capacity of public authorities to ensure the maximum impact of MED project results through efficient implementation of EU/national public funds and mainstreaming actions;
- Reinforcement of the institutional capacity of public authorities in transnational and national policy definition and strategic planning;
- Contribution to coordinated synergies and dynamics among initiatives and strategies active in the Mediterranean;
- Contribution to the improvement of a reinforced cooperation with the South shore of the Mediterranean.

The associate partners of Panoramed include Interreg programmes, INTERACT, sub-regional strategies, the CPRM, the Union for the Mediterranean and the UNEP/MAP, and also the involvement of Directorates-General of the European Commission. They have been involved in Mediterranean programmes, initiatives and strategies, such as BLUEMED Initiative, WestMED Initiative, EUSAIR and PRIMA. They often share challenges, work together in groups or gather in meetings related to relevant regional strategies.

As mentioned above, Panoramed’s role is to establish a permanent dialogue among national and regional public authorities and stakeholders for the definition of shared approaches, policies and strategic projects. Transnational thematic working groups have been set up involving strategic key actors to identify shared policy approaches and strategic top-down projects, which should constantly seek synergies and complementarities with the main institutions and initiatives active in the Mediterranean (figure 2).
3. CONCEPTUAL FRAMEWORK FOR THE ANALYSIS

The framework for the analysis of gaps and opportunities is based on the literature on sustainability transitions and transformations, which has acquired growing importance in the academic literature over the last two decades and is being gradually integrated into European policy framework and debate. As we will show, this framework based on sustainability transitions towards the SDGs enables advances to be made in the four coherences referred to earlier: horizontal, vertical, temporal and territorial.

3.1. Interreg MED and Panoramed

3.1.1. Moving towards a sustainable Europe by 2030

The reflection paper “Towards a sustainable Europe by 2030” published by the European Commission in January 2019 provides the key elements to frame the gaps and opportunities analysis for better governance of innovation. According to the European Commission, “Sustainable development is about upgrading people’s living standards by giving people real choices, creating an enabling environment, and disseminating knowledge and better information. This should lead us to a situation where we are living well within the limits of our planet through smarter use of resources and a modern economy that serve our health and well-being. We should therefore continue on the path that we set ourselves: a transition to a low-carbon, climate-neutral, resource-efficient and biodiverse economy in full compliance with the United Nations 2030 Agenda and the 17 SDGs. This transition needs to be for the benefit of all, leaving no one behind, ensuring equality and inclusiveness. Our economic growth must depend less on non-renewable resources so that we maximise the use of sustainably managed renewable resources and ecosystem services.”

Further, the European Commission defines bioeconomy as “those parts of the economy covering all sectors and systems that rely on biological resources (animals, plants, microorganisms and derived biomass, including organic waste), their functions and principles. It includes and interlinks: land and marine ecosystems and the services they provide; all primary production sectors that use and produce biological resources (agriculture, forestry, fisheries and aquaculture); and all economic and industrial sectors that use biological resources and processes to produce food, feed, bio-based products, energy and services” (European Commission, 2018). In particular, the blue bioeconomy is any activity associated with the sustainable use of renewable aquatic biological resources to generate new economic and social value. Aquatic biomass (both wild and cultured) from the seas and oceans, rivers and lakes has, for instance, great potential to ensure future food, feed and nutrition security. It is also a potential source of raw materials for use in value chains of high value, products and
processes, such as pharmaceuticals, food ingredients, bioprocessing, chemicals, and novel materials and cosmetics while factoring in environment and climate change risks.

In line with the above concept of sustainable development, “a sustainable European bioeconomy supports the modernisation and strengthening of the EU industrial base through the creation of new value chains and greener, more cost-effective industrial processes. By capitalising on unprecedented advances in life sciences and biotechnologies, as well as innovations merging the physical, digital and biological worlds, the European industrial base can maintain and enhance its global leadership. Research and innovation and the deployment of innovative solutions for the production of new and sustainable bio-based products (such as bio-chemicals, bio-fuels, etc.) will also enhance our capacity to substitute fossil raw materials in very significant parts of European industry (e.g. construction, packaging, textiles, chemicals, cosmetics, pharma ingredients, consumer goods)” (European Commission, 2018).

The transition to a circular economy, including to a circular bioeconomy, is seen by the European Commission and the Member States as a huge opportunity to create competitive advantages on a sustainable basis, therefore the bioeconomy is placed at the centre of EU priorities (European Commission, 2019b). In particular, the European Commission recognises that “for the blue bioeconomy to be managed sustainably, better knowledge and scientific research is required, to better understand the impacts of maritime activities on marine ecosystems to underpin sound policies” (European Commission, 2019a).

3.1.2. Promoting sustainability transitions in the EU and in the Mediterranean Area

The European Commission urges all actors in the EU to prioritise the sustainability transition, “further developing the cross-cutting policy agendas that have been adopted at EU level in recent years (...), building bridges and increasing coherence between different agendas at all levels (...) Policy coherence is a critical condition to ensure that we can deliver on the SDGs and ensure long-term green and inclusive growth for the EU” (European Commission, 2018).

In the EU, the document of reference for sustainability transitions is the report produced by the European Environment Agency and published in September 2019, “Sustainability transitions: policy and practice”. Drawing on historical evidence and case studies, the document explains that “transitions emerge through interactions among multiple actors, including businesses, users, scientific communities, policymakers, social movements and interest groups. They are evolutionary processes, meaning that they are typically based on searching, experimenting, reflecting and learning. They also depend critically on interpretations and social acceptance. Transitions are therefore fundamentally uncertain and open-ended. Surprises and unintended outcomes are to be expected. Transitions are also conflictual and deeply political, producing trade-offs, winners and losers, and related struggles, as politically influential and well-resourced incumbents often resist change”
(European Environment Agency, 2019). Thus, sustainability transitions aim at achieving horizontal, vertical, temporal and territorial coherence.

The role of governments in this context evolves towards acquiring the role of enablers of society-wide transformation processes rather than acting as “pilots” of society on its path towards sustainability. Governments continue to implement the usual environmental policy tools, such as regulations and market-based instruments, as a means to drive efficiency improvements, stimulate innovation and steer in the direction of change; however, tackling the core drivers of environmental degradation requires a much broader policy mix, one aimed at enabling innovation, experimentation, dissemination and networking, as well as facilitating structural economic change. Moreover, governments have a key role to play in ensuring horizontal coherence across policy areas, as well as vertical coherence between the local, national and international levels (European Environment Agency, 2019).

Finally, the report also highlights that “sustainability transitions also imply normative choices between alternative visions of the future and how to get there, pointing to the importance of public engagement to foster consultation and deliberation” (European Environment Agency, 2019).

“In line with the strong evidence base of the key sustainability challenges and opportunities for the EU, it is important to focus on production and consumption in the areas of materials and products, food, energy, mobility and the built environment, taking into account the social implications of the changes in these areas. This is where sustainability changes are most needed and are potentially most beneficial for the EU economy, society and natural environment, with strong positive global spill-over effects. These areas do not operate in isolation, but are strongly interlinked and mutually reinforcing” (European Commission, 2018).

The document drafted by the European Environment Agency contains key messages for policy regarding system innovation and the coordination of systemic change processes towards long-term sustainability goals (see table 4).

Table 4. Sustainability transitions: policy and practice. Key messages for policy

<table>
<thead>
<tr>
<th>Key message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Promote experimentation with diverse forms of sustainability innovation and build transformative coalitions</td>
<td>The emergence of new technologies, practices and business models requires a culture of experimentation. This implies supporting diverse innovative activities, from publicly funded research and development (R&amp;D) projects to local social movements, as well as creating new networks of actors. Research and firms are crucial, but open innovation policy should also target users, civil society, communities and other actors. Innovation policy should also stimulate organisational innovations and new business models, which are important in determining the commercial feasibility of sustainability innovations.</td>
</tr>
<tr>
<td>Key message</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Stimulate the dissemination of green niche innovation</td>
<td>To achieve sustainability transitions, radical innovation needs to move beyond experimentation and become more widely disseminated. Novel technologies, social practices and infrastructure systems pose different challenges and disseminate in varied ways, requiring different kinds of policy support (financial and non-financial incentives, regulations, infrastructure investment, new narratives to promote social acceptance, horizontal coordination of policy areas, stimulation of knowledge, dissemination, etc.)</td>
</tr>
<tr>
<td>3. Support the reconfiguration of whole systems, phase out existing technologies and alleviate negative consequences</td>
<td>Sustainability transitions can involve disruption and conflict when the diffusion of new technologies and practices affects existing systems and businesses. Impacts on particular sectors or regions can be severe, implying a role for public policy in offsetting inequalities and facilitating structural change. Ensuring a just transition requires measures to alleviate negative consequences and help firms, employees and regions to reorient (e.g. compensation, retraining and regional adjustment).</td>
</tr>
<tr>
<td>4. Promote clear direction for change through ambitious visions, targets and missions</td>
<td>Sustainability transitions are purposeful and oriented towards defined sustainability outcomes (SDGs). This creates a difficult governance challenge, as the complexity and uncertainty of societal change means that transitions cannot simply be planned and implemented from the outset. To make long-term visions concrete and to incentivise supporting actions it is important to translate these visions and missions into sectoral and cross-sectoral policy strategies, programmes and instruments, and it is also very relevant to guarantee consistence between short, medium and long-term targets.</td>
</tr>
<tr>
<td>5. Align policies between different domains to improve policy coherence for transitions</td>
<td>The multidimensional nature of transition processes means that they are influenced — positively or negatively — by multiple policies (environment, innovation, sectoral, fiscal, education), creating significant risks of inconsistencies and incoherence. Therefore, contrasting objectives across policy areas and actors, policy coordination and policy integration are essential.</td>
</tr>
<tr>
<td>6. Promote coherence of actions across EU, national, regional and local governance levels</td>
<td>Sustainability transitions necessarily involve actions at multiple levels of governance, as they are multi-actor processes that cannot be steered by any actor on any level of governance on its own. They require coordinated policy action at all levels of governance. Promoting both top-down and bottom-up processes of governance requires new mechanisms to promote dialogue and increased flows of information and resources. Thematic working groups crossing different governance levels and including industry and civil society actors can be a useful tool to facilitate this coordination.</td>
</tr>
<tr>
<td>7. Monitor risks and unintended consequences and adjust pathways as necessary</td>
<td>Transitions processes are highly unpredictable, open-ended, complex and non-linear processes that often produce unintended consequences and trade-offs between social, economic and environmental sustainability outcomes. It is essential to continuously identify and evaluate risks associated with transitions using anticipatory governance approaches. Ex ante approaches must be complemented with adaptive governance approaches based on iterative cycles of policymaking and planning, implementing, evaluating and learning.</td>
</tr>
</tbody>
</table>

3.2. Conceptual framework

In the above described policy context, figure 3 shows the proposed framework for analysing gaps and opportunities related to the governance of innovation policies in the MED Area. This conceptual framework supports greater horizontal, vertical, temporal and territorial coherence of innovation policies in the MED Area, which is a main focus of this report. Thus, the starting point are the huge challenges the MED Area is facing, challenges that require urgent, better coordinated and more effective responses and actions from all MED actors. These societal challenges can also become an opportunity if the “right policies” are put in place in the “right manner”. The ambitious Bioeconomy Strategy and the Circular Economy Package at EU level and the BlueMED strategy and the Partnership for Research and Innovation in the MED Area (PRIMA) are all good examples of how challenges can also be drivers for sustainability transitions, that is, for change towards a more sustainable and inclusive society (SDGs). For this to happen, public policies should support:

- The orientation of R&I and technology to support sustainability transitions and to address the SDGs.
- The emergence of new business models for shared value, that is, business models that are sustainable in economic, social and environmental terms and that contribute to achieving the SDGs.
- New multi-actor governance models to align the efforts of all actors towards the SDGs.

Figure 3. Conceptual framework for the analysis of gaps and opportunities

Source: Own elaboration.
3.2.1. Orientation of R&I and technology to support sustainability transitions and to address the SDGs

Sustainability transitions aim to address environmental and societal challenges (the SDGs), therefore they are purposeful and directional. To transform production-consumption systems and advance towards the SDGs there is a need for much greater investment in sustainability-oriented R&I and experimentation. This was highlighted by the United Nations in 2015, when the organisation noted the urgent need to guide R&I to meet the SDGs. The European Union has been explicit in that the priorities of science and technology must be reoriented to respond to the great challenges, such as climate change, social inequality and other “persistent” societal challenges.

It can thus be argued that sustainable innovation is one that takes into account the SDGs without threatening one while trying to achieve the other (Berkowitz, 2020). Sustainable research and innovation can be defined as a “transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view on the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society)” (Von Schomberg, 2011, p. 9, as in Berkowitz, 2020). Furthermore, sustainable innovations can be considered as “(1) innovations [that] avoid harming people and the planet, (2) innovations [that] ‘do good’ by offering new products, services, or technologies that foster sustainable development, and (3) global governance schemes [that] are in place that facilitate innovations” (Voegtlin & Scherer, 2015, p. 1, as in Berkowitz, in press). This emphasises the importance of governance frameworks that allow the development of such sustainable innovation, i.e. that allow interactions among “societal actors and innovators” (Berkowitz, 2020).

Missions have long been used as a mechanism to direct and coordinate R&I towards societal challenges and goals (European Environment Agency, 2019). According to Mazzucato (2018), R&I missions offer a solution, an opportunity and an approach to address the challenges that matter to society, setting clear and ambitious targets that are measurable and time-bound. Indeed, there are no purely scientific and technological solutions that can solve the complex problems of poverty and hunger: there is a need to combine understandings of sociology, politics, economics and technology to solve these problems, as well as to make the conscious decision to point innovation towards them. This is exactly what well designed missions can achieve.

3.2.2. New business models for shared value

The business-as-usual strategy of maximising economic value and externalising social and environmental costs cannot lead to a sustainable future. Therefore, public policies should promote the emergence of new business models that contribute to addressing SDGs. The concept of shared value can be defined as policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social
conditions in the communities in which they operate. Shared value creation focuses on identifying and expanding the connections between societal and economic progress (Porter and Kramer, 2011). **Shared value** is considered a way for companies to achieve economic success, and as such is considered a management strategy in which companies find business opportunities that emerge from social and environmental challenges. Going beyond social responsibility, philanthropy or sustainability, creating shared value (CSV) is a cross-company strategy that focuses on maximising the competitive value of solving social and environmental challenges through serving new customers and markets, saving costs and retaining talent, among other areas of activity. This is a vision that is perfectly aligned with many development goals (Porter and Kramer (2011) as in Amores (2020)).

The concept of shared value requires **entrepreneurs to link business success to social progress** by incorporating social issues at the heart of the matter, without overlooking the focus that business continues to act as business and without a simple or solely social perspective. It is therefore a question of adding new variables to a company’s competitiveness and productivity equation, such as the impact on the environment, the use of resources, occupational safety, supplier access and viability and employee skills and health. Indeed, shared value sees societal value as part of the whole: the societal component ceases to be a restriction, a limitation or a secondary aspect of the project and becomes a further goal that the company includes within the performance to be maximised.

According to the Shared Value Initiative (2019) and Porter and Kramer (2011), there are three levels of CSV:

1. **Reconceiving products and markets.** Meeting societal needs through products and addressing unserved or underserved customers.

2. **Redefining productivity in the value chain.** Changing practices in the value chain to drive productivity through better utilising resources, employees, and business partners

3. **Enabling local cluster development.** Improving the available skills, supplier base, and supporting institutions in the communities where a company operates to boost productivity, innovation, and growth.

The third level of CSV reinforces the idea that CSV requires an ecosystem. This means that a cluster can naturally form part of that ecosystem since, by definition, it is made up of companies, research centres, business demand, government agencies and institutions for a particular business. At the same time, a cluster can provide a cross-sector vision through the collaborative dynamics themselves between clusters of various sectors that can come together in major challenges.
3.2.3. New multi-actor governance models to align the efforts of all actors towards the SDGs

The alignment of the efforts of all actors towards the SDGs requires new participative multi-actor governance models to enable the development of new collaborative solutions to address the SDGs in more effective ways (sustainable innovation). Based on works on transitions literature (Geels, 2002; Schot & Steinmueller, 2018), Berkowitz (2020) proposes a model of locally-embedded participatory, multi-stakeholder governance for sustainable innovations that take into account local or regional specificities in terms of geography, culture, social capital, etc. In this model, the contributions of each of the four helixes are essential: economic actors, public administration, science, and civil society.

Figure 4. Model of locally-embedded participatory, multi-stakeholder governance for sustainable innovation

- **Embeddedness in local context**, i.e. geographies, regulations, economies, cultures, organisational configuration, etc.,
- **Multi-stakeholder approach**, more precisely quadruple helix governance, i.e. four spheres being represented: economy, science, public administration, civil society,
- **Collective and bottom up** decision making process, i.e. whether or not it results from local, voluntary decision to set up governance, and all actors are involved in the decision-making process, and

- **Self-regulation** by economic actors, resulting from voluntary association and voluntary compliance with and collective control of decided rules.

A large part of the success of sustainable innovation within the framework of a model of participatory governance depends on the cohesiveness of people, economies, environments and territories, in other words of having a **shared goal** (Berkowitz, 2020). The breadth of activities across policy areas and across scales of governance creates the need for coordination and **directionality** (European Environment Agency, 2019), which refers to a shared vision and direction-guiding design and implementation of policy interventions towards a desired transformative change (Weber and Rohracher, 2012; Reichardt and Rogge, 2016, as in European Environment Agency, 2019). Directionality can be introduced into a policy mix by **identifying major challenges** in policy visions and by setting specific policy goals, milestones and targets, as well as translating those goals into concrete criteria that guide prioritisation of investment and policy implementation (Miedzinski, Mazzucato and Ekins, 2019).

To make long-term visions and missions concrete and to incentivise supporting actions, it is important to translate them into sectoral and cross-sectoral policy strategies, programmes and instruments at the most appropriate territorial level. Ambitious and consistent short-, medium- and long-term sectoral, cross-sectoral targets and a shared agenda (Fernández, Romagosa, 2020) are needed to make the vision and related policy strategies credible and to measure progress.

In this context, public institutions have a key role to play in ensuring the necessary **horizontal coherence** across policy areas, as well as **vertical coherence** between local, national and international levels. In order to maximise the impact of public policies on SDGs, **temporal and territorial** coherence of public policies, initiatives and actions is also required.
4. ANALYSIS OF INNOVATIVE GOOD PRACTICES

Through an online template, Panoramed experts have provided 16 innovative good practices that generate new shared value based on the blue bioeconomy. In this context, innovative good practices are understood to be the application or use of ideas or methods:

- which are relatively new
- whose application has not yet been systematically reviewed and researched
- where there is some solid evidence of good outcomes from particular experiences
- which could be transposed to other contexts

The interest was in identifying innovative good practices that could contribute to increasing the environmental, social and economic impact of European projects in the MED Area. These good practices are related to:

- the use of technologies and R&I infrastructures
- participatory governance and co-management models
- participation of clusters
- opportunities for social entrepreneurship
- opportunities for the Southern Mediterranean

In general terms, the innovative good practices in MED analysed include a holistic approach, which means that they take into account not only the environment or the economy as differentiated silos, but also seek to develop integrative approaches (Berkowitz, 2020). However, the social strand seems in general weaker, with loose references to subsidiary potential employment creation for vulnerable groups of persons. In particular, the template to support the collection of good practices by Panoramed experts included a section devoted to migration, but experts have not reported on any such initiatives. Some notable exceptions with social impact, such as the Biolab Ponent project, which focuses on improving living conditions in rural areas, are highlighted.

The 16 innovative good practices identified by experts generate environmental, social and/or economic value (see table 6). On average, out of the three strands assessed by experts, the economic value is the most relevant, with 3.7 out of 10 points distributed among the three kinds of added value; the environmental value is rated second, with 3.5 points; and social value ranks the lowest, with 2.9 points. It is remarkable also that, whereas the minimum score given to social value was 0, it was 2 for environmental and economic value; on the contrary, the maximum score given to social value was 4, while much higher scores were given to environmental (6 points) and economic value (8).
Table 6. Economic, environmental and social value

<table>
<thead>
<tr>
<th>Key message</th>
<th>Average</th>
<th>[Minimum-Maximum]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic value</td>
<td>3.7</td>
<td>[2-8]</td>
</tr>
<tr>
<td>Environmental value</td>
<td>3.5</td>
<td>[2-6]</td>
</tr>
<tr>
<td>Social value</td>
<td>2.9</td>
<td>[0-4]</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own elaboration.

Figure 5. SDGs addressed by innovative good practices identified

Source: Own elaboration.
The SDGs most frequently addressed by the innovative good practices identified are Responsible consumption and production, followed by Industry, innovation and infrastructure and Decent work and economic growth (figure 5).

These three first goals are mostly related to the generation of responsible economic value. The other SDGs addressed by the innovative good practices refer to environmental value, such as Climate action, and to a mix of environmental and social value, such as Sustainable cities and communities and Clean water and sanitation.

Four out of the 16 innovative good practices analysed included Partnerships for the goals, as mentioned above, a key principle of our conceptual framework.

It is remarkable that only two or three of the innovative good practices in our sample address pure social goals, such as Zero hunger or Reduced inequalities, and none of them is devoted to the goals of No poverty, Gender equality and Peace, justice and strong institutions.

Our small sample of is, no doubt, not representative of all good practices in the Mediterranean, but it was selected by experts who looked for innovative practices promoting all three strands of sustainability transitions, that is, economic, environmental and social shared value. The weaker representation of innovative good practices that address social challenges may be a sign, not that these challenges are not addressed at all in the MED area, but that innovation, and technologic innovation in particular, is not applied to solve social challenges as much as it is applied to economic and/or environmental challenges.

4.1. Collaboration of stakeholders and governance models

Collaboration among different stakeholders (government, research and innovation agents, companies, civil society) is considered by all the experts a key element for the success of innovative good practice and the creation of shared value in all 16 innovative practices analysed. With various degrees of involvement, the stakeholders are: transnational governments, regional governments, local governments, universities, research centres, technology centres, innovation centres, labs, large companies, SMEs, social enterprises, clusters, trade unions, vocational training schools, port authorities, associations, NGOs, and individual citizens. Thus, all representatives of the quadruple (quintuple) helix participate in the innovation initiatives.

The reasons behind this assessment made by experts of collaboration practices among stakeholders are that:

- Nowadays it is increasingly important to take into consideration the societal impact of research and innovation activities. The integration of RRI aspects into regional policies could help to establish a new way of approaching societal challenges in the policy planning of regional governments.

- Changes of paradigms oriented at solving a societal problem are only possible if they are the result of a consensus acknowledged by everybody concerned with the problem,
the solution or both. Radical changes of perception cannot be imposed or forced, but must be agreed. Everybody concerned must discuss on the same level, and then, once an agreement is achieved regarding perception of the problem and what to do next, everybody moves on, taking different actions according to their different responsibilities. For instance, the public administration produces a new regulation, academia reports that the negative economic, social and/or environmental impact diminishes after actions are taken, local economic actors promote their activities. It is all about establishing a non-hierarchical collaboration among diverse stakeholders around a shared agenda.

- The collaboration of different stakeholders is key when facing fragmented structures, for instance, when there is a large number of unconnected small-scale family-based producers. Moreover, these economic actors are usually unrelated to innovation processes, whether or not these processes are related to their main activity. Deploying business models which capture and share the added economic, social and environmental value of the blue bioeconomy requires technological, organisational, policy and social innovations that can generate new value chains. These innovations can only be co-identified, co-developed and co-implemented if the different system actors (economy, society, research and policy) work in a collaborative way.

- For the creation of new shared value, it is important to ensure transparent and responsible communication, dissemination, knowledge transfer and operation of outcomes by the different stakeholders in order to ensure the maximum impact of the innovation action and thus maximise European blue growth potential.

- A close articulation between the Cohesion Policy and the Maritime and Fisheries Fund in research and innovation areas may be important in addressing relevant Mediterranean challenges.

The experts also assessed the key elements for the governance of the initiatives. On a scale from 0 to 5 (figure 6):

- Adaptation to local realities is assessed as the most important governance element with a 4.3 score;

- This is followed by the participation of diverse stakeholders (rated 4.1), such as economic actors, scientists, civil society, government, etc. This participation is closely linked, according to the assessment of the experts, to their involvement in decision-making processes (3.4).

- The participation of natural science experts is considered more important on average than the participation of social science experts (with ratings of 2.9 and 2.4, respectively). This is consistent with the higher value given to environmental issues than to social value in the initiatives described in The participation of non-local stakeholders on co-management boards also appears appropriate when it comes to local initiatives aimed at expanding the market for new products or services.
- The participation of non-local stakeholders on co-management boards also appears appropriate when it comes to local initiatives aimed at expanding the market for new products or services.

- In this context, to engage and maintain the interest and commitment of participants may be a challenge worth taking into account when analysing the concerns of potential stakeholders and how an initiative can shape solutions through multilevel collaboration. In particular, strong commitment to policy is key to ensuring good governance and the continuity of the initiative beyond the project’s specific duration.

- Finally, participants need to have a set of capabilities to participate in this type of governance mechanisms: trust, transparency, honesty, transversality, empathy, community benefit, thinking of the key to territory, avoiding exclusively personal interests, thinking globally and acting locally, inclusive. Not everybody can be part of these initiatives.

- **Transparency and reporting** seem essential to good governance (3.4), which may be linked to some extent to outreach activities (raising awareness among consumers, economic actors...; 2.9).

- **Bottom-up approaches** can coexist with **top-down approaches**, but they are clearly rated differently: bottom-up approaches get a score of 3.3, top-down just 2.1.

- **Financial autonomy** is also key to providing a good structure to the entity that takes on the function of governance as it responds to all the challenges the initiative may face.

- The elements rated lowest in their importance for governance are **coercive measures**, such as the use of sanctions (1.1 score) and the possibility of excluding members (1.6). Interestingly, the use of incentives (1.9) and rewards (2.3) were also rated among the lower positions.

Additionally, the experts highlighted three elements for the achievement of common goals:

- **Adaptive management**, which enables continuous changes needed to achieve long term sustainability goals (e.g. fishing quotas)

- **Regular scientific monitoring**, which allows the assessment of measures adopted related to environmental conservation (e.g. fish population)

- **Involvement of directly affected population** (e.g. fishermen) in the decision-making process on a level playing field with other sectors, which gives them a sense of ownership of the initiative.

Further, it needs to be taken into account and accepted by stakeholders that this type of initiatives is very slow in producing tangible outcomes, since this is about the cohesion of people, economies, environments, territories and so on. This requires a new management model that cannot be implemented quickly.
Finally, a key figure in the governance of these initiatives emerges: the manager, often responsible not only for financial and accounting management of projects, but also for understanding and applying the new governance models associated with multi-stakeholders’ initiatives. The competences these managers need to possess, to name a few, are: social, public relations mediation skills; good financial and accounting skills; technical knowledge in all sectors involved (economy, environment, social); knowledge of the territory; knowledge of various languages...

Source: Own elaboration.
4.2. New shared value: environmental, social and economic value

The experts highlighted the environmental, social and economic value of the initiatives.

4.2.1. Environmental value

- Awareness raised among communities on the environmental damage of discharging plastic-based products in the sea.
- Improvement in waste management in the agri-food sector that contributes to reducing soil and water contamination.
- When the blue crab is removed, the environment returns to its former state.
- Strengthening of the environmental impact of regional research and innovation projects.
- Reduction of the environmental footprint of production and processing industries; reduction of seafood waste; greater protection of marine resources; better sustainability of the sector; contribution to management of coastal areas.
- Contribution to climate change, energy transition, land use planning and the circular economy.
- Emergence of new business models based on services and sharing renewable energy production locally, improving energy efficiency.

4.2.2. Social value

The main social value, as assessed by the experts, is the empowerment of communities in order to drive initiatives for common benefit. Promoting responsible, participative and innovative small communities based on shared knowledge and new skills by empowering local communities to become the main actors in the management of their own natural resources and become responsible for their local economy. Local stakeholders become the owners of their own future. Encouraging collaboration to achieve targets in a collective way builds trust over time, an invaluable condition for ecological transition. This can be also an answer to pressing and urgent societal challenges: using collective intelligence to find new and innovation solutions. This helps to avoid the culture of the dependence on subsidies that has proven fatal for European rural areas, and contributes to reinvigorating and supporting the local economy and employment, often new green job opportunities.

Other remarkable sources of social value is awareness raising among citizens about energy transition and climate change and food security and nutrition.
4.2.3. Economic value

- Sectors, and new products or services, in part from new natural resources (e.g. new fishes), that reach higher values and generate competitiveness among companies, new markets (ecogoods, "social marketing", which also forms part of the CSR of other companies), creation of new jobs.
- The emerging bio-based industry is the most important source of economic value.
- There is an indirect economic value that coordination tools of these projects (e.g. platforms) can generate through the network effect. Bringing together different actors to find new solutions to societal challenges can generate various economic opportunities for participants.
- Promotion of new energy business models based on services and “prosumers”. This means also the creation of new jobs.

4.3. Obstacles and alternatives to scaling up innovative good practices

According to the experts, when it comes to scaling innovative practices financial obstacles are the most important ones, followed by lack of demand due to stakeholders’ attitudes,
preferences or mindset (figure 8). At the other extreme, lack of demand due to price was not mentioned as a particularly important obstacle.

As alternatives to overcome these obstacles, the experts suggest (figure 8):

- Collaborative projects with agents from the quadruple helix.
- Adaptive management.
- Fiscal or other green economic incentives that support the competitiveness of more expensive ecologic products.
- Training activities, good practice visits and more target-focused dissemination activities.
- Medium-term (2021-2025): simpler, more efficient and faster regulatory approval paths for blue bioproducts and blue intellectual property protection.
- Lobbying actions at national and international level to incentivise private and public investment through tax bonuses in order to find adequate financing.
- Building a network of ambassadors and supporters of the initiative in order to incentivise stakeholder engagement.

Figure 8. Obstacles to scaling up innovative good practices

Source: Own elaboration.
The experts also suggested possible ways to overcome the obstacles to transferring good practices to Southern countries through cooperative projects and platforms for sharing current or potential solutions to common challenges; training programmes; and exchange programmes for entrepreneurs and researchers. Access to infrastructures and technologies is also important.

**Figure 9. Importance of mechanisms that could help increase the transfer and impact of good practices to the South**

Source: Own elaboration.
5. IN-DEPTH ANALYSIS BY EXPERTS

This section presents the main findings of three papers by experts containing more in-depth analyses of specific issues that are important for the governance of innovation policies in the field of the blue bioeconomy in the MED Area and, therefore, for this report.

The paper by Heloïse Berkowitz focuses on participatory governance for the development of the blue bioeconomy in the Mediterranean region. The one by Xavier Amores discusses how clusters can contribute to resolving social and environmental challenges through the creation of shared value. Finally, the paper by Pablo Bou centres on the role of marine biotechnology in the creation of shared value in the Mediterranean.

5.1. Participatory governance for the development of the blue bioeconomy in the Mediterranean region (Berkowitz, In Press)

Berkowitz identifies a series of gaps or obstacles in sustainable innovation projects in the MED region, in relation to locally-embedded participatory, multi-stakeholder governance model for sustainable innovation. She also proposes a set of solutions or opportunities to overcome these gaps.

A first set of obstacles are related to the participation of the quadruple helix actors, that is, local economic actors, public administrations, local scientific institutions and local civil society. Accordingly, the lack of commitment by all four groups of stakeholders is highlighted as one main obstacle, accompanied by lack of trust and resistance to change among established actors. All this may be due to a lack of the general capabilities needed for the governance, either in business, science, policy or civil society, or, in particular, to the lack of entrepreneurial skills in lagging regions and the immaturity of business models in emerging sectors. All this has to do with horizontal and vertical coherence.

A second set of obstacles is linked to the difficulties in designing and implementing projects that guarantee territorial (and temporal) coherence, i.e. that connect with the dynamics of territories. Regulatory inconsistencies in the MED region present an obstacle to wider systemic projects, since multi-layered and multi-level governance instruments often clash with each other or cancel out the efforts of others. Indeed, not all countries have a tradition of autonomous self-organisation at local or regional level and, as a consequence, local collective action is often absent or difficult. Variability in cultures, geographies, economy, migration risks, climates, etc., and even geopolitical tensions, can further hamper the design and implementation of sound sustainable innovation initiatives.

A final obstacle to the development and scaling-up of sustainable innovation is the lack of financial and human resources, as well as social capital.

Some additional findings regarding certain conditions for the success of sustainable innovation projects in the MED are as follows:
- The committed involvement of local and regional administrations is crucial, particularly in rural areas. These local authorities are responsible for commissioning analysis of the potential resources of each one of their municipalities, taking into account economic activities and natural capital. This knowledge is the basis for launching the entrepreneurial discovery process that will enable the identification and validation of new business models.

- All participants must be involved, and this requires developing buy-in or commitment for all and ensuring that the responsibility does not fall onto one single person, usually the manager, who must deal with everyone. Actionability of the governance model, joint actorhood and joint responsibility are key conditions for ensuring not only the implementation of the model but also the accountability of participants.

- Success also depends to a large extent on the cohesiveness of people, economies, environments and territories, in other words, on having a shared goal.

- It is necessary to improve the capabilities of the participants in governance, by enhancing values such as trust, transparency, honesty, transversality, empathy, community benefit, focusing on key aspects of the territory, avoiding exclusively personal interests, and thinking globally and acting locally, in an inclusive manner. According to one member of an initiative “Not everybody could be part of this initiative”.

- As noted from the projects analysed, certain individual actors, including particularly managers, who act as innovation spanners, play a central role in mediation. Conditions for acting as mediators may include having good technical knowledge of all the sectors involved, as well as familiarity with the territory and, potentially, speaking several languages.

Finally, Berkowitz also identifies opportunities for sustainable innovation projects in the MED:

- A twinning strategy between a North more advanced region and a South region or a lagging region and a more advanced region could be implemented. This could facilitate the development of joint projects or simply enable knowledge transfers through workshops and exchange programmes.

- Facilitating and encouraging the development of innovation brokers may constitute a crucial vector of experimentation emergence in territories. This, however, requires capacity building. Training workshops could be designing and implemented in the Mediterranean region, drawing on existing brokers' experience.

- It could be fruitful to facilitate and encourage the development of boundary meta-organisations which would have responsibility for the multi-stakeholder governance of experimentations and be accountable for decisions taken.
5.2. How clusters can contribute to the social and environmental challenges through the creation of shared value (Amores, In Press)

Clusters are the ideal ground for identifying and implementing shared value projects. Clusters can create shared value and contribute to developing responses to territorial social challenges at three levels:

- Enabling local cluster development through improving the available skills and supplier base, and supporting institutions in the communities where a company operates to boost productivity, innovation and growth.

- Redesigning products and markets by promoting innovative solutions, products and services related to the creation of shared value.

- Redefining productivity in the value chain by changing practices in it with the aim of driving productivity through better utilising resources, employees and business partners.

Clusters provide a good tool for identifying and disseminating collective corporate social opportunity, understood as a value creating activity when utilised with an appropriate strategy, and different from Corporate Social Responsibility or simply a charitable gesture. Instead of “good” corporations, “smart” corporations can be understood as collaborating in value chains and society or communities as a whole, or, as specifically stated: “Society should also recognise that corporations are the organisations that create collaborative values rather than simply giving away part of their profits to society. When corporations and society both realise this mutually beneficial role, a virtuous cycle of increased benefits can be developed for both corporations and society.” (Moon (2019), as presented in Amores (2020)). Eventually clusters also implement projects or engage public funding to develop projects of creation of shared value (CSV).

However, few existing clusters have CSV as strategic area in their organisation; rather, improving competitiveness is the main goal of all clusters nowadays, and CSV is not a core topic in most cluster organisations’ agenda. Rather exceptionally, some clusters promote many projects that could be considered as CSV, especially in the cleantech, social, health, children and silver sectors. Some of these CSV projects could be useful for achieving Panoramed objectives. Most of them use European public funding (calls such as INNOSUP, COSME, H2020, Interreg and so on).

Almost all examples of CSV in websites, studies, academic articles, etc., are focused on large companies. They seldom have a perspective from which a cluster, as an entity, or a government drives a CSV policy through a cluster. It is important to highlight this factor because it is, in turn, a handicap for identifying success stories and good practices with a view to promoting the policies and actions of a cluster.

Nowadays public administrations focusing on promoting CSV by clusters are very limited and still incipient. Sweden and Catalonia are two good cases, but they are too recent or hampered
by a lack of resources to ascertain their real long-term impact. They take two different approaches:

- Sweden: strategy focused on connecting SDGs and CSV through public funding, strategy and leadership of the project.
- Catalonia attempts to promote and systematise CSV in cluster initiatives through pilot project and new policies.

New agendas and more incentives must be introduced by governments in order to consolidate CSV and release its full potential, and this requires strategic alignment with territorial challenges. At the moment, “project logic” in CSV is more usual than alignment to real territorial needs, regional smart specialisation or global strategies as SDGs.

There is a need to develop new KPIs on the impact of CSV in clusters and companies. The current measurement of cluster performance based on the number of members, budget increase, projects implemented or visibility in press needs to take into account how these CSV projects or initiatives impact on their community or members.

CSV policies require coordinated, long-term effort by European, national and regional authorities. Clusters could be a valuable instrument for promoting these policies because of the presence of different stakeholders and for the show effect these initiatives could have.

5.3. Marine biotechnology as a tool for the creation of shared value in the Mediterranean (Bou, In Press)

The European Commission defines bioeconomy as those parts of the economy that use renewable biological resources from land and sea, such as crops, forests, fish, animals and micro-organisms, to produce food, materials and energy. Aligned with this definition, the European Commission defines the sector of marine biotechnology (MBT) as a “provider of high value added and specialised commercial products from these renewable biological resources”. Marine biotechnology is considered one of the five specific European activities or focus areas of the blue growth strategy (European Commission, 2012) with greatest potential for job creation and for innovation to be transferred to society, with an expected turnover in Europe of 1,000 M $ and 10,000 new jobs by 2020 if the market continues to grow at the rate of 6-8% (ECORYS, 2014).

According to the blue ocean economic theory (Kim & Mauborgne, 2017), the ideal business model for a company or sector must be based on innovation as a differentiating driver for competition. This theory raises an economic "red-ocean" situation when there is high competition for a product or service with a low or zero presence of entry barriers to potential competitors. This situation means that companies end up competing for price and not for value, maximising the resources of companies devoted to achieving market share without any ability left to invest benefits in technological developments. In this theory, the red of the ocean represents the blood of the members of this ecosystem in this struggle, in a metaphorical sense. As opposed to the “red-ocean”, the concept of “blue ocean” consists in the creation
of new market niches with strong barriers to entry, which generate a decrease in competition. These barriers may be technological, related to industrial protection (patent, industrial secret, utility model, etc.) or legal. **Innovation is the main driver for the creation of economic blue oceans and the evolution of the leading industries in these markets.**

On the other hand, marine biotechnology presents high potential for the creation of shared value (CSV), where new businesses act as transforming agents in their environment, generating environmental, social and economic value.

### Table 7. SWOT analysis of marine biotechnology (MBT)

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- MBT in constant growth (Collins, Broggioato, and Vanagt 2018)</td>
<td>- Lack of KPI indicators for CSV initiatives.</td>
</tr>
<tr>
<td>- Culture of collaboration with other disciplines (e.g. engineering and robotics).</td>
<td>- Lack of MBT cluster organisations to serve as CSV facilitators.</td>
</tr>
<tr>
<td>- Impact on at least 9 of the 17 SDGs.</td>
<td>- Weak research-company collaboration (OECD 2013).</td>
</tr>
<tr>
<td>- Impact of MBT in sectors of high economic potential (e.g. pharmaceutical industry).</td>
<td>- Lack of identification and structuring of agents of blue biotechnology (research, industry, civil society and government) in the Mediterranean.</td>
</tr>
<tr>
<td>- MBT or blue biotechnology linked to many other more mature biotechnologies, being able to promote them technologically (Kafarski 2012).</td>
<td>- Lack of technological centres and specialised infrastructures in MBT.</td>
</tr>
<tr>
<td>- Existence of successful MBT projects with potential to be transferred to other Mediterranean regions with similar problems.</td>
<td>- Current legislative framework hinders the exploitation of the MBT potential.</td>
</tr>
<tr>
<td>- Ongoing reorientation of public subsidies and incentives from those with harmful impacts to those with beneficial impact.</td>
<td>- Existence of subsidies and incentives with harmful impact on environment and that diminish potential for progress in areas such as MBT.</td>
</tr>
<tr>
<td>- Existence of vast unexplored marine areas.</td>
<td></td>
</tr>
<tr>
<td>- Existence of aquaculture techniques able to provide organisms with biotechnological potential without harmful impacts on environment.</td>
<td></td>
</tr>
<tr>
<td>- Existence of logistics for the collection of waste potentially applicable to marine waste, which is a key element for the promotion of blue business and initiatives of circular economy.</td>
<td></td>
</tr>
</tbody>
</table>

Bou argues that marine biotechnology contributes to at least nine out of the seventeen SDGs\(^2\) and, therefore, plays a relevant role in CSV, since each of the nine SDGs identified refers to at least one of the areas of shared value (social value, economic value and environmental value). Table 7 presents a summary of a SWOT analysis of the MBT, as developed by Bou.

6. MAIN FINDINGS FROM HORIZONTAL PROJECTS AND MED COMMUNITIES

As advanced in Section 1.1, Interreg MED focuses on four priority axes, three thematic and one devoted to governance. The three thematic priority axes (axes 1, 2 and 3) target innovation, low carbon and energy efficiency strategies, as well as the conservation of natural and cultural resources, and promote a two-tier approach to cooperation (Figure 10):

- On the one hand, a series of **modular (or integrated) projects** where partnerships cooperate on the ground (field cooperation) within their own project;

- Additionally, **horizontal projects**, established to connect and support modular projects that address similar thematic topics: **eight thematic communities** have been set up, each revolving around a group of modular projects, to share views and methodologies, upscaling cooperation dynamics, with the overarching aim of helping to meet capitalisation targets. Processing through thematic cooperation, the horizontal projects therefore generate thematic capitalisation. A comprehensive cooperation scheme is accordingly framed, where no project is left to operate alone. This is indeed one of the main innovation elements featured in the Interreg MED Programme.

Figure 10. Interreg MED architecture and Panoramed

Source: MED Programme.
The governance axis (Axis 4) targets better governance in the Mediterranean through multilateral cooperation. Exchanges in governance modalities have been set up at programme level, within a single-platform project, Panoramed, to empower territorial actors and trigger governance cooperation dynamics. Panoramed is a top-down governance initiative whose goal is to reinforce the capacity of national and public authorities to contribute in a coordinated way to current and future strategies and initiatives at Mediterranean basin level. In so doing, Panoramed is building bridges between MED projects and high level international strategies, initiatives and agendas, through improved multilevel governance and the involvement of national and regional governments (Daraio, 2019). One of the specific aims of Panoramed is to identify and promote strategic projects in three key sectors for the MED Area: coastal and maritime tourism, maritime surveillance, and innovation in the blue bioeconomy.

Horizontal projects are the essential element of transnational thematic communities. These horizontal projects cooperate with both the Interreg MED programme and individual projects, concentrating and developing information and deliverables per each of the three priority axes, producing summaries and qualitative analysis, gathering results and facilitating transnational dissemination and transferability from modular projects to other thematic programmes, European Commission, member states, thematic or institutional networks. They act as facilitators of synergies, exchanging and sharing between individual projects in order to foster the overall impact of the projects. Horizontal projects also promote modular projects’ communication and capitalisation actions within a joint framework, in order to better highlight the interests of the Interreg MED programme as well as of the transnational projects themselves.

Thus, through a comprehensive remit focused on capitalisation, horizontal projects are conceived as ‘capitalisation companions’: an interface crossing over individual modular projects’ limitations to unleash transfer and capitalisation potentials. Cooperating at ‘thematic community’ level, they foster knowledge sharing, convey skills and creativity and set the framework for stronger cooperation perspectives.

Horizontal projects contribute effectively with their work to meeting the following needs:
- to structure better the research of common solutions for joint problems and priorities in the territory of Interreg MED;
- to define better the added value of the transnational work;
- to communicate and to develop jointly the main results of the programme;

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3 Concept Note Interreg MED Capitalisation Event Athens, 24 October 2019: “MED FOR YOU A Strong Narrative for Policy Change”.

4 As established originally in the Terms of Reference for Horizontal Projects in July 2015.
- to manage a process of community building mixing bottom-up and top-down approaches (between thematic and governance priority axis);

- to contribute to the creation of the unique identity of the MED cooperation area

Horizontal projects effectively manage processes of community building, mixing bottom-up and top-down approaches, as they cooperate both with individual projects (bottom-up) and the Interreg MED Programme (top-down). In so doing, horizontal projects are already starting to work in a way similar to mission-oriented roadmaps, exploring complementarities and synergies among projects to address common challenges. Thus, the eight transnational thematic communities, as bottom-up coalitions of diverse actors gathering mission-projects (as in figure 11, which describes mission-oriented roadmaps), aim to contribute to common challenges.

**Figure 11. Mission Oriented Research & Innovation in the European Union**

The report Mission Oriented Research & Innovation in the European Union (Mazzucato, 2018) identifies mission-oriented policy as the key instrument to reframe Europe’s approach to tackling grand societal challenges. While the SDGs are useful to ensure focus, they remain for the most part too broad to be actionable. On the other hand, research and innovation projects have clear objectives and are actionable, but they remain isolated in their impacts if not clearly linked to their ability to address global challenges and to achieve societal impact. Here, missions set clear and ambitious objectives that can only be achieved by a portfolio of research and innovation projects (see mission projects at figure 12).

Source: Own elaboration based on Mazzucatto report (2018).
Figure 12. Grand challenges, missions and mission projects: the example of climate change

As examples, the Green Growth Community aims to promote a greener development model and a circular economy, while the Renewable Energy community seeks to increase the share of renewable local energy sources in energy mix strategies and plans in MED territories. Furthermore, the agendas of each of the eight thematic communities are clearly aligned with some of the specific objectives of the SDGs (missions in figure 12): in the examples mentioned, the Green Growth Community is aligned particularly, though not only, with SDG 15, and the Renewable Energy Community with SDG 7. Finally, in the cooperation architecture of Interreg MED, the eight communities interact so as not to remain isolated in their efforts to address and achieve societal impact (in the example on the bottom figure 12, the Grand Challenge of Climate Change).

Indeed, the MED communities have been already exploring their complementarities and synergies to address climate change in the MED Area from a cross-cutting and ecosystem-related approach (figure 13). Also, four MED communities are working together to boost the revitalisation of rural areas as a resilience strategy in the Mediterranean Region, using a cross-cutting approach that stresses the relation between the environment, society and economy (table 8).

**Figure 13. Interreg MED communities’ contribution to climate change**

![Figure 13](image)

Source: MADE in MED Conference (April 2018).

**Table 8. MED communities’ contribution to rural revitalisation**

<table>
<thead>
<tr>
<th>Community</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative Technology Solutions</td>
<td>25</td>
</tr>
<tr>
<td>Planning &amp; Management Tools</td>
<td>213</td>
</tr>
<tr>
<td>Innovative Policies</td>
<td>7</td>
</tr>
<tr>
<td>Governance Tools</td>
<td>140</td>
</tr>
<tr>
<td>Pilots and Living Labs</td>
<td>229</td>
</tr>
<tr>
<td>Assessment tools and Methodologies</td>
<td>49</td>
</tr>
</tbody>
</table>

5 SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and help biodiversity loss.

6 SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all.
In addressing common challenges from a cross-cutting perspective, as discussed at the Panoramed Innovation Camp organised in Barcelona on 17 and 18 October 2019, the communities face certain challenges for which several proposals were discussed:

- The projects gathered around thematic transnational communities are very heterogeneous in nature, which is the result of lack of directionality towards common challenges in the calls for projects. Instead of challenges, a thematic approach prevails in the calls for projects. This heterogeneity and lack of common challenges hampers joint communication, governance and capitalisation, in particular monitoring with common indicators.
- A proposal to enable better convergence of projects and communities towards common grand challenges, in the terminology of figure 13, could be to add capitalisation projects devoted to MED challenges to the Interreg MED structure. These projects would add to and be fed, among others, by the eight current thematic communities, capitalising on and monitoring progress towards the specific challenge they refer to by using common indicators.

- MED communities multiply the individual impact of projects enormously and deliver initially unexpected results. However, communities would not be what they are without leaders, horizontal projects. It is key that partnerships behind horizontal projects are strong and that a wide set of skills is adequately gathered, since this is essential for the community.

- To ensure this, appropriate training should be designed, in network management, communication, leadership, conflict management, etc. Also, a basic structure needs to be ensured to allow their potential impact to be actually developed.

- The projects and the communities are mainly focused on economic and environmental value and less on social value, at least not at the same level. Indeed, lack of knowledge about how to take social aspects into account and how to incorporate them into projects has been identified as a challenge to be addressed by communities. Similarly, there is a lack of knowledge on what to include and how to incorporate the gender dimension into projects and communities.

- Therefore, a proposal would be to promote training in social needs and impact and in gender equality throughout the entire programme (not only in innovation). Similarly, guiding consortia/partnerships to incorporate relevant and knowledgeable stakeholders (local entities, NGOs...) also seem to be needed.
7. **ANALYSIS OF THE MAIN GAPS AND OPPORTUNITIES**

The discussions and debates with experts and MED actors in the process of elaboration of this report have been the basis for the identification and analysis of the main gaps and opportunities for a better governance of innovation policies in the MED Area. Before the Panoramed Innovation Camp held in Barcelona (17 and 18 of October 2019), 8 gaps and opportunities had been identified. They were presented and discussed in the Innovation Camp.

The figure 14 shows the eight challenges presented in the Innovation Camp, which were the starting point for the discussion. Experts and MED actors participating were asked to classify them from 1 (the most important one) to 8 (the least important).

**Figure 14. Assessment of relevance of initially identified 8 challenges**

- The lack of a common understanding of MED societal challenges is a barrier against cooperation
- There is large scope for improving the use and impact of EU funds for innovation in the MED area
- There is large scope for improving synergies among R&I projects and dynamics in the territories
- The potential contribution from local communities to MED societal challenges is clearly underestimated
- Putting social needs at the centre of policies to increase impact
- Public administrations can do a lot more to support emerging business models for shared value
- Increasing Northern and Southern collaboration as the main challenge and opportunity for the MED
- There is large scope for optimising the use and impact of R&I infrastructures in the MED Area

Source: Own elaboration.

As a result of the two days of discussion at the Innovation Camp, the eight challenges were merged into five, which are expressed and analysed as gaps, opportunities and recommendations to improve the governance of innovation policies in the MED Area through the Interreg MED Programme and Panoramed. The recommendations are focused on strengthening the horizontal, vertical, temporal and territorial coherence of innovation policies in the MED Area:

- Reinforcing the common understanding of MED societal challenges
- Optimising the use of R&I infrastructures and the synergies between R&I programmes and projects
- Recognising and enhancing the contribution from local communities to MED societal challenges
- Increasing the support from public administrations to emerging business models for shared value
- Increasing the impact of innovation policies by taking into account social needs

In the following sections each one of these five points is analysed in more detail, and possible options for action in the MED Area are proposed, as discussed at the Innovation Camp. By promoting these lines of action, Interreg MED could contribute to improve the horizontal, vertical, temporal and territorial coherence of innovation policies in the MED Area; that is, to improve the governance of innovation policies.

7.1. Reinforcing the common understanding of MED societal challenges

The lack of a common language and understanding of MED Area societal challenges makes it difficult to develop shared visions and to agree on cooperative solutions. Whereas at an abstract level there is probably agreement about the main challenges for the MED, when working in more specific fields and/or with various multidisciplinary partners, differences in languages, focus, diagnoses and resulting proposals for action make real cooperation difficult. This, in turn, makes decisive progress towards common challenges difficult, since potential successful initiatives remain isolated with little chance of being escalated or transferred to national or regional policies aimed at achieving common goals.

Indeed, among the many policy and programme/project documents related to the MED Area, there are varied lists of challenges for MED that differ from each other in the focus or intensity of actions demanded (see Section 2), depicting a blurred picture of what is needed in MED, what is being done, how to capitalise it and how to transfer the results of individual strategies and programmes to national and regional thematic policies. This blurred picture becomes confusion when it comes to challenges common to the Northern and Southern Mediterranean shores. Certainly, the various shapes of the “Mediterranean region”, with EU and non-EU countries, Northern and Southern banks, different specific goals and means (financial and regulatory), individual countries and also groups of countries, also add to this confusion over a common policy vision.

Possible options for actions

In response to this context, shared, ambitious and positive long-term visions for the Mediterranean are needed, with shared narratives or storylines among the multiple actors (policymakers, business, civil society organisations, citizens) so as to increase acceptability and to promote effective cooperation to advance towards common goals. The SDGs could be
a valid common reference for MED, since they are largely agreed upon and used as a reference by many stakeholders. However, the SDGs would need to be adapted to the MED’s specific policy vision, challenges, goals, milestones and targets (directionality) so as to translate the goals into concrete criteria that can guide the prioritisation of investment and policy implementation.

This adaptation of SDGs to MED, or the identification of clear common societal challenges to MED, would need to be made at forums where different actors meet and develop shared visions and alternatives to meet societal needs in more effective ways. Policymakers, business, civil society organisations and citizens, also from Southern countries, should all participate. In addition to reinforced multidisciplinary and multidimensional dialogue, there is a need to integrate diverse perspectives to co-create alternatives for a better future, including cross-department public and private actors who agree on the mutually reinforcing roles of various policies that need to be directed at and aligned with the common societal challenges.

As a result, there is also a need for coordination mechanisms between MED and national and regional policies (vertical coherence), and a need for coordination between the various stakeholders (horizontal coherence): security, demography, climate change, trade, economic factors, social protection, migration policies and so on all need to be directed towards and aligned with the common societal challenges and be mutually reinforcing. For vertical and horizontal coherence addressed at the common societal MED goals to be effective in the territories, a strong focus on capacity building needs to be included in the next programming period, which should also include Southern countries.

A relevant issue that can promote shared understanding of the challenges and alternatives to meet societal needs are metrics and indicators to measure the (comparative) extent of the challenges and the impact of intertwined environmental, social and economic policies and projects on the issues that matter most to society. Traditional indicators do not provide the kind of information needed to understand the complexity and dynamics of the real world nor the impact of policies and projects in a coherent manner. Some of the SDGs’ KPIs could be used to set common criteria for assessment and monitor progress, but academia and policymakers should devote greater efforts to developing new metrics and indicators to understand the reality, the interactions between phenomena and the way policies and projects impact on (un)expected outcomes. An Observatory on the progress towards specific MED shared visions and goals could also be an option as a first step towards a kind of Open Method of Coordination for MED.

Furthermore, efforts to harmonise language among actors engaged in different disciplines could be pursued so as to facilitate common understanding of terms often used with different meanings. A glossary of terms could be prepared and regularly updated, defining and explaining new concepts, establishing correspondences between the way of naming a concept in one discipline and in another. These efforts should be complemented by improved communication among all stakeholders ensuring that they address and are aligned with the shared vision and goals, including companies that translate research to the market.
Finally, more budget seems needed for Northern-Southern projects and also specific programmes. Calls for twinning projects, with partners from North and South and with a double development path suggest an interesting option.

7.2. Optimising the use of R&I infrastructures and the synergies between R&I programmes and projects

There are many EU funded initiatives and cooperation programmes among Mediterranean innovation projects, but there is agreement that the use and impact of EU funds for innovation in the MED Area have much scope for improvement, both at EU level and in each country and region. One reason behind this are the limited synergies and complementarities resulting from R&I projects and dynamics in the territories, meaning that, as stated by local policy makers, transnational R&I projects tend to have more a project logic rather than a territorial one, what is often called “projectisation”. These projects, promoted by universities or technological and research centres, are often disconnected from the dynamics in the territories, and from national, regional and local strategies and policies. As a consequence, the results of the projects are not translated into national, regional or local strategies and policies, many resources and efforts are wasted, and many opportunities are lost. In this same vein, many current R&I infrastructures and equipment in the MED Area, especially pilot plants to test and develop new uses of available resources, are key to developing new value chains and new business models based on the circular economy and have been financed by EU funds yet a systemic mapping to visualise existing capacities is lacking, and this severely hampers the coordination and generation of complementarities and synergies.

To try to overcome these limits, many repositories and platforms have been set up to collect and visualise projects, although largely with only partial views so that the whole picture of EU funded projects is missing. Without this big picture, it is difficult to optimise the use of funds, since actors cannot detect complementarities, gaps or duplications and it is difficult for them to build coalitions to work in collaborative networks. Policy makers should take informed decisions and practitioners should improve their working effectiveness and efficiency.

Possible options for actions

In this context, a possible option for action could be to articulate challenge-driven missions or alliances to encourage multiple actors to join their efforts and work together using different types of funds to achieve common goals. There are examples of international experiences of this kind of coalitions (figure 15). In this context, the valuable experience of Interreg MED communities could usefully be harnessed to explore possibilities of collaboration aimed at jointly addressing common challenges, such as climate change or the revitalisation of rural areas, as briefly presented in Section 0.
Therefore, new mechanisms are needed to guarantee better alignment and synchronisation of projects with the dynamics and needs of the territory. Here again, a common language and shared narratives and visions are key elements to identify potential complementarities and synergies and to improve the synchronisation of different strategies and programmes. The option of articulating multi-stakeholder challenge-driven missions, alliances or coalitions seems highly necessary.

As a tool to push forward challenge-driven missions, comprehensive maps of existing projects and R&I capacities and gaps in the MED Area should be drawn up, together with an evaluation of necessary infrastructures for the future. In particular, there is huge need to showcase the experiences in prototyping. These tools should not be a library/catalogue, but a results-oriented tool that allows:

- policy makers to make informed decisions at local, regional and suprarregional level
- us to raise citizens’ awareness
- possible partners for projects to be identified
- the promotion of transferability
- the visualisation of better investments
- the simplification of access to R&I infrastructures and the elimination of duplications

A protocol could be agreed upon to exchange relevant information among stakeholders about funding, strategies, programmes and projects, possibly complemented by open data, such as the RIS3-MCAT Platform in Catalonia, which links projects with SDGs. Further development of this idea, i.e. which institution(s) should lead this process, which information should be
exchanged, whether it should be a platform of platforms, who are the potential users — policy makers, partners/researchers — formats, etc., could be an issue for a future Panoramed policy paper.

To enable advancement towards common goals, new forms of governance and new business models for R&I infrastructures and equipment are much needed, so as to promote open research and innovation, to facilitate SMEs access to them and to optimise their use. The Enterprise Europe Network\(^7\) could be used to engage local stakeholders, to support new business models and to improve synergies.

### 7.3. Recognising and enhancing the contribution from local communities to MED societal challenges

According to the academic literature on sustainability transitions, many innovations that are shaping our future society are happening at the local level, frequently promoted by self-organised social networks and by communities of interest promoted by individuals. These initiatives often meet the needs of local policy networks and are participated in to various degrees by municipalities and/or SMEs and grassroots organisations. There are many examples in the fisheries sector of participative governance and co-management models that could be applied to other fields.

Yet, all too often, local initiatives with significant impact for some collectives or communities in the territory are neglected, because they tend to have a low technological component (or no technological component at all) and, due in part to this, attention is usually drawn to larger transnational and technological projects.

As a consequence, very valuable knowledge stemming from local communities is wasted and many opportunities are missed. The aggregation of projects and cumulative learning from local communities’ projects are not easy, since each project is different and is embedded in a specific territorial context.

#### Possible options for actions

In response, intermediary actors are needed to collect, aggregate and disseminate information and knowledge among projects and (potential) stakeholders. In Interreg MED, the horizontal projects are already performing this intermediary role to capitalise the results of Interreg MED projects. The lessons from this valuable experience could be applied to local community-based initiatives so as to allow knowledge sharing, replication, adaptation to other territories and/or up-scaling.

\(^7\) More information at: https://een.ec.europa.eu/
The Policy Learning Platform is the second action of the Interreg Europe programme, established to boost EU-wide policy learning and capitalisation on practices from regional development policies. The platform is a space for continuous learning where the policymaking community in Europe can tap into the knowhow of experts and peers. As the community of like-minded stakeholders grows, so does the pool of good practices and expertise in the four Interreg Europe topics:

- Strengthening research, technological development and innovation
- Enhancing the competitiveness of SMEs
- Supporting the shift towards a low-carbon economy in all sectors
- Protecting the environment and promoting resource efficiency

Source: Own elaboration based on The Policy Learning Platform website.

The following is needed:

- Mechanisms to identify and collect good practices stemming from local communities;
- Methodologies to codify the good practices;
- Mechanisms and training capacity building to facilitate the adaptation of the good practices to other territories, and mechanisms to promote knowledge exchange and cumulative learning processes;
Mechanisms to replicate and scale up good practices that provide answers and solutions to common MED challenges.

In this context, the Interreg Policy Learning Platform\(^8\) (figure 16) could be also a reference for building up a pool of good practices and expertise related to experiences stemming from local communities.

The impact of community-based projects could be increased through the application of technology. Thus, researchers could work more closely with local communities to develop technological solutions to respond to communities' needs and to improve communities' innovations, promoting a shift of boundaries, e.g. scientists working with fishermen, learning from them and teaching them how to collect data and take advantage of local resources. Also, initiatives should be built upon the specific knowledge of members of the community —“Citizens science” for instance— promoting student internships in local governments departments.

The articulation of alliances or coalitions of local actors to achieve common goals through bottom-up shared agendas and the connection of these local strategies to Mediterranean and European strategies and missions are key to adequately addressing the SDGs. As stated above (see Section 4.1), a large part of the success of sustainable innovation within the framework of a model of local participatory governance revolves around the cohesiveness of people, economies, environments and territories, in other words of having a shared goal (Berkowitz 2020). The need for coordination and directionality of local actors or alliances of local actors could also be met by the proposed capitalisation projects devoted to MED challenges within the structure of Interreg MED, as a complement to the thematic transnational communities.

7.4. Increasing the support from public administrations to emerging business models for shared value

The challenges the Mediterranean is currently facing are huge and increasingly severe and complex. Governments have many powerful tools to become drivers of change towards a more sustainable development pattern, the most important of which are legislation, public grants and public procurement. Official narratives are also an effective means to promote change.

Yet, there are too many examples of ineffective legislation with severe side-effects harming social and/or environmental and/or economic values, even subsidies promoting economic sectors that impact negatively on some of the SDGs. Indeed, as addressed in Challenge 1, a common understanding of “shared value” is largely lacking, even within governments.

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\(^8\) Available at: [https://www.interregeurope.eu/policylearning/what-is-policy-learning-platform](https://www.interregeurope.eu/policylearning/what-is-policy-learning-platform).
Moreover, despite the powerful tools available to governments, they cannot do it alone. Governments lack the capacity and the financial resources to address the challenges by themselves.

Possible options for actions

**Guidelines** could contribute to providing solid support for changes in public procurement practice, legislation and public subsidies that aim to guarantee the coherence between short- and long-term objectives, taking the social, environmental and economic dimensions into account. These guidelines could address:

- The **understanding of “shared value”** by public authorities and personnel
- Public procurement of innovative solutions to open up new opportunities for SMEs to generate new products and services that generate shared value.
- **Subsidies and incentives to promote business models for shared value**, for example by introducing shared value as a criterion to support business.
- **Integrating shared value in entrepreneurship policies**, eliminating the current duality between economic entrepreneurship (focused on economic issues and usually promoted by economic departments of governments) and social entrepreneurship (focused on social issues, usually promoted by employment or social welfare departments).
- In this context, Horizon and SME instruments should reinforce the focus on delivering shared value with social impact. The experience of B-Corps movement, with over 3,000 companies in 71 countries supported by the United Nations,⁹ could also be a reference to learn from. A new online platform under development will leverage B Impact Assessment to enable companies around the globe to manage their impact through performance on the United Nations SDGs. **Entrepreneurial associations and clusters associations** should also become a driver for this change.
- A **change of current official narratives** to translate societal challenges into new opportunities for new business models, based on new value chains and on the principles of the circular economy.

7.5. Increasing the impact of innovation policies by taking into account social needs

Consistently considering the social needs, i.e. those of the most vulnerable persons (older, younger, low skilled, persons with disabilities, migrants...) or territories (deprived rural or coastal areas and so on), can contribute to enhancing the impact of research and innovation, for example, if a technical innovation needs to be used by consumers and citizens in deprived

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⁹ More information at: [https://bcorporation.net/](https://bcorporation.net/).
urban or rural areas. As stated above, tackling MED societal challenges requires holistic strategies, projects and actions that integrate the social, environmental, economic and technological dimensions, maximising synergies and counterbalancing trade-offs. Achieving complex social challenges, for example, as regards ageing in rural or coastal areas, gender inequality, increasing migration flows and so on, can indeed also be a specific goal of socio-technical innovation. There are examples in Interreg MED of experiences that entail sound approaches towards meeting the needs of vulnerable persons and/or territories.

Yet, socio-technical innovation in Interreg MED projects tends to focus on governance and/or technological innovation aimed at addressing environmental challenges, very often with an approach based on economic sustainability, aimed at promoting new business models. In this approach, resolving social challenges—the needs of vulnerable persons, groups of persons or territories—is rarely the main goal of innovation. The actual or potential side effects on social issues (migration flows, creation/destruction of jobs, and also for groups at risk, such as persons with disabilities, low-skilled women and young and older persons) are in general given little consideration, either at the moment of designing the innovation or at the implementation phase. Whereas hard technical innovation tends to focus on environmental challenges, it is soft governance innovation that will focus on the challenges faced by the most vulnerable persons or territories. Some outstanding social challenges in the Mediterranean, such as migration flows, are almost absent in Interreg MED projects.

Possible options for actions

Addressing SDGs requires reorienting research and innovation to the values, real needs, challenges and expectations of society, its communities and territories. The social dimension in innovation calls and projects, including horizontal projects, needs to be included at the same level as the economic and environmental dimensions. Technological innovation projects should always evaluate the potential (positive, neutral or negative) impact of technology on vulnerable groups and territories; they should also always consider how to improve the lives of the communities or territories they are impacting on, and how to prevent or address the negative effects, for instance on job destruction and resulting increased migration flows. Also, calls to address specific pre-identified communities’ needs through technology (e.g. affordable high-speed internet in rural areas) should be promoted.

Interreg MED and other programmes promote technological and social experimentation at the local level, in close collaboration with local stakeholders and citizens, very often in living labs. It is necessary to continue promoting these spaces for experimentation, connecting them with technological developments and research and innovation projects. As an example, some Interreg MED projects are focused on the needs of rural (coastal) areas, in which, for instance, high-speed Internet connection is lacking, which is both a result and a cause of insufficient technological development. Academics must work closer with users, communities and governments in order to anticipate the impacts of new technologies, especially on vulnerable groups and territories.
Importantly, there is also a need for **developing and adopting new quantitative and qualitative indicators, metrics and evaluation methodologies for that social impact of research and innovation that, among other things, contribute to better understanding the intertwined impacts of the environmental, social and economic strands of sustainability.**
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