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Draft MED 2050 Roadmap - Towards a New Foresight Study on Environment and Development in the Mediterranean

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I. Introduction

1. MAP Phase II, adopted by the Conference of Plenipotentiaries on the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols (Barcelona, 9-10 June 1995), as Annex I of the Barcelona Resolution on the Environment and Sustainable Development in the Mediterranean Basin, noted that “*Public information and public participation are a dimension essential to the policy of sustainable development and environmental protection*”. Furthermore, under the objectives of the information and participation component it included, *inter alia*:

“-to provide to the general public the information available on the state of the development and environment of the Mediterranean and its evolution, and the measures taken to improve it”;

“-to publish the Report on the State and Evolution of the Mediterranean Environment at regular intervals”.

2. Furthermore, the UNEP/MAP Mid-Term Strategy 2016-2021 (MTS, Decision IG.22/1) set out seven Objectives in order to achieve the expected accomplishments under the Overarching Theme “Governance”, one of them being “To deliver knowledge-based assessments of the Mediterranean environment and scenario development for informed decision-making and stakeholder work”.

3. To this end, Strategic Outcome 1.4 of the MTS reads “Knowledge and understanding of the state of the Mediterranean Sea and coast enhanced through mandated assessments for informed policy-making.”, and Indicative Key Output 1.4.1 reads “Periodic assessments based on DPSIR approach and published addressing *inter alia* status quality of marine and coastal environment, interaction between environment and development as well as scenarios and prospective development analysis in the long run. These assessments include climate change-related vulnerabilities and risks on the marine and coastal zone in their analysis, as well as knowledge gaps on marine pollution, ecosystem services, coastal degradation, cumulative impacts and impacts of consumption and production”.

4. Finally, the Programme of Work and Budget 2015-2016 (Decision IG.22/20), includes a specific Main Activity 1.4.1.3 “Develop a roadmap for the preparation of Med2050 report”.

5. Following the above mandate, this document presents the roadmap for a new foresight exercise in the Mediterranean. Such an exercise will provide valuable information on future developments based on science-based scenarios and on anticipating actions to promote sustainable development in the Mediterranean region for the coming decades. Furthermore, the findings of such an exercise will feed the process of reviewing the implementation of the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD 2016-2025, Decision IG. 22/2). As noted in Section 3 of the MSSD 2016-2025: “Science is key to success: all action and policy development at the national or regional level must rely on a strong evidence bases. The analytical tools that will allow the forecasting, planning and assessment of sustainable development-related impacts and actions need to be developed with the scientific community, which itself needs to direct its research capacity in support of decision making...”

II. Timing for a new foresight exercise in the Mediterranean with a 2050 horizon

6. The last such foresight exercise was performed in 2005-2006, over ten years ago. However, this does not in itself justify a new project. The present document brings together several inputs: the internal reflections by the Secretariat (Plan Bleu/RAC) on this issue, the analysis of the findings of a seminar organised in Paris in December 2016 with the participation of specialists in Mediterranean foresight and representatives of several countries and international organisations, the results of a benchmark study (completed in April 2017) on the 30 existing studies performed since the early 2000s, as well as preliminary discussions that took place at the Plan Bleu Focal Points meeting (held in Sophia Antipolis, France on 25-26 April 2017).

7. Following the above, there are five major reasons for launching a new foresight exercise now:

- a) The first reason is that the context has completely changed since 2005 – with the economic crisis,

the oil glut, global and regional geopolitical changes, the Arab Spring, the European crisis, acceleration of climate change, etc. These changes may realistically be further accentuated by 2050 in all areas – technology, demographics, geopolitics, economics, ecology, etc. It is essential to include this perspective of rapid transformation (and therefore transitions needing to be made) in MAP policies – especially as the Mediterranean is and will be particularly affected.

- b) The second reason is that most existing foresight work on the Mediterranean, including that of 2005, now has too short a time-frame, at most up to 2025 or 2030 – and is not able to take into account more long-term issues, such as climate change or possible ecosystem disruption, nor, in particular, consider transitions (e.g. economic, energy transitions) which will only have an effect in the long term. It should also be noted that 2050 is now the common time-frame for most international policies.
- c) The third reason is that neither the 2005 exercise nor those performed outside of the MAP take into account impacts on the sea, or even on the marine economy, which does not reflect the concerns of the Barcelona Convention and therefore of the MAP.
- d) Another very significant reason – which could in itself justify a new exercise – is that past work has only focussed on one possible aspect of foresight: forecasting (what will happen to the environment in ten, twenty or thirty years if such or such a context or scenario should occur?), while other aspects, which are equally interesting and perhaps more useful for action, have been neglected.

Foresight should not be confused with forecasting. The aim of foresight is not only to extrapolate current statistics to reveal trends in certain identified and well-understood variables or problems. It also has three other functions which are just as important but have not been adequately explored so far. It should alert us to new risks or poorly-understood opportunities, identify possible disruptions and anticipate the consequences of improbable events – and therefore assess uncertainties and not just probable trends. It should also compare and discuss various visions of the future, in order to contribute to jointly building consensus on what is collectively desirable or at least not unacceptable. Finally, it has a fundamentally strategic purpose and should help us to construct and assess the paths and strategies needed to achieve shared goals in a context of uncertainty.

Launching a new exercise would finally provide the opportunity to use these foresight capacities not only to predict but also to alert us to possible disruptions, to promote comparison of visions and discussion, and finally, to jointly build and compare long-term strategies suitable for the diversity of Mediterranean countries.

- e) Finally, a fifth and final reason should not be neglected: communication. Experience has shown that major foresight exercises, when performed seriously and shared, can be very useful tools for communication and funding, including for the general public and media – which is not always the case for more specialist work. Launching MED 2050 would put the MAP back in the heart of public debate on the environment in the Mediterranean.

III. Benchmark study: findings and identified gaps

8. Prior to launching MED 2050, a benchmark study was performed of work pertaining to the scope of action for the MAP, and more widely, to sustainable development in the Mediterranean. Around thirty existing studies/exercises performed over the last fifteen years at the scale of the Mediterranean basin, or of a significant part of the Mediterranean, were used and analysed (Annex 2). The summary published in April 2017 is available on the Plan Bleu/RAC website and gives a precise, qualitative and quantitative overview of existing work.

9. In particular, it demonstrates a certain number of gaps both in content and methods, in addition to the gaps mentioned above.

Firstly, gaps in the content of these exercises:

- The time-frames are too short, very little work looks beyond 2030;
- Possible disruptions, improbable events, and the emergence of very new risks or opportunities have not been adequately explored. They are mainly forecasts regarding trends or deviations from trends (macro scenarios);
- Little work is multi-scale covering both the sea and coastline on the one hand and the Mediterranean region on the other. Only one exercise, MED TRENDS, led by WWF (with the support of Plan Bleu/RAC) explicitly covers the Mediterranean ecosystem and maritime space (in the Western Mediterranean). The vast majority of the other studies focus on the relationships between economic development, demographics and governance.
- When taken into account, the environment is generally considered as a (downstream) effect of socio-economic changes. The reverse impacts of transformations of habitats and ecosystems on development, lifestyles, migrations, etc., are rarely considered. For example, this is true for the rare works that focus on climate change.
- The majority of work considers the Mediterranean region as a whole – often only using the distinction between Northern and Southern countries. While case studies are offered for some countries, or sometimes certain territories, geography and cultural specifics are inadequately covered in the overall dynamic of scenarios.
- Finally, many of these exercises lead to recommendations that are insufficiently effective, due to the lack of true strategic analyses comparing the options for achieving the set goals. This is another consequence of the predominance of forecasting approaches: approaches using strategic foresight (or “back-casting”) are insufficiently used.

Secondly, gaps in terms of methodology:

10. Other than this imbalance in favour of forecasting, several other methodological gaps are highlighted in the benchmark study:

- The vast majority of the 30 exercises are the work of experts or researchers, performed in a relatively small circle, often for bodies that are specialist themselves;
- Direct stakeholder participation (States, territories, businesses, associations, etc.) in producing assumptions and scenarios is usually very limited;
- The political integration of these exercises in the reality of each country or region is also highly inadequate, in particular due to their overly general approach.
- With a few exceptions (e.g. the WWF study), communication is insufficiently developed, in particular for the general public, media and direct decision-makers.

11. If a new exercise is launched, it should include both the results and lessons learned from these past experiences.

IV. Key directions for MED 2050

12. The aforementioned benchmark report and all preparatory work performed by Plan Bleu in 2016-2017 have helped draw up some general directions for the future MED 2050 exercise. However, it is important to note that, since this is still an early stage of the project, the necessary consultations have not yet taken place, and the objectives and desirable content of Med 2050 are still open.

13. At this preliminary stage, it is suggested that this exercise will be quite different from that of 2005, which was mainly a quantitative “ivory tower” exercise by experts, focusing on the environmental impacts of the major trends forecast in the medium term (2025).

14. This difference should be expressed through seven general key directions:

- a) Firstly, an extension of the time-frame – the choice of 2050 – with an intermediate time-frame

of 2030, corresponding to the one adopted for COP21 and the United Nations Sustainable Development Goals;

- b) Next, a better balance between a quantitative and qualitative approach. The future exercise should combine intelligent use of existing statistics on trends – or statistics that will become available in the next report on the state of the environment in the Mediterranean – with more qualitative considerations to include recent geopolitical upheavals, economic, technological, political and ecological uncertainties, possible disruptions, stakeholder visions, etc. This would not therefore involve building an overly complex, data-hungry, quantitative model – although, of course, this does not mean that statistics will be lacking.
- c) Thirdly, the true consideration of climate change in a more systems-based perspective to include the reverse consequences of this change on ecosystems and on the economy, agriculture, lifestyles, migrations, urbanisation, energy policies, etc.
- d) Much greater priority will also be given to foresight regarding the sea, which was largely missing in the 2005 exercise. This will probably involve making a distinction between scientific work on marine ecosystem transformations and more general foresight for the Mediterranean region – which then must be coordinated. This also assumes that perspectives for the blue economy are better taken into account.
- e) Moving from an “ivory tower” exercise by experts to open, participative foresight, providing structure for true dialogue between various Mediterranean countries and involving the relevant stakeholders and civil society. The aim of the future exercise should be to make comparison possible and then to consider contrasting visions of the future of the Mediterranean, prior to the joint construction of shared medium and long-term goals. For this, MED 2050 must better take into account the specifics, resources and experiences of the various countries around the Mediterranean, compared to previous exercises.
- f) A more strategic focus. Alongside openness to stakeholders and civil society, this is another essential condition for placing the foresight exercise within the reality of the challenges facing each country, underpinning the Barcelona Convention and ecology. The key question that the foresight exercise must answer is not what the future will be in 2050, but instead the question of transitions: how do we move from today’s situations and crises to medium-term action plans and long-term goals or challenges? For this, priority must be given to the production and comparison of various options for transition, taking into account the specifics of the different Mediterranean regions, and realistically identifying the resources, opportunities and obstacles, etc. Considered in this way, the future exercise should make a significant contribution to any renewed strategy for sustainable development in the Mediterranean.
- g) Finally, a seventh and final direction would be to invest much more in communication than in the past. The results of this work, even at intermediate stages, should be made much more accessible to various relevant audiences – from specialists to residents – which means considering the communication strategy from the exercise design phase, and probably inventing a more interactive production process.

15. In conclusion, this means drawing up an ambitious project which best meets the expectations of various countries and stakeholders, and the crucial ecological challenges of the Mediterranean from now to 2050. Naturally, there is also the issue of resources, leading to the consideration of two main possible options for the 2018-2019 programme.

V. Two possible options for MED 2050 preparation

16. Launching a MED 2050 project that meets the directions specified above assumes mobilising significant internal and external resources, which are currently not available. The investment needed to perform such an exercise – with reasonable conditions for success – can be roughly estimated at €500,000 - €1m over two years, which is far beyond conceivable short-term resources. Two options are

therefore considered:

(a) First option: mobilisation of external resources and MED 2050 launched late 2018/early 2019

17. The first option is based on the ability to mobilise specific external funding to launch the MED 2050 project in 2019. In this scenario, activities for the next three years would be as follows:

- Late 2017 to late 2018: search for financial and scientific partners, stakeholder consultation (MAP structures, countries, supervisory bodies, etc.), creation of a network of experts and national representatives, production of an initial database on trends, and development of the definitive project (and first milestone report).
- In 2019: project launching, implementation of structures, development of communication tools, continued work on trends (in collaboration with the report on the state of the environment), launch of specific work on Mediterranean ecosystem transformations (in particular with regard to climate), and consultation of countries on their visions for the future of the Mediterranean (on a voluntary basis). Second milestone report.
- In 2020: organisation of regional workshops based on these national or territorial contributions and more general considerations, for jointly constructing scenarios for 2030-2050. Then, on this basis, work with relevant stakeholders to define alternative transition strategies and perform comparative assessment of their plausibility. First summary report ready and disseminated at the end of 2020.

(b) Second option: No additional funding and continuation of the preparatory and monitoring phase until late 2019

18. The activities would therefore be as follows:

- Pursuit of foresight monitoring and publication of four-page summary documents on specific themes;
- Creation of a network of resource people and national or international representatives;
- Development of a database of the main prospective trends until 2030-2050 (in relation with the report on the State of the Environment and Development 2019);
- Consultation with scientists, foresight researchers and stakeholders (from MAP, countries, civil society, etc.) on the future of the Mediterranean, and organisation of seminars for discussion and debate.

19. It appears that under all scenarios the monitoring and coordination function shall continue, as shall gathering of statistics on the main trends. The question is whether or not it is best to delay by another two years the undertaking of a large-scale foresight exercise given the geopolitical situation and the ecological crises in the Mediterranean space. In this area, the next two decades will indeed be decisive.

VI. Next steps

20. Taking into account the discussions at the MCSD meeting, a more specific proposal will be drawn up including one or more alternative projects to be implemented from 2018-2019 or after 2019.

For this, three new activities will be performed:

- Production of a four-page summary report on the benchmark study;
- Organisation, in late 2017, of a second seminar (on the 40th anniversary of Plan Bleu), to expand the network of experts and relevant stakeholders;
- And, in particular, the exploration of possible options for the future exercise, with the proposal of corresponding roadmaps. This work on the options will be based on the widest possible consultation with MCSD members and other stakeholders.

Annex 1

Proposed timeline for the MED2050 Report

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Date	Action	Deliverables
2016-2017	Benchmarking of existing relevant Mediterranean foresight studies in preparation of MED2050 report	Benchmarking of existing relevant Mediterranean foresight studies
August-September 2017	Draft of roadmap included in a draft information document on MED2050 for COP 20 (Plan Bleu), shared with MAP CU and components	COP 20 Information document on MED2050
October 2017	Final information document on MED2050 for COP 20 (Plan Bleu)	
Quarter I 2018	Mobilization of MED2050 governance structure	Detailed MED2050 table of contents
Quarter I - II 2018	Development and consultation of the detailed table of contents of MED2050 (Plan Bleu and MED2050 partners)	
Quarter III - IV 2018	Development of a common trends scenario serving as basis for development of other scenarios, considering preliminary results from QSR and SoED (Plan Bleu and MED2050 partners)	Outline of MED2050 scenarios
Q IV 2018 – Q IV 2019	Co-construction of alternative/thematic scenarios (Plan Bleu and MED2050 partners)	
Q III 2019 – Q II 2020	Co-construction of recommendations for decision makers (Plan Bleu and MED2050 partners)	
Q II 2020 – Q IV 2020	Editing of MED2050 (Plan Bleu)	Draft MED2050 report
Quarter I 2021	Draft MED2050 report submitted for consultation (Plan Bleu)	
COP 22	MED2050 submitted to COP 22 (Plan Bleu)	
End 2021	MED2050 published and disseminated (Plan Bleu)	Final Med2050 report

Annex 2

References of the benchmark study described in Section III

Annex 2: References of the benchmark study described in Section III

#	Titre	Auteurs	Date
2	Méditerranée 2030. 4 scénarios pour les territoires méditerranéens	Institut de la Méditerranée, V. Wallaert JC. Tourret	2010
3	EuroMed 2030	Directorate for Science, Economy and Society of the EC-DG Research & Innovation in collaboration with a group of experts "EuroMed-2030"	2011
4	Demain La Méditerranée	IPEMED	2011
6	MedTrends	WWF	2015
7	The Climate of the Mediterranean Region: From the Past to the Future	Piero Lionello, Chercheur au l'université du Salento (Italie).	2012
8	Comportements et sécurité alimentaire en Méditerranée Etat des lieux et prospective	Martine Padilla	2009
9	Mediterra 2008 : The Future of Agriculture and Food	CIHEAM	2008
11	Mediterranean Energy Perspectives 2015	OME	2015
12	Géopolitique du bassin méditerranéen In Rapport VIGIE 2010 (Futuribles) : Horizon 2020 - 2030 : Tendances lourdes et incertitudes majeures	Pierre Blanc (Ciheam)	2010
13	Région méditerranéenne & changement climatique une nécessaire anticipation	Stéphane Hallegatte, Samuel Somot et Hypatie Nassopoulos dans IPEMED	2008
15	Mediterranean Energy Transition: 2040 scenario	ADEME, OME, MedENER	2016
17	SESAME (Southern European Seas – SES : Assessing and Modelling Ecosystem Changes)	HCMR, Athens	2011
18	Rapport sous-régional Afrique du Nord. Etude prospective du secteur forestier en Afrique	Banque africaine de développement, Commission Européenne, FAO	2003
19	Le système agricole et alimentaire de la région Afrique du Nord – Moyen-Orient à l'horizon 2050 : projections de tendance et analyse de sensibilité	INRA-Pluriagri	2015
21	Managing Water Scarcity in North Africa - Trends and future prospects	North Africa Horizons A monitoring bulletin published by FSF (Futures Studies Forum for Africa and the Middle East)	2015
68	Macroeconomic Scenarios for the Euro-Mediterranean Area	MedPro	2013

#	Titre	Auteurs	Date
69	Scenarios Assessment and Transitions towards a Sustainable Euro-Mediterranean in 2030	MedPro	2013
70	Adaptation to Climate Change in the Southern Mediterranean	MedPro	2013
71	Population scenarios and policy implications for southern mediterranean countries	MedPro	2013
72	What scenarios for the Euro-Mediterranean in 2030 in the wake of the Arab Spring	MedPro	2011
73	Possible European Territorial Futures: expert consultation on key foresight topics	EPSON	2016
74	L'eau et les milieux aquatiques: enjeux de société et défis pour la recherche	Michel Sebillotte (dir.)	2003
75	A sustainable future for the Mediterranean: the Blue Plan's environment and development outlook	Plan Bleu	2005
76	Visions méditerranéennes sur l'eau, la population et l'environnement au XXIème Siècle	Plan Bleu, Jean Margat et Domitille Vallée	1999
77	Study on Climate Change and Energy in the Mediterranean	Plan Bleu, BEI	2008
78	Energy sector in the Mediterranean region, situation and prospective 2025	Plan Bleu	2009
79	Migrants et migrations dans le bassin Méditerranéen	Philippe Fargues et Hervé le Bras	2009
80	Labor and migration in the Euromediterranean region: issues and perspectives	Thierry Baudassé et Ahmed Driouchi	2007
81	Demain la Méditerranée : scénarios et projections à 2030	Guillaume Almeras et Cécile Jolly	2009
82	La pollution de la Méditerranée: état et perspectives à l'horizon 2030	Roland Courteau, based on Plan Bleu	2011
83	Maritime transport of goods in the Mediterranean: outlook 2025	Philippe Vallouis, Christian Reyaud et Martine Poincele, Plan Bleu	2010
84	Le tourisme littoral en Méditerranée. Tendances et perspectives face au changement climatique	Alexandre Magnan	2009