

MED 2050 MODULE 2

Contrasted Visions on the future of the Mediterranean

PRELIMINARY REPORT

MED2050

Building the Mediterranean future together
Construisons ensemble l'avenir de la Méditerranée
لنبني معًا مستقبل المتوسط

Contents

Contents	2
Diagrams, tables and figures	4
Introduction	6
I- Overview and objectives of MED 2050	6
II- Module 1 - Foresight base	6
III - Objectives and structure of Module 2 - Visions on the future of the Mediterranean	7
Part 1: “Personalities” survey	8
I - Overview of the survey	8
II - Summary of opinions and observations	11
1. Concern over the deteriorating situation in the Mediterranean	11
a) Generally pessimistic outlooks	11
b) Unanimous rejection of inaction	12
c) Reasons for hope	13
2. The same observation, but different solutions	15
a) Differences over the liberal political model and the place of the Mediterranean in the world	15
b) Differences of opinion on economic liberalism, the use of technology and energy choices	15
c) Diverging visions on lifestyles	16
3. Rurality: a blind spot in the interviews	17
Part 2 - Youth Commission on the Future of the Mediterranean	18
I - Overview of the workshop	18
1. Objectives of the Youth Commission on the Future of the Mediterranean	18
2. Method	18
a) The challenge of projecting into the future	18
b) Creating three contrasting fictions	19
c) Summary of the three fictions	20
3. Workshop organisation and programme	21
II - Lessons from the workshop	24
1. Purpose of general analysis	24
2. Summary of results	25
a) Reactions to the fictions	25
b) Ten takeaways	26
3. The most likely futures	27
4. Areas with the greatest consensus	28
5. Areas with the least consensus	28
6. Controversial topics	29
a) The technological solutions up for debate	29
b) More or less desired territorial transformations	29
c) Debate surrounding sobriety	30

d) Striking a balance between individualism and altruism	31
e) Necessary bridges between governments and citizens	31
f) International cooperation under certain conditions	32
7. Contrasts between the North, South and East	33
8. An overall desire for cooperation between young people across the Mediterranean region	34
Conclusion	35
I - Comparative summary of the two approaches to the visions	35
1. Pessimistic visions, but a shared desire to take action	35
II - Next steps in the MED 2050 project	36
Appendix	37
I - Compiled and summarised interviews	37
1. Personalities interviews with people outside the MED 2050 project	37
a) Personalities interviews with people from eastern Mediterranean countries	37
a) Interviews with people from northern Mediterranean countries	48
a) Interviews with people from southern Mediterranean countries	85
2- Responses to the questionnaire from members of the MED 2050 platform	102
a) Questionnaire responses from people from eastern Mediterranean countries	102
b) Questionnaire responses from people from northern Mediterranean countries	104
c) Questionnaire responses from people from southern Mediterranean countries	110
d) Questionnaire response from one person from northern Europe	113

Diagrams, tables and figures

Boxes

Box 1. Individual Survey - Three questions about the Mediterranean and its possible futures	8
Box 2. Participant reflections about the “Youth Commission on the Future of the Mediterranean”	34

Graphs

Figure 1. Nationalities of interviewees	9
Figure 2. Categories of interviewees	10
Figure 3. Nationalities of respondents to the online questionnaire	10
Figure 4. Countries of origin of workshop participants	22
Figure 5. Age of participants	23
Figure 6. Gender of participants	23
Figure 7. Employment status of participants	23
Figure 8. Level of education of participants	23
Figure 9. Breakdown of participants by rural and urban areas	23
Figure 10. Main concerns of participants	23

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Introduction

I- Overview and objectives of MED 2050

The Mediterranean context has changed considerably since MAP's last foresight study, published in 2005. The Contracting Parties to the Barcelona Convention have therefore tasked Plan Bleu with carrying out a new foresight exercise for 2050: MED 2050.

In line with the project objectives set out in the roadmap¹ defined in two texts adopted by the Contracting Parties to the Barcelona Convention, the MED 2050 project has been structured into five major phases, known as modules:

1. An initial quantitative and qualitative phase, designed to establish a basis for analysing the Mediterranean system by exploring its specific trends, disruptions and weak signals and ranking the issues (risks or opportunities) for the environment and sustainable development in 2030 – 2050.
2. A second phase aims to consult stakeholders and co-build contrasted visions on development and the environment in the Mediterranean - with stakeholders (e.g. representatives of the political, economic and scientific spheres, environmental associations, youth networks) and experts from the three southern, eastern and northern sub-regions.
3. A third phase aims to develop several contrasting scenarios for 2030 - 2050, building on the previous work.
4. A fourth, more strategic, phase focuses on reflection and comparison of possible transition pathways towards sustainable development based on the previous scenarios and involving experts and stakeholders.
5. The last phase aims to share the results with several potential audiences: the UNEP/MAP-Barcelona Convention system, the countries affected, the general public, the media, civil society and the scientific community, etc.

II- Module 1 - Foresight base

Module 1 is a preliminary phase for the development of a foresight base, drawing on the work of experts in the MED 2050 foresight group. This stage started by characterising a list of major trends, disruptions and weak signals that could influence the development of the Mediterranean system, and ranking these disruptions according to their likelihood of occurring and potential impact. The experts prepared 35 factsheets to analyse the various dimensions and themes of the Mediterranean system. This work was compiled in a report entitled: "[MED 2050 – MODULE 1: Foresight base - Preliminary report](#)".

¹ Decision IG.23/4 of the Barcelona Convention, Annex II MED 2050 Roadmap towards a Foresight Study on the Environment and Development in the Mediterranean; Decision IG.24/4 of the Barcelona Convention, Annex III Revised Roadmap for the MED 2050 Foresight Study.

III - Objectives and structure of Module 2 - Visions on the future of the Mediterranean

In addition to the work of the experts in Module 1, and in line with the Med 2050 roadmap² which highlights the importance of incorporating a participatory dimension into the foresight exercise, the purpose of Module 2 is to consult various stakeholders and take into account their visions on the future of the Mediterranean. Module 2 is therefore designed as a phase for consulting stakeholders and co-building different visions on the future of development and the environment in the Mediterranean, with stakeholders and experts from the southern, eastern and northern sub-regions. The key characteristics of this process are centred on the desire to take into account the heterogeneity of the Mediterranean sub-regions, within a comprehensive foresight approach in the region, involving experts and a wide range of stakeholders from civil society.

From the various possibilities proposed by the framing methodology for Module 2 to highlight the differences in visions for the future specific to the different regions (workshops, individual consultations, questionnaire, combination of workshops and consultations), two avenues were chosen, given the health context in which this module was carried out: an individual survey of people representative of all countries around the Mediterranean, and a workshop with young people from the Mediterranean with different profiles, called the “Youth Commission on the Future of the Mediterranean”.

² “Unlike most analyses identified in the benchmark study, MED 2050 will not rely solely on expert work. Contracting Parties and stakeholders will be consulted on their visions for the future of the Mediterranean (their viewpoints and aspirations), with the aim of sharing potentially contrasting visions across Mediterranean sub-regions.” (Decision IG.24/4 of the Barcelona Convention, Annex III Revised Roadmap for the MED 2050 foresight study).

Part 1: “Personalities” survey

I - Overview of the survey

The “personalities” survey was conducted through face-to-face or videoconference interviews. Some responses were obtained via an online questionnaire sent to people registered on the MED 2050 platform. All respondents answered a series of 3 questions, with a final section inviting free comment.

The questionnaire was worded as follows:

THREE QUESTIONS about the Mediterranean and its possible futures

*As part of the **MED 2050 foresight study** carried out by **Plan Bleu** within the framework of the **United Nations Mediterranean Action Plan**, we would like to interview people from different backgrounds and with different profiles about their vision of the possible future of the Mediterranean - both as a region and as a sea. The aim of this MED 2050 study is to **anticipate the problems facing the Mediterranean** (excluding the Black Sea) between now and 2050 (approximately one generation) in order to compare different transition pathways towards a more sustainable Mediterranean by the mid-century, thereby avoid the most serious and likely crises.*

*The questionnaire is structured around **three questions**, ranging from perceptions about the current situation to personal visions about disruptions or changes over the long term.*

Question 1: Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what **major challenges (problems and opportunities)** do you foresee for the long term (2050)?

Question 2: What are your visions about **what would be desirable or unacceptable** changes in the region in the decades to come?

Desirable:

Unacceptable:

Question 3: What **disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable** in the long term?

To achieve the desirable outcome

To avoid the unacceptable outcome

Free comment:

Box 1. Individual survey - Three questions about the Mediterranean and its possible futures

Interviews and responses to the questionnaires were made anonymous, to give the interviewees as much freedom of expression as possible. However, in order to analyse the similarities and differences between the various interviews, the profiles of the people interviewed were categorised according to four criteria:

- Stakeholder category: civil society, politics, science, academia, business and the arts³;
- Sub-region: East, North, South;
- Age group: 20-40, 40-60, > 60⁴;
- Gender: male, female⁵.

Plan Bleu members conducted forty-two interviews. All countries around the Mediterranean are represented (Figure 1), with a wide range of stakeholder categories taken into account (Figure 2)

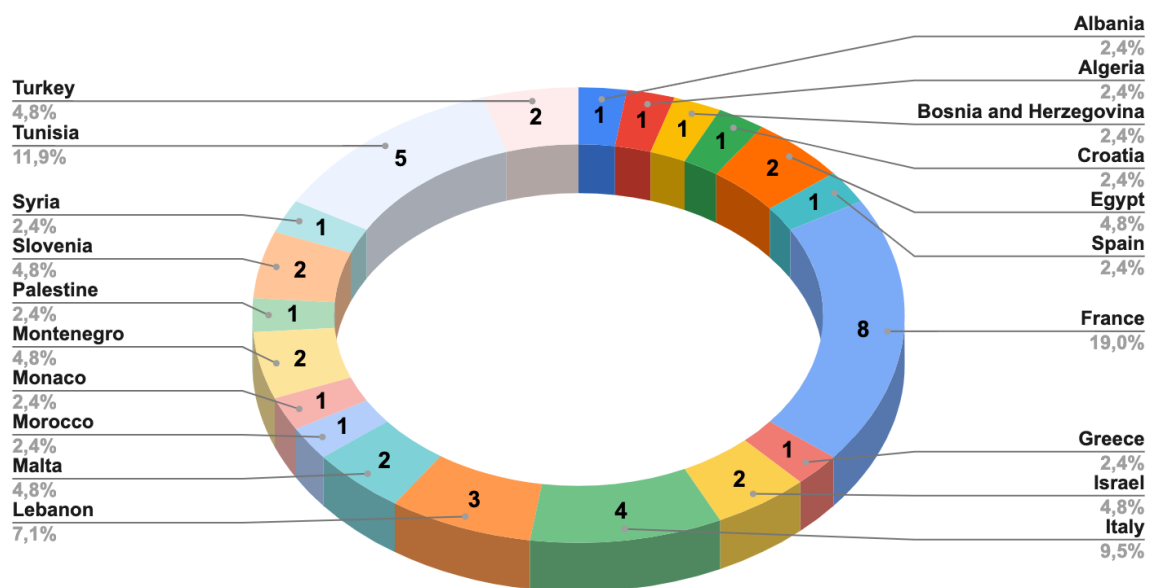


Figure 1: Nationalities of interviewees

³ Some people may belong to multiple stakeholder categories at the same time (e.g. a scientist and teacher/professor, or have both an academic role and a role in a non-profit). This explains why the analysis of the breakdown based on this criterion gives a higher number than the number of people interviewed.

⁴ This criterion is approximate, as age was not asked during the interview, but was estimated by the interviewer

⁵ Plan Bleu recognises that gender identification may not be limited to the binary system, but in this case, all respondents identified as either female or male.

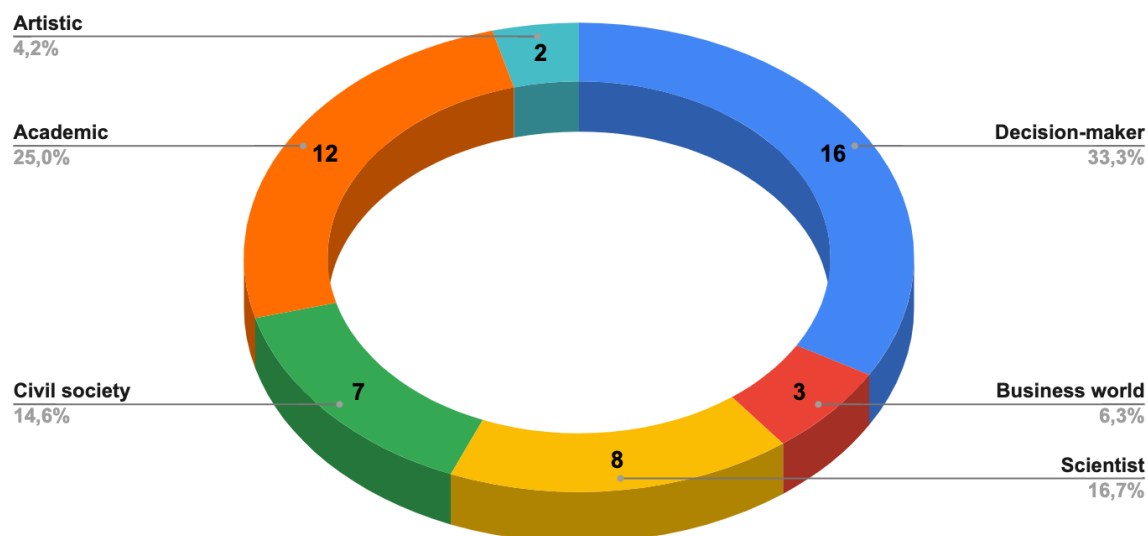


Figure 2: Categories of interviewees

In addition to the interviews, Plan Bleu also asked people registered on the MED 2050 platform to complete an online questionnaire. This questionnaire contained the same questions asked in the interviews. A total of fifteen responses were received, but did not represent all countries around the Mediterranean (Figure 3).

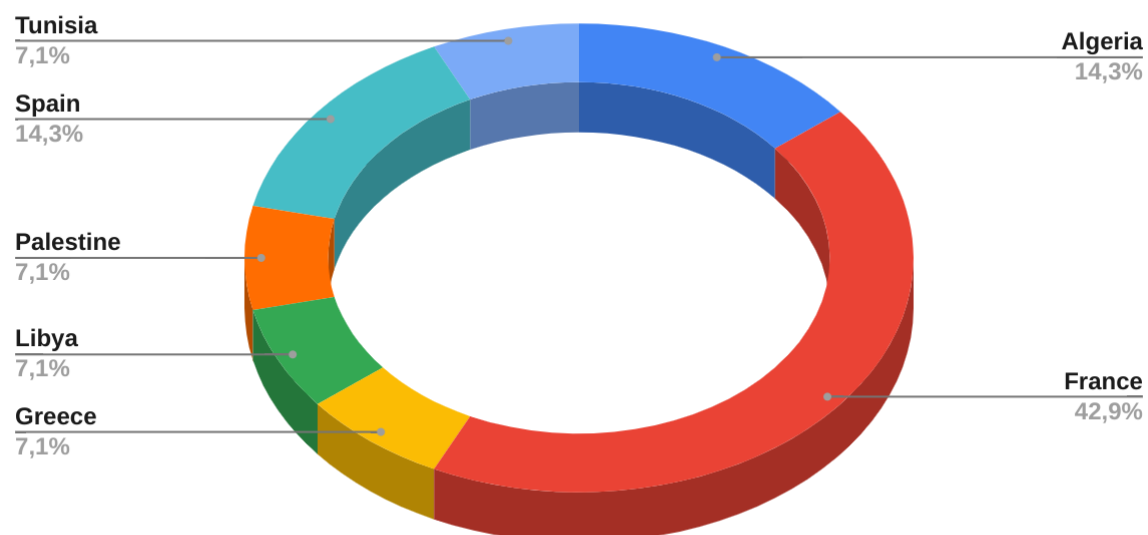


Figure 3: Nationalities of respondents to the online questionnaire

II - Summary of opinions and observations

A study of the interviews conducted reveals a number of recurring points, based on the same general observation that Mediterranean societies are in crisis. Environmental degradation, social and political tensions, and growing inequalities are all highlighted in what are generally pessimistic outlooks. However, in the light of this alarming situation, the respondents refuse to give up and are calling for a break with the dominant societal model.

1. Concern over the deteriorating situation in the Mediterranean

a) Generally pessimistic outlooks

Some respondents expressed their difficulty in having an optimistic vision of the future - *“We’re dancing on the Titanic!”* - or the idea that the interaction between all the challenges in the Mediterranean is a kind of *“ticking time bomb”*.

Fear of environmental degradation

These pessimistic outlooks are based on the major problems affecting the region at the moment:

- **The impact of climate change:** this is a statement that appears in virtually every interview, often at the start and in detail, insisting on the idea that we are going to cross the “tipping points”, despite repeated warnings from scientists for decades. Some interviewees describe tragic, even apocalyptic situations, such as the disappearance of cities or islands as the sea rises.
- **Pollution :** mostly chemical, with frequent mention of plastic pollution (*“a sea of plastic”*), which is a phenomenon considered to be accelerating.
- **For the sea :** the focus was on intense (and polluting) maritime traffic, overfishing, illegal fishing and tourism, which directly threaten marine ecosystems.
- **The unsustainable use of resources :** led by the erosion of biodiversity and the depletion of water resources. However, the message was more nuanced for this last factor, as some see this issue as a key to development and peace, as well as a key aspect for the quality of life and development of Mediterranean societies. The issue of water quality, particularly in coastal areas (seaside tourism), was also highlighted, in conjunction with all the components of catchment area management.

These factors come together to form a set of interdependent factors (or “Nexus”) incorporating water - food security - food security - energy - environment, which is presented as a major global priority because its failure would be fatal for the Mediterranean.

In the interviews, there was an almost unanimous observation that the degradation of natural environments, under the pressure of human activities, **risks becoming a burden that threatens the long-term balance of ecosystems, with risks of irreversibility**. This development is all the more alarming for some, given that the changes are rapid and unprecedented: *“[It is a] totally unprecedented situation in human history, not so much in terms of the complexity of the problems to solve, but in terms of how*

*quickly they need to be solved”; more broadly: “maybe it is the greatest challenge humanity has ever faced”*⁶

There are also political, social and international tensions

This gloomy overall vision of the environment is compounded by **already tense socio-economic and political situations**. North-South inequalities were not only highlighted as one of the essential characteristics of the region, but also as a destabilising factor on a geopolitical, economic and social level. Many of those interviewed regretted that these inequalities are growing between the northern and southern shores.

Extreme population growth was also often cited. People from the eastern shore are especially worried about this phenomenon, while those on the northern shore are concerned about the increasing population being increasingly concentrated in coastal areas, sometimes expressing very gloomy views: wars will result from the lack of water and rapid population growth, or social conflicts are likely to break out on the outskirts of cities, due to uncontrolled development in many Mediterranean cities. There were comparatively few references to **migration** as a factor leading to crisis. This challenge is mentioned regularly and is perceived as a major issue, but as a result of other challenges (geopolitical, environmental, etc.), and the response required is seen as indirect.

Considerable importance is placed on the position of the Mediterranean in the global geopolitical landscape. The fear was expressed that Mediterranean countries would become tied to external blocs, at a time when this notion is being redefined. The few opinions on the subject recommended that Mediterranean countries maintain a degree of neutrality. One respondent stated that *“Mediterranean countries need to assert their neutrality with respect to the major political and military blocs. The Mediterranean is also a hotbed of warmongers. It’s a confrontation between imperialist forces that want to appropriate this region”*.

Major geopolitical influences are anticipated, such as the growing importance of state actors from outside the region, notably Russia and China (with concerns over China’s investment, whose long-term ambitions for the region are unknown). Today, the Mediterranean is considered to be in a critical situation, because the international system is fragmenting, and the globalisation scenario is gradually being replaced by a regionalisation scenario at best, or fragmentation at worst, characterised by the interactions of several blocs in a competitive rather than cooperative position.⁷

b) Unanimous rejection of inaction

Generally speaking, for many of those surveyed, **the “Business as Usual” scenario, or indifference to present and future problems, is unacceptable** and arouses incomprehension and indignation. One respondent put it this way: *“Leaving things as they are is suicidal for everyone living by this sea”*, and another insisted: *“We can’t stand the idea of having more plans (versus action). We know the effects of inaction”*. One respondent sums up this idea of refusing to do nothing with a terse statement: *“What’s unacceptable? It’s very simple. The status quo. That would be committing harakiri!”*

Criticism of scattering funding for development aid or the protection of natural environments, and bilateral agreements without consideration for the regional common good, is directed at **approaches that**

⁶ Original quote from an interview in English.

⁷ This idea of a Mediterranean engulfed in a multi-polar world is a major component of Scenario 3: “Growth at all costs in a fragmented Mediterranean” (see Module 3 MED 2050).

do not address the whole range of regional issues. A number of respondents called for a different approach to issues, with **the need to think with the long term in mind**, over 30-40 years (which would constitute a break with past approaches) and to **move away from silo (disciplinary) thinking** to adopt a more holistic approach to the challenges facing the Mediterranean: *"The challenge is going to be how to break out of our silos and work much more cross-functionally. You can't address water without addressing education, training, agriculture, industry and culture. I think it's fundamental"*.

c) Reasons for hope

Many reasons for hope

While the interviews almost all mention **the notion of crisis, hope still remains associated with it.** The argument was made that crises, and their potentially cathartic effects, are necessary for finding new models, and that they provide opportunities, as these statements suggest: *"humans don't act until it's too late, we are simply showing that on many fronts"*⁸. *"Only when a serious accident happens we move"*⁹. *"It's amazing how much a profound crisis opens up in terms of a future better world in the sense that these crises, and I think that's what we are going through now, are necessary crises to find the new models"*¹⁰ Alternatively, *"as long as we don't have to go out in the street wearing gas masks, we'll always tell ourselves that the problem is far away"*. *"Only crises reveal that the collective framework makes sense in the Mediterranean"*.¹¹

Some of those interviewed expressed the idea of the **Mediterranean as a testing ground for solutions**, or even as an innovative development model that could inspire other regions of the world, as the Mediterranean concentrates all the problems encountered around the globe. For example, one respondent said: *"compared to other seas, what we succeed in transforming in the Mediterranean, if we speed up our action, could serve as a model elsewhere, where the problems are less complex."* Another stated: *"we need to become a special region that is open and free, with a shared economic space"*. Some of those surveyed agreed that a macro-region organised around the countries bordering the Mediterranean could enable projects to be pooled and establish a common set of evolving mandatory rules, regardless of the political, economic and social situations of the various countries in the region, since their future depends on concerted action and cooperation.¹²

The southern and eastern Mediterranean remain demographically dynamic and those surveyed are **hopeful that change will come from young people**, outside of institutions. This idea is mostly expressed by people who work (or have worked) in political institutions and international organisations. The new generation is seen as a chance and an opportunity, because change will come about through pressure from them. The following recommendation sums up this vision: *"We have to step aside for young people. We need to stop trying to solve problems with solutions based solely on the past. An operational and conceptual paradigm shift is needed. We need to think differently. It's very difficult for people with long life experience to change... so disruption is needed"*. When talking about how young people are changing, some respondents mentioned **the brain drain as a major issue**, and insisted on the need to find ways of

⁸ Idem.

⁹ Idem.

¹⁰ Idem.

¹¹ This idea of crisis combined with the notion of resilience is the driving force behind Scenario 2, "Colliding crisis and forced adaptations" (see Module 3 MED 2050).

¹² This idea of the Mediterranean as a testing ground for innovative solutions for other regions of the world is at the heart of Scenario 5 "An alternative sustainable development model specific to the Mediterranean" (see Module 3 MED 2050).

curbing this phenomenon by keeping the skills they have acquired in countries where they are sorely needed.

Another widely-shared idea is the **importance of investing in human capital**, particularly through **education and training, which were** repeatedly highlighted as important factors. Some suggested introducing environmental and sustainability education as early as kindergarten or pre-school.

A desire to develop a collective project

Few interviewees envisaged **a single Mediterranean identity, but presented the idea of a region open to otherness, a sort of common melting pot** shared by all Mediterranean countries. In their view, while there are multiple identities, there is also, more importantly, a common heritage. This ambivalence can be a great strength but also a great weakness, especially in a multi-polar world where the various Mediterranean countries collaborate little and are in competition, even rivals. As one respondent suggested: *“Fundamental values which are shared... it is an asset and we need to build on it. The problem is that often countries don’t build on that, but rather invest in the differences because we are in a very competitive system. And so my wealth translates into your spending.”*¹³ *There is perhaps a desire for a Mediterranean identity,”* said one interviewee, but this specifically Mediterranean identity does not yet exist. *“When you go from the North to South, you’re an expat or on holiday, whereas when you go from the South to North, you’re a migrant,”* they concluded.

While there are **few visions of institutional change, there is a strong desire for integration, regional cooperation and solidarity**. The starting point is the recurring observation that the current institutional landscape, based on the Mediterranean Action Plan (MAP) and the Union for the Mediterranean (UfM), has shown its limitations and is not structured to contribute effectively to this integration. One respondent wondered: *“In the Mediterranean, there is a total lack of collaboration and integration. The Barcelona Process has not delivered, nor has the Union for the Mediterranean. The European Union has favoured unsuccessful bilateral relations. There needs to be a paradigm shift towards a Mediterranean area. But can you change paradigm while in a survival scenario?”*

Complementarity between the different sides of the Mediterranean was emphasised, but there is no political framework capable of organising it: *“We should create something like the Rome Treaty for the Mediterranean in order to create a political community and pursue integration.”*¹⁴ Concrete examples, such as a Mediterranean Assembly with a president, support a widespread desire for greater integration, despite the fact that the Mediterranean is, and always has been, a region fraught with conflict. There is also a desire for the **greater inclusion of citizens in decision-making processes, particularly in local governance**.

The Mediterranean as a global commons or “One Mediterranean” was mentioned several times. This is based on the idea of a community of destiny, as it is recognised that crises in the Mediterranean have shown that the collective framework makes sense. As a result of increasing interdependence, only collective responses are relevant: *“If the Mediterranean is our shared home, our common good, we should be keen to help protect it. If we have this vision - what is the common good? And what is the most important goal we could achieve? If we all work together, we can team up like on a regatta boat.”* One

¹³ Original quote from an interview in English. This idea is echoed in Scenario 3, “Growth at all costs in a fragmented Mediterranean.”

¹⁴ Quote from an interview in English.

person even mentioned that laws, legal systems and jurisprudence could be rewritten to take better account of common goods, including the Mediterranean.¹⁵

2. The same observation, but different solutions

While everyone agrees on the fact that there is a crisis, **the solutions proposed to address it are very different**. A comparison of the interviews reveals dissension at the political and economic levels, and in terms of lifestyles.

a) Differences over the liberal political model and the place of the Mediterranean in the world

There is disagreement about presenting liberal democracy as the “development model” to be adopted by all countries. Several of those surveyed said that this **democratic model, combined with a liberal economy, is not suitable for many countries**, contrary to the official doctrine of most Western institutions, such as the United Nations Commissions. For these people, strong or authoritarian regimes are sometimes more effective for managing a country and avoiding acute crises.

Some respondents emphasised **the European Union’s positive role as a driving force** on certain issues, such as the Marine Strategy Framework Directive (MSFD), which is the world’s only binding instrument on achieving good environmental status in the marine environment. With the Covid crisis and the war in Ukraine, the need to co-build the resilience of Mediterranean countries through a strong, balanced and continuous Euro-Mediterranean partnership¹⁶ was underlined by various respondents, particularly for the following challenges: food security, energy security and shared economic prosperity. These challenges call for united, transnational responses. However, **some people on the southern and eastern shores of the Mediterranean expressed reservations about the question of Palestine and the notion of interference**: *“Mistrust will last until we solve the issue of Palestine”¹⁷ - “Reforms have to be within and not dictated from outside”¹⁸.*

According to several respondents, if the Mediterranean is to position itself in relation to other regions, it should primarily be along **a vertical Europe-Mediterranean-Africa axis**. Several interviewees mentioned the idea that the Mediterranean is the gateway to Africa, with traffic flowing in both directions, and that **there can be no long-term solutions for the Mediterranean if it ignores the African continent**. However, the configuration of this axis differed from one perspective to another.

b) Differences of opinion on economic liberalism, the use of technology and energy choices

Economic considerations featured prominently in the interviews, but they were dispersed and there was no clear majority vision, with some people preferring to trust the market economy and others preferring to explore other economic options. The most common observation is that many Mediterranean countries

¹⁵ This vision of the Mediterranean as a common good is the subject of Scenario 6, which makes the Mediterranean Sea a global commons (see Module 3 of MED 2050).

¹⁶ The idea of a Euro-Mediterranean partnership is the central theme in Scenario 4 “Euro-Mediterranean partnership for a blue-green transition”.

¹⁷ Quote from an interview in English: *“Mistrust will last until we solve the issue of Palestine”*.

¹⁸ Idem. *“Reforms have to be within and not dictated from outside”*.

are in a fragile economic state, with high levels of debt, and are therefore ill-prepared to absorb current or future economic crises. This situation constitutes an additional source of vulnerability for the region.

Some believe that **tourism**, particularly mass tourism, also known as “popular tourism”, can be a source of opportunities, provided it is properly managed and developed. However, others believe that it would be unacceptable for the Mediterranean region to be transformed into a vast tourist region condemned to endure increasing waves of “*mass summer migration*”.

There are contrasting views on **the role of technology**. Some argue that it will be a source of progress and solve many problems (such as sea water desalination and decarbonisation of the energy sector). Others believe that it would be a profound mistake to make it a cure-all to everything. One respondent put it this way: “*Working with people is more challenging than working there with technology – technology is a small part. Technology is an important tool, but doesn’t allow by itself to create real sustainable and social development and to change the framework.*”¹⁹

As for **the type of energy** that should be promoted, shifting away from fossil fuels and developing renewable energies is a generally accepted idea, although, according to one interviewee, societies tend to resort back to fossil fuel security in times of crisis (such as war). There is no consensus on the issue of the massive use of nuclear energy and positions are very clear-cut. Some people think that nuclear power should not be abandoned, and should even be developed in order to transition to renewable energies, while others wonder whether it is a clean energy with well-controlled risks.

c) Diverging visions on lifestyles

Concerning **the question of lifestyles and the extent to which change is needed**, some believe that consumer behaviour will change the situation by influencing production to become more sustainable. Others suggest that responsibility should be extended to producers. For example, if a product cannot be recycled and reused, it should not be allowed onto the market. For one respondent, another option might be to ban advertising that encourages over-consumption: “*because we are manipulated to buy, buy, buy*”²⁰. For most of those interviewed, it is not just a matter of small “cosmetic” measures or local projects, however important these may be. We need deep-seated change, a social revolution, a radical change in our behaviour, habits and consumption patterns.

We also need to **revolutionise the way we think**, and work to build a collective imagination that encourages people to adopt actions commensurate with **the issues and challenges at stake**. One respondent put it remarkably well: “*If we want to avoid being affected by the extinction of elephants in nature, we need to make them extinct in our dreams, and that’s pretty much the essence of the problem. There are some programmes we don’t want to talk about because they touch too much on our current comfort and our current ways of life.*”²¹

¹⁹ Quote from an interview in English: “*Working with people is more challenging than working there with technology – technology is a small part - Technology is an important tool, but doesn’t allow by itself to create real sustainable and social development and to change the framework*”.

²⁰ Quote from an interview in English: “*Because we are manipulated to buy, buy, buy*”.

²¹ Idem: “*If we want to avoid being affected by extinction of elephants in nature, we need to extinct elephants in our dreams, and that's pretty much the essence of the problem. There are some programs we don't want to talk about because they are too much touching our current comfort and our current ways of life*”.

3. Rurality: a blind spot in the interviews

Surprisingly, **rurality and the rural world** were only mentioned once in our interviews. Apart from this one exception, the rural world was only addressed through the themes of agriculture and food security, but not as an issue in its own right.

Part 2 - Youth Commission on the Future of the Mediterranean²²

I - Overview of the workshop

1. Objectives of the Youth Commission on the Future of the Mediterranean

Module 2 of the MED 2050 foresight project aims to identify and compare contrasting visions of the Mediterranean in 2050, with a particular emphasis on the visions of young people. With this in mind, Plan Bleu organised a workshop called the “Youth Commission on the Future of the Mediterranean”, targeting young people from around the Mediterranean. The aim of this workshop was to identify contrasting visions of the future of the Mediterranean, from a sustainable development perspective. To help with projections for 2050, three fictions were developed before the workshop, based on the factsheets drawn up by the experts in Module 1. These fictions depicted contrasting futures so that the commission participants could take a stance in relation to the social contexts described and immerse themselves in the future. They are therefore part of a design fiction approach.²³

In order to frame discussions and enable young people to share their opinions, fears and suggestions, two areas of discussion were chosen:

- lifestyles, closer to the daily reality of individuals (activities such as eating, mobility, work, etc.),
- the role and place of societal actors, starting with public institutions, states, local authorities, businesses, the media and organised civil society.

2. Method

a) The challenge of projecting into the future

Researchers in social psychology have repeatedly demonstrated that when individuals are asked to project into the past or future, their projections become more biased as they move further away from the present. This ability to relive events or project oneself into the future is called *autonoetic consciousness*, and it is strongly influenced by the value systems in which we live, interact and are educated.

Studies also show that representations of the future are often governed by cultural norms. They highlight major life changes (from primary school to middle school, high school and university, falling in love, getting married, having children, having a permanent job, etc.). The more distant the time horizon, the more abstract future projections become. In the short term, individuals are able to define goals and think

²² Part 2 of this report on the “Youth Commission on the Future of the Mediterranean” is taken from the report written by Julie Rieg, an independent consultant from Change it Use it, who was responsible for organising the workshop, with the support of the Blue Plan team. Read the full report “Contrasted visions on the future of the Mediterranean”. [Analysis of discussions at the Youth Commission on the Future of the Mediterranean” on 2 March 2022, available on the MED 2050 website.](#)

²³ Design fiction is a foresight approach that uses design, narrative and video techniques.

about adapting their behaviour. In the long term, their perceptions of their place in the world and society become obscure and uncertain.

Taking this information into account, and in order to identify contrasting visions of our societies in 2050, we developed a procedure structured around three dynamics:

- Providing young people with fictions before and at the start of the workshop, as the human mind projects itself more easily into stories (books, TV, films, etc.);
- Getting young people to work on the societies in which they would ideally like to live;
- Asking young people not to project themselves within the fictions as individuals, but to think about the dominant lifestyles at work in these scenarios.

However, it is important to underline a few methodological limitations. While the fictions have the advantage of helping to project forward to 2050, the content naturally influenced discussions. It was therefore vital to consider the fictions as a way of generating discussion, debate and differences of opinion. It was also important for the fictions to be contrasting and to present as comprehensive social contexts as possible. Finally, the interpretation of discussions had to take into account the content of the scenarios presented.

b) Creating three contrasting fictions

We began by looking at the factsheets produced in Module 1 of the MED 2050 programme. For example, we took into account changes in migration, environmental awareness, value systems, Mediterranean identity, urban environments, the energy transition and production and consumption patterns. We especially focused on projections for 2050 that the experts in these fields had described in the factsheets.

To define the content of the three contrasting fictions, we first created a common “backbone” so that the same human activities (food, mobility, work, tourism, etc.) could be discussed and compared. We then divided the projections from the factsheets into each scenario, while ensuring overall consistency. When information was lacking, we relied on the 2050 carbon neutrality scenarios defined by the French Environment and Energy Management Agency (ADEME) in 2020, particularly the section on lifestyles²⁴. Finally, we avoided talking about the role of societal stakeholders in these scenarios, to give free rein to the imagination of participants in the Youth Commission.

In the end, the three scenario synopses were finalised, with a fictional narrative organised into around twenty points, an image associated with each of the points, and the creation of a *PechaKucha* for each scenario. Originating in Japan, *PechaKucha* ("chatting" in Japanese) is a presentation format in which a slide is shown every 20 seconds. The *PechaKuchas* produced for this mission lasted just under 5 minutes each, and were transformed into short videos in which the images played one after the other and the text was narrated by a machine. The *PechaKuchas* were produced in French and English and translated into Arabic.

²⁴ Ademe, Feuilletton “Modes de vie” des scénarios de Transition(s) 2050. Study and analysis of the desirability, feasibility and conditions for creating scenarios, coll. Horizons, November 2021.

c) Summary of the three fictions

Fiction 1 - +2.2°C - A Connected Mediterranean: The Technological Shoreline

This scenario depicts a future in which humanity manages to limit global warming to 2.2°C by 2050, thanks to technology. However the international community has reacted too late and is now suffering the consequences of continuing global warming. This situation has serious consequences for the Mediterranean. The sea has lost 35% of its fish and 30% of its plant species. Sea levels have risen considerably and coastal farmland is becoming progressively arid due to soil and groundwater salinisation. Due to rising temperatures, summer heatwaves last two months, causing droughts, forest fires and loss of agricultural production. On the other hand, in winter, floods and landslides are more numerous and more violent, leading to the destruction of villages. However, thanks to various technical innovations, societies have managed to limit their greenhouse gas emissions and adapt to these sudden and violent changes. Renewable energies now make up 60% of the energy mix around the Mediterranean.

Technology is at the heart of every aspect of people's day-to-day lives. The Internet of Things is pervasive, measuring and regulating everything from energy consumption and food to temperature-regulating clothing. The Mediterranean is still one of the world's most popular tourist destinations, but due to the extreme heat, tourists are now only sunbathing on artificial and air-conditioned beaches "under glass". Restaurants and merchants have been replaced by automated machines. Those who can't afford to travel discover the countryside and meet up with friends in the metaverse where tourist sites are reproduced. These inequalities are reflected in our eating habits. While the wealthiest people have access to local products with a high nutritional value, the less well-off consume ultra-processed globalised products, or even fake products (fish, cereals, vegetables) made with the help of cellular techniques and plant substitutes. Nutritional deficiencies and health problems associated with the consumption of recycled wastewater are a health risk for the Mediterranean's inhabitants.

Fiction 2 - +3.3°C - Islands of Resistance in the Face of the Crisis

This second scenario is the most pessimistic of the three. It depicts a world where the worst-case climate predictions have become reality. Temperatures have risen by an average of 3.3°C, and many ecosystems have collapsed. For example, the Mediterranean has acidified and lost 70% of its marine, animal and plant biodiversity. All Mediterranean societies have been destabilised; political leaders are constantly caught off-guard, struggle with imposed changes and are only able to implement short-term policies in response to one catastrophic event after another. No structural planning or adaptation policies can be implemented effectively. Unsustainable infrastructure continues to be developed, and social movements are multiplying, demanding the preservation of the environment and the respect of public health. Countries producing fossil fuels continue to exploit them.

Mediterranean lifestyles have been completely transformed. The coastline has become uninhabitable in places, with thousands of people dying prematurely each summer due to over-pollution of the air and tropical diseases. The countries of the South are particularly affected. In response to these premature deaths, governments are forcing their citizens to live at night, when temperatures are a little more bearable. In addition, due to drought and the collapse of fisheries and agriculture, coastal residents are facing systemic food and water shortages. The tourism sector has deteriorated considerably, and the Mediterranean is no longer a major tourist destination; only the wealthy holiday there in winter. The collapse of tourism is symptomatic of a more general economic recession. Unemployment rates average

30% across the Mediterranean. Finally, aggravating an already precarious situation, the Mediterranean experiences major waves of migration from the South.

However, in the face of this widespread crisis, some areas of resistance are emerging. On a local (municipal) or even provincial level, determined and united citizens are pooling their efforts to try and collectively build a life protected from the general slump. These micro-societies adopt lifestyles based on autonomy and resilience, producing their own food and energy. Governance is based on direct democracy, but with a high level of social control supported by social media technologies.

Fiction 3 - +1.5°C - The Resilient Mediterranean: Osmosis in Sobriety

Contrary to the previous scenario, this one is the most utopian. It depicts a world where, following an unprecedented natural disaster, California had suddenly disappeared under water. Not only do tens of millions of people die, but many Internet servers crucial to the global digital economy also disappear. In the wake of this digital blackout, and the shockwave felt around the world, first by constraint and then by choice, governments unanimously agree to establish a new era based on respect for the planet and sobriety.

Following this decision, coastal populations are relocated to medium-sized towns a few dozen kilometres inland. This urban exodus started off as forced before becoming the defining phenomenon of the 21st century. Seduced by their new less stressful lifestyle that is more in tune with nature, Mediterranean citizens are much more fulfilled. A new social ideal is being created around the commons and solidarity. Housing has shared spaces. Energy and food is produced collectively, on the scale of buildings, neighbourhoods and villages, depending on their size. A user-friendly technology model is emerging, based on low-tech and nature-based solutions. Recycling shops and other repair shops are springing up everywhere, while agroecology is gaining ground. The mass tourism model, which has become incompatible with these new lifestyles, is collapsing. However, travel has not disappeared, and is now longer, focused on nature, cultural enrichment and sharing local know-how. Careers are changing with job opportunities, and young people are moving away from the traditional sectors of industry and mass tourism, towards production and service activities that benefit the whole community: quality food, care for others, particularly in inter-generational systems, care for ecosystems, etc.

However, the decline in the use of digital technology, the reduced need for tertiary professions and the emphasis on dropping out of school to look after the community have led to a resurgence in inequalities in access to education. Resistance to this paradigm shift, advocating a return to 20th-century consumption patterns, is emerging and occasionally disrupting the newly established relative “peace” between humankind and nature.

3. Workshop organisation and programme

Around forty young people, between the ages of 17 and 27, took part in this workshop. We wanted to include people with a wide range of backgrounds, whether in terms of their country of residence (21 countries from around the Mediterranean), their professional and marital statuses, their level of

education, whether they live in rural or urban areas, and their main concerns (employment, immigration, education, inequalities, etc.).

The tables below show the characteristics of the participants in the youth panel:

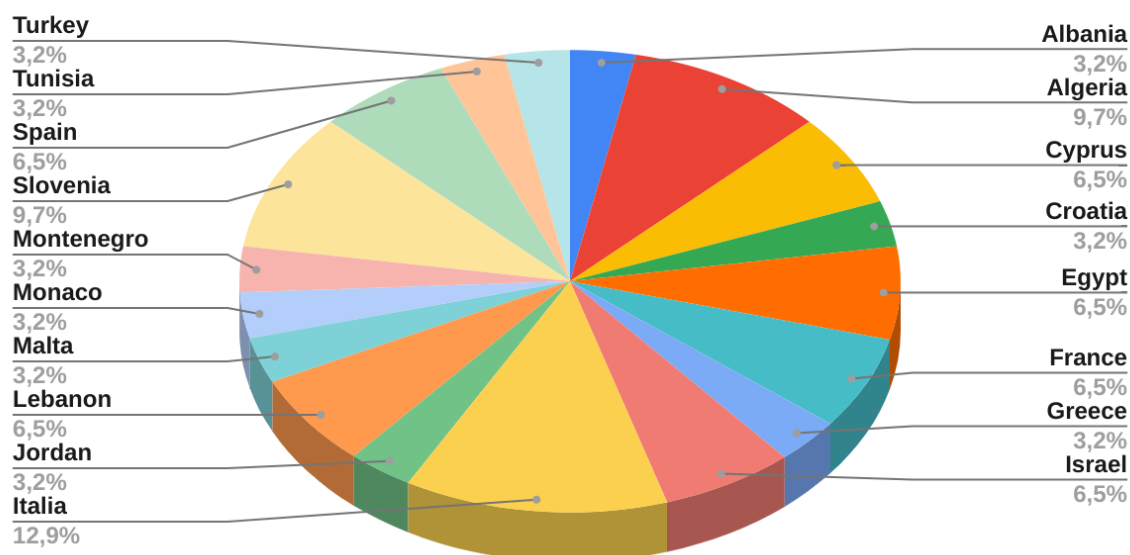


Figure 4: Countries of origin of workshop participants²⁵

²⁵ The 18 countries mentioned here consider only the countries of origin of the young participants, while the 21 countries mentioned above include three audience members from the State of Palestine, Libya and Morocco, who were not represented in the groups of young people.

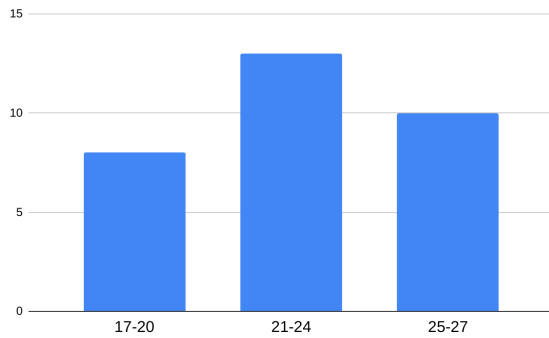


Figure 5: Age of participants

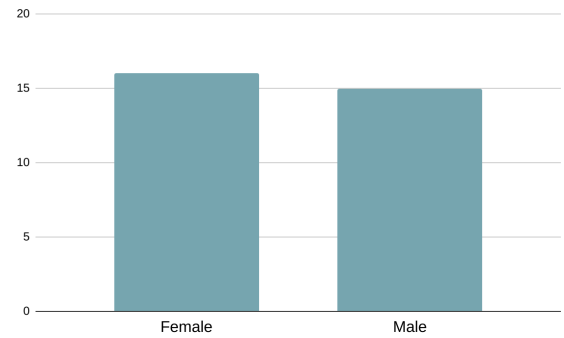


Figure 6: Gender of participants

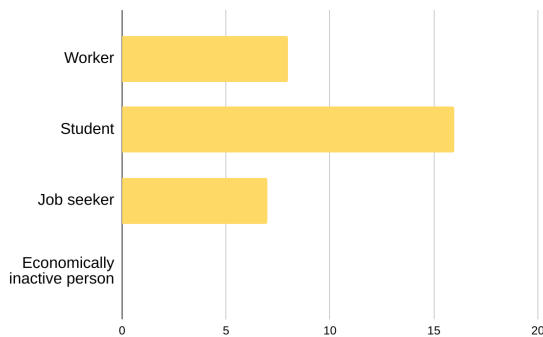


Figure 7: Employment status of participants

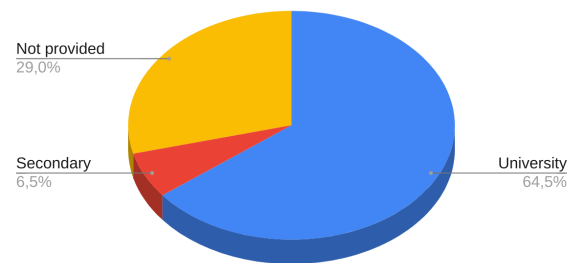


Figure 8: Level of education of participants

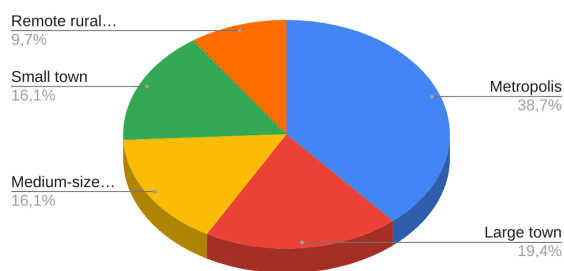


Figure 9: Breakdown of participants by rural and urban areas

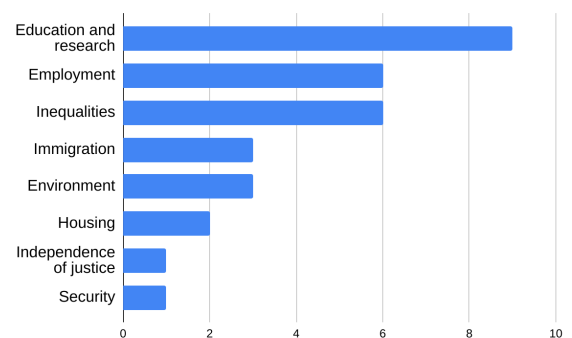


Figure 10: Main concerns of participants

We have also kept to the principle of an audience, as originally planned for the in-person workshop. Two groups of people were invited to be part of the audience: members of the MED 2050 foresight group (two people), and participants from the Mediterranean Worlds Forum held in Marseille in February 2022. People who signed up to take part in the commission and were not selected to take part in the sub-groups

were also selected, as were people who signed up but were over 27.²⁶ The audience participated alongside the young people in the plenary sessions, and in pairs while the young people worked in sub-groups.

To prepare for the workshop, a detailed, timed moderation protocol was created for the plenary sessions, for the youth sub-groups and for the audience, along with documents to be completed during the workshop to lead the sessions and collect information (presentation aids, online questionnaires, etc.). All participants received a kit prior to the workshop, which included both the morning's programme and details of the three fictions (images and phrases), so that they could refer to the fictions during the commission meeting. They were also asked to view the *PechaKuchas* before the workshop. The disadvantage of this procedure was that the fictions were not discovered on the day of the commission meeting, while the advantage was that the participants were able to familiarise themselves with and understand the information more quickly.

The commission meeting included five major phases:

- An introduction to present the context and objectives,
- A plenary session for viewing and getting to grips with the fictions by filling out questionnaires,
- Sub-group discussions concerning participants' views of the lifestyles presented in the three fictions,
- Projections about the role of stakeholders in the fictions,
- A plenary session for feedback and discussion.

It should be noted that the pace was fast, as the commission meeting lasted just four hours and was held by video conference, which meant it was not possible to go into the details of the narratives and hear every participant at length. However, given the constraints, the results were rich and enlightening.

II - Lessons from the workshop

1. Purpose of general analysis

Comparative analysis of the three fictions

The study helped identify results specific to each fiction, in terms of their desirability, their likelihood of occurring by 2050 and the expected role of the various societal stakeholders. At the same time it also provided us with cross-cutting information about the expectations of young people in the Mediterranean and their level of knowledge and awareness of environmental issues, while also identifying areas of disagreement regarding the actions to be implemented by 2050.

Five key areas of analysis

The overall analysis covered:

²⁶ [For more information on the composition of the groups, please refer to the report written by Julie Rieg: "Contrasted visions on the future of the Mediterranean. Analysis of discussions at the Youth Commission on the Future of the Mediterranean on 2 March 2022".](#)

- The types of solutions that participants preferred for dealing with climate change (“technological solutionism”, sobriety practices or the development of nature-based solutions);
- Their ability to project changes of lifestyle to anticipate or cope with crises (forced or voluntary sobriety);
- How they would like their ideal society to function (How much change? In what areas?), both within a country and on a Mediterranean scale;
- Mediterranean specificities that need to be taken into account to build a common future;
- The role of citizens, especially young people.

Across the board, it quickly became apparent that there were significant differences in viewpoints between the cultures or sub-regions of the Mediterranean Sea (North, South, East).

2. Summary of results

a) Reactions to the fictions

Reactions to Fiction 1: +2.2°C - Connected Mediterranean: The Technological Shoreline

Fiction 1 was seen as likely, as it is aligned with the direction taken by current governments. In terms of desirability, opinions differed. Some participants welcomed the use of technology to cope with climate change and maintain current lifestyles, while others saw it as a technocracy “*out of touch with nature*” and far removed from traditional lifestyles. These participants questioned the social acceptability of the solutions (artificial rain, “carbon vacuums”, etc.) and their impact on nature. In Fiction 1, walking, cycling, electric cars and renewable energies were strongly desired, while food inequalities were particularly rejected.

Reactions to Fiction 2: +3.3°C - Islands of Resistance in the Face of the Crisis

Fiction 2, considered by most to be the most dystopian, was also seen as the most credible and therefore the most likely. Participants drew a parallel with the current context (“*this scenario is what we are experiencing today*”²⁷), characterised by insufficient action by governments to limit climate change and the loss of biodiversity. On the other hand, most participants appreciate citizen movements that organise themselves collectively to regenerate socio-ecological ecosystems and produce their own food. Participants were quick to point out the actions needed to avoid such a scenario, such as state control of businesses or the development of innovative solutions to deal with crises.

Reactions to Fiction 3: +1.5°C - The Resilient Mediterranean: Osmosis in Sobriety

Fiction 3 was most often seen as utopian, in the sense that it is a desirable but difficult-to-achieve future. However, a few participants considered it likely, in that they foresee a major economic and climate crisis that would force us to change our lifestyles by 2050. However, this fiction is not without controversy. Low-consumption practices and community living were considered as appealing (“*it’s a common and not individual profit*”²⁸) but were also rejected by others (“*going backwards*”, “*sacrifices*”, “*end of progress*”).

²⁷ Original quote: “*this scenario is what we live today*”.

²⁸ Idem: “*it’s a common and not individual profit*”.

However, organic and seasonal food, a 90% reduction in the use of fossil fuels, and intensive urban greening were all highly desirable.

b) Ten takeaways

1. A rather dystopian vision of the future

Overall, participants found dystopias more likely than utopias. This is because they feel that dystopias are in continuity with our current lifestyles (Fiction 2) or with the directions taken by governments today (Fiction 1). This explains why the advent of a major crisis is also considered credible (Fiction 3).

2. Consensus on nature-based solutions

Organic, seasonal and less meat-based food, urban greening, the use of nature-based solutions to achieve carbon neutrality, and even walking and cycling, are all favoured by a large majority of respondents.

3. Questioning technologies

Technologies are widely accepted and expected in the fields of health, education and work, or in response to major crises (such as water desalination in the event of drinking water shortages). However, their use to monitor and control household carbon consumption, create artificial rainfall or for carbon storage appeals to some respondents but disgusts others. The latter believe that it is essential to favour natural solutions where they exist, and to develop technologies if, and only if, they have little or no negative impact on ecosystems.

4. Disagreement surrounding the creation of metropolises

While land artificialisation, particularly in rural areas, is criticised, participants pointed out that access to employment is essential in cities. The creation of metropolises is both desired and rejected (*“my heart goes both ways”*). Participants paid particular attention to coastal preservation, which is a sensitive issue for most of them.

5. Sobriety: opponents and *aficionados*

Sobriety, in the sense of reducing consumption, generates both positive and negative perceptions. For most participants, sobriety could only become a dominant practice in Mediterranean societies if it is forced (regulations or crises).

6. High expectations for social justice

All the inequalities portrayed in the fictions were condemned by the participants, who also identified other risks to people (such as the abuse of night work, modern slavery for climate refugees, and pandemics). Participants expect governments to be attentive to the issue of equality and to put forward appropriate solutions. However, not everyone is prepared to work individually to help others (e.g. in communities or through work centred on collective needs).

7. Environmental awareness at the heart of stakeholders' actions

Governments are expected to raise public awareness about the environment and force businesses to make the transition. On the flip side, citizens are expected to put pressure on governments alongside NGOs. The media, non-profits and local authorities have been identified to help individuals change their lifestyles (towards greater sobriety). In particular, local authorities are seen as guardians of the interests of

local communities, with the correlative responsibility for creating projects with citizens, especially women and young people.

8. International cooperation under certain conditions

While international cooperation between all Mediterranean countries is hailed as essential (Fiction 1), it is seen as unlikely, especially by people living in southern countries. A number of conditions need to be met, including the redistribution of wealth and consideration of Mediterranean lifestyles, in order to adopt a sustainable approach collectively.

9. Persistent contrasts between the southern, eastern and northern Mediterranean

People living in southern Mediterranean countries seem to be seeking emancipation (action without waiting for help from northern countries). Those living in the eastern Mediterranean seem to expect more protection for individuals in the face of the most restrictive situations. Those who live in the North expressed a greater sense of urgency to take action to tackle climate change and the loss of biodiversity. A larger sample would be needed to verify these positions.

10. Young people eager for more discussion

Participants in the Youth Commission on the Future of the Mediterranean asked for the opportunity to repeat these discussions, debate substantive issues and work together to build a common future for the Mediterranean region. These are innovative and hopeful perspectives

3. The most likely futures

Dystopias are most often seen as highly likely

Fiction 2, which was the most catastrophic in terms of environmental, economic and social impact, was considered the most credible. It is also, unsurprisingly, the least desired. Fiction 1, which relies on green technologies to tackle the environmental crisis, is also considered widely likely in the sense that it is a continuation of the direction taken by governments. However, the solutions proposed, land artificialisation and the intensive use of technologies are far from appealing to all participants.

Utopias are generally considered unlikely

On the other hand, Fiction 3, which promotes sobriety and local communities, and which was seen by three quarters of participants as the most desirable of the three fictions, is also the least credible. This is due to the difficulties associated with changing governance models, economic models and lifestyles. All stakeholders have to agree to implement these changes, which makes the task all the more complex, especially depending on the Mediterranean country in question. This seems to be more difficult for southern and eastern Mediterranean countries than for those in the northern Mediterranean.

Major crises are considered highly likely by some participants

However, some participants believe that a change in model is plausible and even very likely. They believe the advent of a major climate or economic crisis is inevitable between now and 2050, which would certainly lead to a major change in lifestyles. In this case, sobriety would be forced and compulsory, rather than voluntary. This insight demonstrates a certain awareness of climate issues and their social and

economic repercussions for decades to come. It reflects both a form of pessimism (we no longer believe that alarmist forecasts can be ignored) and optimism (in the face of crises, we could collectively move in the right direction).

4. Areas with the greatest consensus

Respect for nature seems to be at the heart of young people's expectations for the future of the Mediterranean

Solutions that focus on nature and avoid the use of fossil fuels seem to have the support of the vast majority of participants, as can be seen both in the responses to the questionnaires and in the sub-group discussions. These include seasonal and organic food, walking and cycling, the development of an electric car network, and intensive urban greening and reliance on nature to achieve carbon neutrality.

However, the majority of young people reject the use of fossil fuels...

The idea of an increase in conflicts around the Mediterranean surrounding the use of fossil fuels and other offshore resources, and the emergence of black markets to continue consuming as we do today, were widely rejected by participants.

... social inequalities...

Participants also reject social inequalities in terms of food (the wealthiest classes would have access to better food) and tourism (only the wealthiest classes would be able to go on holiday).

... and major lifestyle changes

This was particularly evident for opening schools and shops at night to reduce heat-related mortality. The phrase "*We are not a nocturnal species*" sums up the general position.

5. Areas with the least consensus

17 out of 28 future assumptions were a source of debate

Regardless of the fictions presented, there was a lot of disagreement associated with the proposed assumptions (7 in the first fiction, 4 in the second and 6 in the third). Of these assumptions that caused controversy, nine were slightly more desired than rejected, and eight were slightly more rejected than desired.

Six major themes

Disagreement mainly concerned:

- Whether or not new technologies should be used to solve environmental issues,
- Reduced trade (tourism, shopping, etc.) vs. continuing with current lifestyles,
- The transformation of territories between urbanisation and a return to rural/local areas,

- Citizen movements to respond to societal problems vs. public and corporate actors managing them,
- The ability of all Mediterranean countries to pursue a common destiny,
- The question of individualism versus solidarity and social justice.

6. Controversial topics

a) The technological solutions up for debate

“Technocratic utopians” were present at the Youth Commission meeting

To tackle climate change, some participants view “carbon vacuums” or artificial urban cool islands very favourably, which places them in the category of “technocratic utopians” defined by ObSoCo in its Observatory of Utopian Perspectives (*Observatoire des perspectives utopiques*).²⁹ In technology, they see the possibility of solving a major challenge of this century, while continuing to live as we do today. For example, one young Israeli sees artificial beaches under glass as an opportunity for people to continue going to the beach and swimming. Generally speaking, people living in eastern Mediterranean countries appear to be the most attracted to these solutions.

Along with cautious people

However, for half of participants, this technological approach needs to be measured. Carbon vacuums, for example, could hamper the ecological transition. In the “pro-technology” scenario, action is taken to tackle the consequences of our model without questioning the causes. Aquaculture, a form of marine biotechnology, was therefore widely criticised. Participants see this as a modification of natural marine ecosystems, and therefore as a health hazard with potential pandemics. The extraction of resources (quarries, extraction of sand from the sea, etc.) raises the question of the potential long-term impacts. Debates on these technologies are therefore similar to those on the development of onshore and offshore wind turbines, and electric vehicles and their hidden costs. The controversies highlight major issues of social acceptability, linked to cultural representations of “progress”. However, the cautious participants also believed that technologies should only be used, but only when they are considered the most appropriate way of solving a problem, and when they generate few, or preferably no, negative external impacts. Where available, natural alternatives should be favoured (e.g. urban greening rather than creating artificial cool islands).

There is consensus on some purposes

In the fields of health, education and awareness-raising, and also in response to urgent crises (e.g., desalination plants to deal with a lack of drinking water), all the participants saw technologies as useful. Whatever the participants’ level of technophilia, they all believe in the capacity of humankind to develop the technologies mentioned.

²⁹ L’Observatoire des perspectives utopiques, Octobre 2019 in l’Observatoire Société et Consommation (available here: <https://lobsoco.com/lobservatoire-des-perspectives-utopiques/>)

b) More or less desired territorial transformations

Disagreement surrounding the creation of metropolises

Participants were rather reticent when it comes to urbanisation, but they also raised essential questions, particularly about the opportunities found in cities, especially in terms of employment. Fiction 1, which promotes the creation of metropolises and vertical development, is seen as a “disconnection from nature”. The artificialisation of rural land was mentioned several times among the negative points in this fiction. Vertical development seems to be an ecological solution in that it reduces land artificialisation, but it also raises the question of the quality of life in such an environment.

Urban exodus under certain conditions

The urban exodus seems to make some participants want to get closer to nature, but not at any cost. To begin with, some participants pointed out that it is not possible for all city dwellers. People must both want to leave the urban environment and be able to live in a rural environment. Some say they would be prepared to leave if and only if infrastructure is developed in rural areas, including digital infrastructure. However, we would then have to take into account the impact of infrastructure development on nature.

Coastal areas

In Fiction 2, coastal areas that become uninhabitable are a real heartbreaker for some participants. This sentiment should be seen in the context of Mediterranean lifestyles, with fishing and, more generally, sea-related professions playing a dominant and symbolic role in local know-how.

Perspectives

In the light of these observations, two perspectives emerged for the transformation of territories:

- Integrate the lifestyles of small and medium-sized towns into large cities by working on greening or slowing down the pace of life and developing neighbourhood life;
- Prevent the creation of metropolises by promoting the development of medium-sized towns and cities, accompanied by job creation.

c) Debate surrounding sobriety

On the one hand, those opposed to sobriety

Firstly, it should be noted that sobriety, understood as a reduction in consumption, is not desired by all participants. Some clearly stated their intention to continue eating meat or fish. For others, sobriety practices are seen as a hardship, the “end of progress”, a “step backwards” or even a “sacrifice”. In Fiction 3, some participants went so far as to question the ability of humans to be happy with such a lifestyle. Others would like to see the return of traditionalist movements and the creation of mafias (an idea taken from Fiction 3) to promote and enable the return of current consumer practices.

And aficionados on the other

At the same time, Fiction 3 also elicited very positive feedback from a significant number of participants, who praised the reduction in trade and tourism, the reuse and repair of objects, the primary use of walking and cycling, shared housing and local food and energy self-sufficiency. They seem to consider

these measures aligned with the responses needed to tackle environmental challenges, especially for people living in northern countries.

Frequent hesitations

However, more often than not, these changes in lifestyle create controversy or divided opinions (“there’s good and there’s bad”). Shared housing is good for the environment. But what about comfort and privacy? Jobs are created around collective needs. What impact will this have on jobs and opportunities for young people? Tourism is declining. What impact will this have on countries whose economies rely heavily on this sector? Some participants seem to expect businesses to make a special effort to offer products and services in line with environmental concerns, so that people can consume with peace of mind.

Sobriety is more of a last resort and still seen more as a constraint

In Fiction 2, islands of resistance are created with maximum levels of constraint, while Fiction 3, which encourages sobriety, seems likely and justified, only as a consequence of a major climate or economic crisis. In the discussions, the idea of forced sobriety came up more often than mass collective awareness of environmental issues.

d) Striking a balance between individualism and altruism

Social justice in mind

Overall, when talking about the ideal society in which they would like to live, participants expressed a strong desire for social justice in the Mediterranean region (all countries included). They condemned all forms of injustice and inequality present in the fictions: access to healthy and balanced food, access to tourism, access to employment, the right to education and training.

The “dehumanisation of society” described in Fiction 1 was strongly rejected. The risks of “modern slavery” involving climate refugees and the picking and choosing of refugees at borders based on their skills, were widely underlined. Participants identified the abuses that could occur if businesses were allowed to establish night work during extremely hot weather.

Greater inequalities between countries

Participants also highlighted the inequalities between countries around the Mediterranean. For instance, a drop in tourism would have a different impact in different countries. Even though most of them have developed this sector to a great extent, the level of economic dependence on the industry varies from one country to another, along with their capacity to cope with economic losses.

Inequalities also relate to job and social insecurity and the quality of life, which one young Lebanese woman captured with a simple question: *“If you take away the ability of the less wealthy classes to go and relax on a beach, what are they left with?”* This raises the difficulty of adding constraints to people who already have complicated and difficult lifestyles.

Things are different on an individual level

It is clear that everyday lifestyles based on community and altruism are not universally accepted. They appeal to some participants and put off others. For example, living in communities, in shared housing, or working to meet collective needs. This observation leads us to believe that, for some participants, social

justice is only considered on a macro scale, while for others, it is thought of both on a macro and micro scale. In both cases, it remains an important value for everyone.

e) Necessary bridges between governments and citizens

Environmental awareness at the heart of the discussions

During the commission meeting, participants talked constantly about raising the awareness of citizens through government action and, at the same time, about the ability of citizens to put pressure on governments to initiate change. In this respect, they expressed definite confidence in citizen movements and activism as a way to bring about change. The expected double movement of environmental awareness-raising between governments and citizens is a form of paradox, which can be resolved with the intervention of other categories of actors, including:

- NGOs, whose role is to collect and disseminate neutral information, particularly scientific information, in order to inform and put pressure on governments;
- The media to disseminate knowledge while fighting against fake news;
- Non-profits and local authorities to help individuals change their lifestyles towards greater sobriety.

Solving environmental challenges must not be left up to individuals

Although measuring the carbon footprint of households and receiving a bill at the end of the month based on their emissions was generally welcomed, participants stressed that solving environmental issues must first and foremost be the responsibility of businesses, and industry in particular. To achieve this, governments are expected to control, impose and ban polluting practices. Regulatory authorities must ensure that polluting practices are no longer profitable by creating specific regulations, funding the creation of environmentally-friendly sectors, developing a punitive system that acts as a deterrent, and supporting the enforcement of regulations at the local level.

The vital role of local authorities

Lastly, the participants referred to the central role of local authorities in protecting the interests of local communities, making the right decisions for their territory and creating projects with citizens, especially young people and women, who are too often left out of debates. Some even spoke of the need for “participatory science”.

f) International cooperation under certain conditions

Eagerly-awaited cooperation

For Fiction 3, the participants seem to agree that exchanges between countries must remain in place, even if, on an individual level, everyday life is more local. For Fiction 1, inter-state cooperation was highlighted repeatedly. However, people from the southern Mediterranean are more sceptical about how this will actually be achieved.

Developing a culture of cooperation

It seems easier for young people living in northern Mediterranean countries to envisage cooperation between all Mediterranean countries, than for those living in countries in the southern and eastern

Mediterranean. They don't have the same room for manoeuvre: policies in place, economic context, conflicts with neighbouring countries, etc.

The culture of cooperation also comes into play, as northern countries have the experience of the European Union (among others). In addition, young people living in southern Mediterranean countries are distrustful of the ability and desire of northern countries to help them and redistribute wealth.

Levers for cooperation

A number of factors were identified to further develop cooperation on a Mediterranean scale:

- Taking into account Mediterranean lifestyles, traditions and local knowledge;
- The development of economic agreements to initiate change and redistribute wealth from northern Mediterranean countries to southern and eastern Mediterranean countries;
- Regulation of energy and rare materials prices for the most vulnerable countries.

These levers are seen as a prerequisite for countries in the southern and eastern Mediterranean to embark on an ecological transition, particularly in terms of fossil fuel reduction. It should be noted that, for some participants, the continued use of fossil fuels and competition between countries is seen as desirable. For others, southern Mediterranean countries should be able to initiate their ecological transition without expecting anything from the northern Mediterranean countries.

7. Contrasts between the North, South and East

The discussions show that the participants have a variety of value systems, with differences between those living in the northern, southern and eastern Mediterranean. Some participants seem more attached to the values of "survival" and "belonging", while others think more in terms of "emancipation" and "interdependence". The information presented on this page concerning the differences from one region to another should be considered as hypotheses that should be tested in studies involving a larger number of people living in these countries, depending on the area. They do, however, give an idea of the main concerns of people living in these areas, and therefore of the major changes that are expected.

The desire for emancipation in the South

People living in southern Mediterranean countries debated whether they should be helped by wealthy Mediterranean countries or whether they should stand on their own two feet. This second option was favoured by several participants, who stressed that it is possible to find concrete solutions to preserve ecosystems while creating jobs, even in the most difficult environments, such as the Sahara desert. One of the expected consequences of these local initiatives is to limit the migration of young people to European countries in search of work. Changes in tourism and fisheries, two important economic sectors in these countries, are also viewed with a lot of uncertainty due to the loss of jobs.

Preserving current lifestyles in eastern Mediterranean countries

People from eastern Mediterranean countries were more likely to report a desire to preserve current lifestyles, which explains why technological solutions were more welcome. The most important thing for them is to make the lifestyles of local people easier, as they are already in the most vulnerable situations.

The urgent need for change in northern Mediterranean countries

In the North, residents seem more eager to see the ecological transition take place, with both a change in economic models and lifestyles. In fact, they seem less concerned by other tensions, particularly political and social issues.

8. An overall desire for cooperation between young people across the Mediterranean region

The young people who took part in the commission meeting, in particular those living in the southern Mediterranean, clearly expressed their desire to resume this type of dialogue and continue reflection. They asked for regular meetings to be organised, so that they could debate further and work together to form more specific ideas about a common future. They also wondered how their contributions, reflections and ideas from the Youth Commission on the Future of the Mediterranean will be used. Could there perhaps even be the potential for a Mediterranean Youth Parliament, or ad hoc training to prepare a common vision right from the start of higher education programmes?

Feedback and questions from young participants about the “Youth Commission on the Future of the Mediterranean”

“What else is planned for Plan Bleu? What are you doing with the results? Are you going to invite us to another meeting like that?”³⁰

“It has been great to take part in this conference; it allows for participatory science. It's interesting to hear different points of view for the scenarios.”

“I loved this meeting. I really like the principle of international collaboration. I hope there will be others!”

“Amazing experience to think and discuss about the future scenarios of the Mediterranean!”³¹

“A great and stimulating experience, with a concrete focus on current and future issues (such as social issues like solidarity communities). In fact, there wasn't enough time to cover everything.”

“Very interesting. It would be more interesting if we could discuss different ideas linked to the sustainable development of the Mediterranean area in particular.”³²

“I hope we will have a chance to collaborate and exchange ideas soon again!”³³

“I didn't feel bored. I like the variety and creativity of the session.”³⁴

“Can we share the fictions' videos on our social media to create debate around us and sensitize our network?”³⁵

Box 2. Participant reflections about the “Youth Commission on the Future of the Mediterranean”

³⁰ Original quote in English: “What else is planned for Plan Bleu, what are you doing with the results, are you gonna invite us to other meeting like that?”

³¹ Idem: “Amazing experience to think and discuss about the future scenarios of the Mediterranean!”

³² Idem: “Very interesting. It would be more interesting if we could discuss different ideas linked to the sustainable development of the Mediterranean area in particular”.

³³ Idem: “I hope we will have a chance to collaborate and exchange ideas soon again!”

³⁴ Idem: “I didn't feel bored. I like the variety and creativity of the session”.

³⁵ Idem: “Can we share the fictions' videos on our social media to create, debate around us and sensitize our network?”

Conclusion

I - Comparative summary of the two approaches to the visions

1. Pessimistic visions, but a shared desire to take action

The views expressed in the “personalities” interviews and the Youth Commission on the Future of the Mediterranean are generally pessimistic about the likelihood of Mediterranean countries making the political and economic changes needed to reverse current trends, which are deemed disastrous for the environment and society. Several participants referred to the idea that humans only change once they are up against the wall, and that only a major crisis can force systemic change. Even though the “business as usual” scenario is considered the most likely, the status quo is unanimously regarded as unacceptable.

Across generations and across all the Mediterranean countries represented in these surveys, there is consensus about a desire for profound change, and a refusal to accept inaction, as this is considered irresponsible. Points of agreement and consensus can be found on subjects such as stopping the use of fossil fuels, inequalities within countries and between the different sides of the Mediterranean, and mass land artificialisation, particularly in coastal areas. The majority of those surveyed call for more sustained international cooperation, which many see as a *sine qua non* for a successful transition to a desirable future. However, this unanimity is somewhat tempered: young people in the southern Mediterranean are sceptical about getting help from affluent northern Mediterranean countries, and tend to favour endogenous solutions without waiting for outside help. While all those interviewed said they would like to see closer cooperation, young people from the southern Mediterranean expressed a desire for autonomy, and a certain distrust of the North. This scepticism echoes a concern shared by personalities from the southern Mediterranean, almost all of whom said that the prerequisite for North/South cooperation was the need to resolve the political disputes currently aggravating relations between the two sides (in particular, colonial legacies and the Israeli-Palestinian conflict).

Overall, respondents were in favour of greater public sector control over the private sector, greater pressure on governments from NGOs and the media, respect for nature, the promotion of nature-based solutions, the preservation of coastal areas, greater power for local authorities and the development of medium-sized cities and towns.

2. Passing on the torch to the next generation

Several of the personalities interviewed expressed both their desire to make way for new generations, and their confidence in young people’s ability to bring about the necessary turnaround in values and lifestyles. Rather than blind faith in the new generations, these responses are probably also a sign of awareness of the failure of the older generations to provide solutions for a more viable future in the Mediterranean.

The Youth Commission on the Future of the Mediterranean shows, however, that the way in which new generations view the future of the Mediterranean varies enormously, particularly depending on their country of origin. While there is a shared desire for change, there were different concerns and contrasting, even diverging, ideas about what needs to be done to change the trajectory.

A strong divide was seen concerning the use of technology and a change to lifestyles. There were two opposing positions: “technophiles” who want to maintain current lifestyles, and “downshifTERS” who want to shift towards greater sobriety by radically transforming the way society is organised, and our consumption and production patterns for greater equity. While the use of technology to reduce greenhouse gas emissions or respond to crises is universally accepted, geo-engineering (such as techniques to induce artificial rainfall) and enclosed tourism solutions under glass are widely debated. It seems that these two typical positions are geographically divided, with respondents from eastern Mediterranean countries tending to be more technologically-oriented and liberal, while those from northern countries tend to desire a return to more sustainable, environmentally-friendly lifestyles. Like the views expressed on cooperation, it should be noted that this geographical divide on technological solutionism was also found in the individual interviews.

Beyond consensus on the desire for profound change and improved international cooperation, lines of dissension were seen not so much based on the age of those surveyed, but mainly based on their geographical location. Beyond any divisions or differences of opinion or choice, there is a sincere desire on all sides to maintain dialogue, and better still, to carefully cultivate it, as each side expressed their deep rejection of selfishness as the worst kind of behaviour, be it personal, communitarian or national. It is considered a vector of certain catastrophe. The best antidote is open willingness to engage in trusting dialogue.

II - Next steps in the MED 2050 project

The contrasting visions gathered in this second stage of the MED 2050 project (Module 2), in addition to the work carried out on the foresight base (Module 1), will contribute to the development of contrasting macro-scenarios for the Mediterranean from 2030 to 2050. These scenarios will then feed into more strategic reflection on possible transition pathways towards sustainable development (Module 4), involving experts and stakeholders from Mediterranean societies. A final phase (Module 5) will focus on promoting the results of this work across the Mediterranean, targeting different audiences: the UNEP/MAP system, the countries concerned, the general public, the scientific community, the media and civil society, etc.

Appendix³⁶

I - Compiled and summarised interviews

The interview summaries were produced by members of the Plan Bleu secretariat, which inevitably involves a degree of subjectivity. However, these summaries are designed to retain the underlying ideas and main points, in a format of no more than two pages. The writers of this report have highlighted the key points of each summary, either because the respondent placed a particular emphasis on them, or because they are innovative, or because they add something important to the Module 3 scenarios, such as colourful wording or a highly illustrative example.

1. Personalities interviews with people outside the MED 2050 project

a) Personalities interviews with people from eastern Mediterranean countries

❖ Interview 1

Interviewee characteristics: scientific background, eastern Mediterranean, > 60, male

Q- First question is really about the major challenges that you see for the long term for 2050, in the Med

A- Main challenge: availability of water and quality of water. The challenge of water use. Compounded by climate change and population growth.

Q- What are the possibilities that we have to address these issues?

A- Efficiency of water use, meaning that a specific water Consumption of crops should be reduced somehow, either by more targeted or sophisticated irrigation (not necessarily more expensive) - the obvious is treated wastewater effluent. Technical challenges: salinity, micro pollutants and biotics.

Q- I'm a water guy, I've been working in the water sector in the past, and I know how it's very advanced in terms of technologies, but for example, the right to reuse is not progressing so much in northern Africa, there are cultural barriers. I also wonder about political support. Do you think this might change?

A- Important to go to the religious leaders and convince them. **Working with people is more challenging than working there with technology.** Technology is a small part.

³⁶ [Appendices concerning the "Youth Commission on the Future of the Mediterranean" can be found in the report written by Julie Rieg: "Contrasted visions on the future of the Mediterranean. Analysis of discussions at the Youth Commission on the Future of the Mediterranean on 2 March 2022".](#)

Q- And do you think we go towards more cooperation or more conflicts in the Mediterranean area ? In thirty years, sorry. Overcoming the characteristic political tensions here and there, but just looking at the long term.

A- Contradicting trends for more cooperation or conflict, some places in one direction, others in the other. Both sides gain from this cooperation. **There is some mistrust and will last until we solve the issue of Palestine. Sometimes scientists can be the bridge and bring solutions to mutual problems.**

Knocking on their doors appears.

It is in the interest of Israel that Jordan remains a stable state, of Europe that North Africa remains stable and people don't move because of lack of water or employment.

Somebody has to grow food. Land ownership is very traditional, with very small plots. Each time it is inherited, the plot is divided. Organisational change and reform of traditional ownership needed: not to cancel it, but operate them differently: 20 small plots is one big plot and everyone is a shareholder This is a big cultural change.

Q- Would you see in 30 years time the same kind of countries, governments, institutional setup, or do you anticipate a major shift?

A- The Arab Spring: Worse situation than before. Libya: Was quite rich (not that I like Khadafi) but in chaos now. **But reform has to be from within and not dictated from outside.**

If the West goes there and dictates when the West goes away, it collapses.

❖ Interview 2

Interviewee characteristics: academic background, eastern Mediterranean, > 60, male

Q- What major challenges and opportunities do you foresee for the Mediterranean in the long term, up to 2050?

A- **The failure of the water - food security - energy - environment Nexus would be fatal for the Mediterranean Basin.** To ensure the Nexus' success, the first component is water, especially irrigation, the need for technology transfer and empowering farmers.

Another issue is pollution related to water, landfills and sanitation.

70% of water in the south-eastern Mediterranean region is transboundary. There is a need for hydro-diplomacy, as transboundary basins will experience serious shortages and conflicts. The tools available from the United Nations (UNECE Convention 1992; 1997) have so far not been used to resolve conflicts. Transboundary water conflicts: The Jordan, Tigris, Euphrates & Nile Rivers. Need for technical and institutional cooperation (basin agencies).

2nd component: energy. Most Mediterranean countries use fossil fuels. We need a Mediterranean solar plan, and to promote renewable energies. However, renewable energies cannot cover the Mediterranean's energy needs, and we must not abandon nuclear power, which is the only energy platform that could meet demand for the Mediterranean Basin, alongside gas. The gas fields discovered in the southern Mediterranean could help Europe meet its needs. We need to diversify our energy sources, but we still need stable political regimes to use nuclear power in the region.

3rd component: food. In the Mediterranean, there are 600 million people who are overnourished and 400 million who are undernourished. We need to help southern and eastern Mediterranean countries feed themselves better, stop food waste and diversify their agriculture in line with the specific characteristics of this region (no tomatoes in the desert).

A convincing example of the failure of the Nexus and poor ecosystem preservation: the Dead Sea is dying because of poor management of the Nexus and intensive agriculture; or the Renaissance Dam, which is a failure of the Nexus, and social failure for Ethiopia, Sudan and Egypt.

Climate phenomena will lead to climate migration.

Part 2: Education: the future on which to build peace in the Mediterranean, a chance for the Mediterranean population to develop its political system, establish democracies and tackle climate change.

3rd challenge: security in the Mediterranean. With climate change, an increasing number of migrants, social problems and problems directly linked to the unsustainable management of our resources. Security and stability in the Mediterranean also depend on neutral relations with the major political and military blocs. **Mediterranean countries should advocate their neutrality**, rather than following the political actions of the superpowers.

Q- You've already started to answer my second question, which is about what would be desirable or, on the contrary, unacceptable. Let's move onto the 3rd question: what profound changes are needed to avoid the most pessimistic visions of the Mediterranean's future?

A- Establish the Europe-Mediterranean-Africa Verticale, advocated by **Miguel Ángel Moratinos** and **Jean Louis Guigou**: an area of cultural construction, and industrial, economic, educational and energy development. Africa is the continent with the most natural resources; the Mediterranean Basin, at the centre, is the bastion of cultures, religions and youth; Europe is the bastion of technology. **We can do wonders if we build bridges; if the Mediterranean Basin becomes the link between the North, Europe and Africa.**

The French President has launched several international conferences, most recently in Brest, and previously the climate conference. In the same vein, France should launch another conference with Mediterranean heads of state or technocrats and Mediterranean thinkers to relaunch the UfM.

❖ Interview 3

Interviewee characteristics: academic background, eastern Mediterranean, > 60, male

Q- What major challenges and opportunities do you foresee for the Mediterranean up to 2050?

A- Free trade is a false solution for southern Mediterranean countries. The process put in place by the Barcelona Declaration has not been implemented. The gap has widened with the southern Mediterranean torn apart by conflict and environmental issues that are not being addressed in the face of climate threats and the degradation of natural resources. **There was something utopian about the Barcelona Declaration of 1995, with the belief that free trade would solve all development problems and bring living standards**

between the two sides of the Mediterranean closer together. Inspired by the dominant neo-liberal ideology, this assumption that free trade would be the solution has not proven itself over time. Worse still, it has widened the development gap between northern and southern Mediterranean countries and exacerbated unequal trade.

The lowering of customs duties, trade liberalism and the opening up of markets have led to unequal development. The experience of free trade zones (in Tunisia, Egypt and Morocco) has not yielded much in the way of results, and there has been no reflection at the EU level on the industrialisation processes to be undertaken in southern Mediterranean countries. The economic history of many nations in the developed world has shown that **import substitution industrialisation** is one of the historical paths to industrialisation. Take Germany, for example. Through interventionism and protectionism in the 19th century, it experienced real economic growth, and quickly caught up with the much more developed western Europe.

The EU's commitment to free trade, backed by major international institutions (WB, IMF), has hampered the self-centred development of southern Mediterranean countries. The EU's expansion to eastern Europe is a priority that has not promoted dialogue with southern Mediterranean countries. The Balkan countries are marginalised.

What's more, the European Union's priority to expand to the East has meant that it has been unable to conduct sustained and fruitful dialogue with the countries on the southern side of the Mediterranean. **Expansion of the European Union to the east has been to the detriment of the Union for the Mediterranean.** All the Balkan countries bordering the Mediterranean have been left out of the Mediterranean construction process, as was Russia. Therefore the eastern Mediterranean, one of the world's most strategic crossroads, has been absent from EU visions. **Let's not forget that the Mediterranean does not belong to NATO.**

A few other major problems hinder EU dialogue with the Mediterranean. One of the major human and political problems is Israel's apartheid regime, as it occupies Palestinian land in total violation of international law. **The situation in which the Palestinians find themselves is similar to that of South Africa or colonial Algeria.** There is no difference between these situations. And **the Israeli-Palestinian conflict is a serious obstacle to the success of the Union for the Mediterranean.**

The use of violence against certain peoples, such as Syrians and Libyans, has also been an obstacle to the UfM. Russia's presence in a country like Syria merely fills a frightening political vacuum left by the European Union.

Another major issue is the migrant issue, which is, in itself, a disgraceful human problem in my eyes. **We are witnessing a brain drain and skills drain from the southern Mediterranean to the North and the United States and Canada.**

Another major source of tension and national rivalry in the Mediterranean is the development of oil and gas resources on its southern shores. **The misuse of oil and gas revenues by Arab countries has resulted in a high level of industrial and technological laziness, in total opposition to any process of economic development.**

Visions for the future:

It's hard to have an optimistic view of the future when considering the human problems facing southern Mediterranean countries, particularly migrant challenges. Countries on the northern shore have been

complicit in the emergence of mafias in the economic sphere, and the World Bank has supported their economic policy in the name of globalisation and the liberal ideology this process implies. **The Covid-19 crisis called into question many of the dogmas of this ideology and the relocation strategies that had been used.** The re-territorialisation of production systems is now a stated objective in a number of northern countries.

This calls for a paradigm shift in economic, social and environmental public policy. We are seeing small signs of this change, and this is a step in the right direction. For example, attention is being paid to environmental concerns (water stress, marine pollution, fossil fuel consumption, etc.), the necessary energy transition to alternative energy sources, the threats of climate change, increased activity in coastal areas and the use of concrete in natural areas. Solar power needs to become a major source of energy.

In conclusion:

We need to relaunch dialogue between the northern and southern Mediterranean, and extend it to other frameworks. A number of different organisations have emerged around the world, particularly in Asian regions, opening up new opportunities and encouraging the development of economic cooperation in the region. In the Mediterranean, we need to think about the role China could play, and about the Silk Road, which sends out an important economic message. In this case, it is important not to adopt a hostile attitude towards potential investments, but to carefully examine the benefits for local economies of investments being made in Mediterranean countries by multinational corporations, including from China and Russia.

The World Bank and IMF could contribute their expertise and resources to finance the UfM's portfolio of innovative projects. However, they need to abandon the liberal paradigm which has led them to recommend privatisation in southern Mediterranean countries, which has contributed to the destruction of their productive capital in the past. **Today, we need to preserve the economic heritage of states.**

❖ Interview 4

Interviewee characteristics: academic background, eastern Mediterranean, > 60, male

Q- In 30 years time what would be the main problems and opportunities that you would like to mention for the Mediterranean.

A- Two things : one is the shortage of water, worsened by climate change. **Water is the key.** Second, the explosion of population. Cairo will expand from 20 now to 50 million people by 2050.

Lack of water and demography - explosion of population, will result in wars. Many farmers because of climate change, because of a shortage of water, will not be able to continue to cultivate their land and they will move to the cities, and the cities will explode again, there will be crime. Civil war in Syria was exactly because of three consecutive years of drought, plus new Turkish dams on the rivers.

Main solution, especially in North Africa: water reuse. 90% in Israël, second country in the world Spain with 17% only. Europe average only 5%. To prevent civil war in the South Mediterranean and a new wave of immigration to the North, the key is water management, then digital agriculture.

You in Europe you will experience another wave of immigration. And if you want to prevent it today. So the way we feel we understand it's education and training, especially in water management and digital agriculture.

Q- It's also about government or institutions ? Countries, local authorities, regional administration, Mediterranean cooperation?

A- First and foremost, the governments and also the Union of the Mediterranean.

Nigeria in 2050, 400 million, in 2100, about 900 million. **If we don't train them today and educate, they will start their marching north, because if they are hungry.**

Q- Second question: what visions would you see as unacceptable for the Mediterranean in 2050?

A- If this continues, in 2050, probably some terrorist groups can get nuclear weapons.

the reply, the war against terror is mainly by upgrading the standard of living of the population, mainly through upgrading the agriculture because those societies are primarily agricultural societies. But also digital culture: so we can teach the youngsters computers and they can work in high tech. In Israel today, high tech companies employ on-line Palestinians living in the West Bank. We have to do it broadly, Europe, has to find ways to employ young Egyptians in high tech companies, they will continue living in Egypt and work online, instead of moving to look for jobs in Europe. This is a new world.

Q- Do you think it's necessary to have a disruption of transformation in terms of government, for the way we make policies in the Mediterranean ? The way you manage...

A- I believe that every government, democratic or not, understands these two problems : climate change, the lack of water and the needs for the training and education in water management and in a digital agriculture to upgrade agriculture. Especially now with the war in Ukraine. They have to upgrade agriculture. That it is proposal or suggestion, it is a must, the future of this region.

❖ Interview 5

Interviewee characteristics: academic and civil society background, eastern Mediterranean, 40-60, female

Q- Based on the situation of the Mediterranean as you see it, what major challenges, problems and opportunities do you foresee for the long term?

A- The main problem for me is **overpopulation**, through increasing "local populations" or immigration to the Mediterranean. There are few natural areas left for wildlife and natural biodiversity. These little pockets in the Mediterranean that have been safe from humans until now need to be protected. We need to rethink our consumer behaviour. The second problem is, of course, global warming, everywhere but especially in the Mediterranean. **As individuals, we can change our luxury habits in travel, heating and air conditioning. However as a civil society and as a State, we need to focus more on ecosystem restoration and reforestation.**

In terms of opportunities, the Mediterranean has a relatively young and open population, with access to technology, which offers great potential. We need to provide them with an environment that is suitable for their development, so that they don't leave.

There is a great deal of complementarity between the different regions of the Mediterranean. The political framework is the only way to organise all this to some extent.

The Mediterranean is a highly diverse region, but it is also very heterogeneous in terms of environmental conditions, such as rainfall, temperature, soil type, topography and so on. Instead of intensive farming in the wrong soil conditions, or where there is no water, we need to develop and encourage adaptive farming with traditional native species suited to this type of climate.

Q- What is your vision of what would be desirable or unacceptable in the region in the decades to come, up to 2050?

A- It would be unacceptable to treat the Mediterranean like any other region in the world. Especially within the framework of the United Nations, we absolutely must avoid applying the main texts without taking into account the realities on the ground, local specificities, Mediterranean culture and traditions. For example, we need to plant 3 billion trees by 2030 or 2050, but you can't go and plant where the land can't be planted, or where the land is producing something else. You really need to get down to the plot level to see what is the best way for each part of the land in order to meet the SDGs at the same time.

We absolutely need to take into consideration our Mediterranean cultural heritage in all our projects, whether natural or educational, and make it the banner under which differences can become a strength and not an alibi for bickering, no longer just limited to folklore.

It's important to pay attention to the role of young people. It is not enough to have good universities and good training. There are also some first steps, **such as helping these young people set up their own businesses, get jobs where they are needed, rather than training people and ending up with well-qualified people who are unemployed.** Maybe we need to create something that allows these people to realise their potential while respecting the environment, because I think they're even more aware than we are. **Unlike us, who lived at a time when we didn't think about the environment, and started to take it into consideration when things started to go wrong, young people were born into this and will suffer the damage in the future.**

Q- What disruptions or transformations are needed to achieve your desirable vision or to avoid what you consider to be unacceptable in the long term?

A- We have to communicate with politicians, who are not the easiest people to get behind our agendas because often **their own political agendas are closely tied to the length of their mandate and their potential re-election. The environmental agenda, on the other hand, is a long-term agenda covering 30, 50 years or more.** Starting at the bottom of the pyramid, with the people, the rural environment, our heritage, rather than coming up with big projects like dams is really the way to hopefully bring about decisive change in southern Mediterranean countries.

These people must no longer bank on the idea that "we're going to get a few billion from the World Bank to do this mega thing", without taking into account the agricultural land that will disappear and the smallholder farmers who will have to emigrate. On the contrary, we need to really look at what local assets we have and build accordingly, without altering the natural and social balance, and stop cutting corners when it comes to field studies just to get projects approved.

Our consumer habits are going to change everything and influence production. If I decide not to promote products from Bolivia brought to the Mediterranean with a large carbon footprint, but instead choose a brand that respects all that, if my situation allows me to, then I can join a silent majority who are starting to speak out in favour of breaking with the unsustainable production system.

To do this, you need to start with a small group of people, which can be a family, a school, a university, a business, an association, etc. then, little by little, it takes hold. It won't happen overnight, but it's happening now. It's under way and we really need to encourage it. **We are consumers, but we are also major influencers, both in terms of voting and our consumer habits.**

I want to the Mediterranean region to be very green and very blue.

❖ Interview 6

Interviewee characteristics: civil society and academic background, eastern Mediterranean, 40 -60, male

Q- Based on the situation of the Mediterranean as you perceive it , from your country, your institution or business, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the medium (2030) and long term (2050)?

A- In terms of general issues: the **widening gap in resources, wealth and education between the two sides of the Mediterranean**, the lack of South-South and North-South cooperation, all forms of pollution and the warming of marine waters, **the homogenisation of the two large basins under the pressure of climate change, particularly in terms of the migration of land and marine species.**

For the marine environment: overfishing, illegal fishing, pollution. Fishermen are not only unpoliced or poorly policed, they are also not involved in the decisions that concern them. Scientific research receives too little support to carry weight with decision-makers. **There is a persistent problem when it comes to governance: it must be scientifically founded, jointly decided and supported by strong technological resources.** The biological invasion of tropical species (via the Suez Canal and Strait of Gibraltar) is not always a problem. For example, siganids are starting to be fished, providing a new resource for Syrian fishermen.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- The desirable (for both land and sea) would be to protect biodiversity throughout the Mediterranean. Pollution control in cooperation with neighbouring countries. Establishing large protected areas. Teaching school children to respect the Mediterranean Sea. **Pollution management training in the two major basins.** The quality of fish transport and processing, from catch to plate

The unacceptable would be overfishing and illegal fishing (encouraged by corruption), pollution, with full knowledge of the facts.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- To achieve the desirable outcomes (for both land and sea): **strict regulations with associated controls; a ban on all activities impacting marine ecosystems; improved cooperation between countries with precise and strong commitments from everyone; exchanging and sharing data to better manage shared ecosystems; precise and up-to-date quotas in territorial and international waters; improved consultation**

between scientists, fishermen, consumers, ecologists, the media and decision-makers; the development of training in responsible fishing and aquaculture: concepts, practices, measurement criteria, etc.

Key words characterising changes to the Mediterranean by 2050: increasing marine biological invasions; **powerful organisations defending this sea and strong cooperation with governments;** easing of international tensions by sharing interests and resources; **major geopolitical influences: Europe, China and Russia;** **growing tensions over freshwater** , with mainly technological solutions (desalination using solar energy).

I dream of a Mediterranean restored to its original beauty, when it was called “Mare nostrum” or “Tethys”.

❖ Interview 7

Interviewee characteristics: political background, eastern Mediterranean, > 60, male

Q- What are the major challenges (problems or opportunities) that you perceive for the medium/long term and the evolutions that you envisage, positive or worrying?

A- Mediterranean ports allow cultural exchange where people from different parts of the Mediterranean and Asia meet, mix, and influence each other. **“Geography is destiny”** (Ibn Khaldoun). Diversity exists in the DNA of the Mediterranean, and can help the world overcome today’s polarisation, segregation, and marginalisation.

Democracy, the culture of living together, is nurtured by the people of the Mediterranean, as one of the leading innovations of humanity.

Urbanisation triggers massive changes in the global society. The COVID-19 pandemic, climate change, and losses of biodiversity have threatening effects on human civilization. Sustainable urbanisation and ecological transition appear to be an indispensable global field of action in the fight against these threats without borders. **Cities are at the heart of such actions.**

Q- What visions do you have of what would be desirable or, on the contrary, unacceptable, given the evolutions you envisage in the coming decades? Does the Sea have a place in these visions?

A- The Mediterranean is a blue continent. Unlike other continents, it is made of water. **Unlike other seas, Mediterranean does not divide people, but it connects them.** It forms a strong bond between people and cultures. We share the sea, the culture, and history.

We must re-establish harmony with nature, in our economies, in agriculture, tourism, infrastructure, urban regeneration, etc. In my electoral campaign, I promised not only **to be the Mayor of humans but all species and natural ecosystems of the city, including the flamingos.**

Q- What are the disruptions or changes needed to move towards your desirable vision or avoid what you consider unacceptable in the long term ?

A- During certain periods, authoritarian societies and authoritarian governments may become stronger throughout the World. Authoritarian regimes focus on categorising people as “Others”. They consolidate power by emphasising differences and by defining people as “us” and “them”. Their strategy is to point at the so-called flaws and alleged mistakes of “others”. We shouldn’t fall into this trap. **Culture can help us move away from the polarising discourse of politics.** With mass urbanisation and population mobility,

promoting diversity and celebrating our common values, have also become one of our most important duties. Each and every one of our citizens has the right to feel belonging to the place they live. New urban policies are required for our increasingly cosmopolitan cities.

In our interconnected and rapidly transforming World, **it will be essential that States and international organisations reformulate the institutions of global and Mediterranean governance by recognizing the merits of cities.**

Q- What role could your country or institution play in these necessary transformations ?

A- As a response to drought, our municipality provides economic incentives for rain-fed agricultural products that require less irrigation, in harmony with local climate conditions.

There is a necessity for institutional innovation to face crisis such as the pandemic: the threats require resources beyond our capacity. We need to adapt both processes for operations and services, but also new decision-making, with executive and consultative bodies, accompanied by a strengthened solidarity.

Q- What is the likelihood of achieving the disruptions or transformations necessary to move towards your desirable vision or avoid what you consider unacceptable in the long term ?

A- In the coming years, it will become even harder for our cities to manage the rapid pace of population growth. More investments have to be made for a green recovery from the pandemic. **Cities' access to financial resources and expertise will determine the future of the World. Cities connected to the World benefit more from globally available resources.**

❖ Interview 8

Interviewee characteristics: academic and civil society background, eastern Mediterranean, 40-60, female

Q- So the first question is starting from the situation of the Mediterranean as you perceive it from your country, from your living and working environment, what are the major challenges or problems and opportunities that you perceive for the long term ?

A- In the Arab region, according to the country, there are great differences in the capacity of institutions to use technology, and financial resources to develop solutions to various issues. This inequality is the first challenge that the Arab world is facing. For instance, the pandemic showed us how deep was the **digital divide** in our countries. We don't have these digital skills at the same level for all citizens in the country, and this creates inequalities in the region. We could also mention **gender inequalities**. The economic participation of Arab women in the law is the lowest in the world and the pandemic added even more pressure on Arab women due to the loss of income and isolation resulting from the lockdown measures. Instability and political conflicts adds to these problems: for example, the civil war in Syria **destroyed a lot of essential infrastructures** in most cities all around the country and in Palestine, we have to get Israel authorization for most of our projects, which restrains our development.

I think one of the very important challenges that is facing the Arab region is about strategy and policies. We are very brilliant in writing strategies and development strategies and policies but we are not working hard to make these strategies real and to put these policies into action. **We also miss a legal framework.** We don't have laws for some of the important issues related to sustainable development. **For instance, one of the very important laws that we miss in the Arab region is related to intellectual property rights.**

How can we protect R&D in the region ? It ends up with many researchers going outside the Arab region to protect their work or to protect their research, and this is not acceptable.

Q- Thank you very much. So let's go to the next question. What visions do you have of what would be desirable or, on the contrary, unacceptable in the possible development of the region in the coming decade ?

A- The unacceptable would be to stop working and to wait for others to produce something and to bring it to us. We should start doing actions. The COVID-19 showed that technology is part of everything at all levels of cities, at all levels of the economy, so we should commit ourselves in this field. Technological tools, artificial intelligence, robotics, platforms such as Zoom, Google meets, Teams and so on, helped us get over the pandemic. Now we should start thinking how we can deploy these technologies to the benefit of sustainable development and to achieve sustainable development goals.

So to me, in the future, the one important thing to consider in the Arab region is **to take into consideration in priority the use of technologies**, so as to empower ourselves. We could also think about technology for agriculture so we can produce very, very high quality plans. We can use technology to empower our economy and tourism for example. **Technology now is the core** or say the glue that can protect the Arab region.

We should also take into consideration research and development. We should be part of this international group that is working on research and development. For example, in COVID-19, we were waiting for others to tell us what to do, especially with the vaccine. This is due to our lack of strong infrastructure for R&D in the Arab region. Taking into consideration R&D will empower the economy.

Talking about the economy in the Arab countries, I think one of the issues is tourism. We have many historical sites in the region. And we have different natural areas in the region. If we start thinking about developing tourism in the Arab region, I think it would help us strengthen our economy.

At the same time, in the Arab countries we should take into consideration our **water resources**. We don't have enough water for all people but we are surrounded by the Mediterranean and the ocean. We could convert, use technologies, to make these waters usable for agriculture, for planting or for drinking.

Q- OK, thank you very much and so we go to the last question, which is what are the disruptions and transformations that would be necessary to move towards what you describe as a desirable vision or to avoid what you consider unacceptable in the long term ?

A- There should be stakeholders who can provide support to the government. I'm not only talking about citizens but most of all about the private sector, academia, international and regional agencies. Because sometimes when we are talking about, for example, Egypt. Why don't the Egyptian people sit with other people to understand and to get benefits from their experience, how they have been, for example, solving some problems and apply these solutions in a relevant way for the Egyptian context. **So knowledge exchange and experience exchange is very important in the Arab region**. We should exchange our knowledge and learn from each other's experience.

We also have a cultural issue in the Arab region. For example, some Arab countries didn't accept the SIDA agreement. Some said we couldn't adopt SIDA Agreements because you know about religion and something like this. They didn't even read it, you know. Now, even the United Nations, now taking into consideration cultural issues and if they are talking about the dimensions of the city, they added the fifth

pillar, which is the cultural dimension or the culture builder. This is one of the issues to take into consideration when we are talking about how we can reach our vision.

Once again when we are talking about the laws and regulations, we should put them down, write them down and apply them. Not to keep them over the desk.

Q- Yeah, of course. I mean, there's so many things he could forget to talk about. Is there anything else you would like to say ?

A- Ah yes, this is an important thing, statistical data. In Arab countries, **one of the biggest problems is that we don't collect data in relation to the international indicators and indices.** Especially here in Palestine, we don't have a lot of statistical data. You can't find the statistical data, the information you are looking for.

I know one of the big challenges or barriers for the Arab region is the financial issues. We don't have financial support for our programs for example. So if you don't have funds, you can do nothing. But you can ask your friends, you can ask a broader private sector to review in this case. Sometimes the government doesn't have the money, but you can ask the private sector to provide this solution to citizens or this service and they will get their benefits from that. But at the same time they will also support the government and they will provide the money needed for this program. We can't work if we are acting in different islands. We should stand all together on one island and or two, work together.

a) Interviews with people from northern Mediterranean countries

❖ Interview 9

Interviewee characteristics: academic background, northern Mediterranean, > 60, female

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- First of all, we need to distinguish between 3 distinct geographical areas in the Mediterranean: the northern shore, with countries federated by the EU, the southern shore, with more independent countries, and the islands. **Despite deep-rooted unity based on the sea that connects us, and a culture born from ancient Mediterranean civilizations, our countries have developed differently.**

Should we move forward while taking regional identities into account, or all together?

Demographic challenge: This is well-known, documented, ongoing and major. It needs to be addressed in order to work towards a demographic transition in the South and a rebalancing of ageing in the North.

Tourism challenge: Tourism flows are cyclical, which causes intermittent overcrowding at destinations. We need to move away from purely seaside mass tourism and think about a form of tourism that is more attuned to local culture, the hinterland and cultural encounters.

The challenge of **intra- and trans-Mediterranean maritime traffic.** Sister seaport agreements and automation are a sign of progress (e.g., Tanger-Med affiliated with Alicante). This automation offers

potential for development, which would facilitate regulation and control. But this poses the major problem of changing the port's activities and image. Jobs and their qualifications need to be rethought.

The challenge of **catchment area management**. This management is crucial, as it determines the quality of coastal waters. Considerable progress has been made on the northern shore. There are no insurmountable obstacles to transposing these efforts to the southern shore of the Mediterranean.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- There's no need for doomsaying. It is unacceptable to pass breaking points and points of no return, such as the introduction of invasive species. Vector-borne diseases (e.g. mosquitoes) should be closely monitored and eradicated if too dangerous. Mutations, viruses and new propagation methods need to be understood and brought under control. We need to improve the quality of our monitoring networks. This health dimension must be taken seriously.

It would be desirable to capitalise on and develop all the positive aspects of the Mediterranean, starting with its long shared history, its heritage treasures (and not just UNESCO sites), the willingness to manage a Mare Nostrum for the benefit of all, and the opportunity to set an example of integrated management of resources and human activities on the right geographical scale, serving as a "model" for many other seas around the world.

Professional activities could be rethought in terms of relocation and reducing dependence on imports from Asia. The aim is to avoid a "bread (GMI) and circuses (mobile video)" effect. We need to learn to harness technologies, while preserving what creates social ties and creativity through jobs with human added value.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- We need to regionalise development within relevant geographical areas. The UfM was a good idea until Northern Europe got involved. We need to work with willing regions and professions for long-term cooperation. Examples of applications already under way: port alliances, waste treatment on islands (major progress on energy recovery), sustainable forest management, etc.

We need to restore people's ability to think and act while taking into account the long term and their interest in common goods. You can't solve the world's problems with grand speeches. The Mediterranean is a relevant scale. **Initiative could also come from economic decision-makers** (e.g. "blue" ports) and social media networks, which are powerful influencers.

Science can also help (e.g. GID's work over the past 20 years!). In this way, we can also organise participatory research to empower people and motivate them to take action, such as boaters taking photos of jellyfish. It is important to give "rewards" in return. These improvements need to work in synergy. Each success in one field should boost creativity and the desire to implement solutions in other fields.

Interviewee characteristics: civil society background, northern Mediterranean, 40 - 60, female

Q- What major challenges (problems and opportunities) do you foresee in the long term, (up to 2050)?

A- The major challenge in the Mediterranean is **climate change, which is transforming marine ecosystems** and will have a number of impacts: mortality of various species, modification of migratory routes, major changes in the food chain, acidification.

Scientists are well aware of the famous “tipping points” - the point at which a species reaches its maximum ability to adapt, and they warn us about them, but as citizens we find it hard to sense them and therefore to understand them. Yet history speaks for itself, for example with cod in Newfoundland, whose stock collapsed and has never recovered. If the Posidonia seagrass, a pivotal ecosystem, reaches its “tipping point” and collapses, this will generate cascade effects.

“The challenges of climate change have been added on top of a situation that is ultimately already tense, with socio-economic and political difficulties in many Mediterranean countries.” In most Mediterranean countries, water stress is already a major issue, and some (e.g. Tunisia) experience it for twelve months of the year. Climate change is happening fast. However, public policies are struggling to keep up. **The situation is totally unprecedented in human history, not so much in terms of the complexity of the problems to be solved, but in terms of how quickly they need to be solved.** How can we rapidly decarbonise our economies? What kind of transition is needed between the end of the oil era and the world after? What impact will this have on our socio-economic systems in the Mediterranean?

We need to think long-term and drastically accelerate our decarbonisation efforts. In shipping, it takes 30 years to renew a fleet of ships. **In all sectors where renewal takes several decades, we need to act now.** Offshore wind and other renewable energies need to be developed, but in a way that avoids major impacts on biodiversity, especially on certain already vulnerable species such as seabirds.

There are no longer good and bad solutions. We’ve entered a period where all we’re dealing with are dilemmas and compromises, and they’re extremely difficult to make.

In the marine environment, nature must be allowed to recover. Climate change is taking hold in an already fragile environment. The marine environment can withstand or even adapt to climate change, if it is healthy and not under constant attack. **We need to create the most harmonious possible cohabitation with the natural world.** To achieve these goals in real life, environmental protection regulations simply have to be enforced. This may seem obvious, but in reality it’s not. It requires political vision and courage.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- It would be desirable to limit global warming to 1.5°C, the unacceptable outcome is over 2°C. Compared to other seas, the Mediterranean is subjected to many human activities, so **successful transformations in the Mediterranean by speeding up action could serve as a model elsewhere, where the problems are less complex.**

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- We need to step up our **efforts to raise awareness and train decision-makers and citizens**. This includes economic mechanisms that work, courage at the regulatory level, massive investment in research to find technological solutions (even though **green growth is full of illusions**), the strong development of nature-based solutions and effective decarbonisation strategies for businesses.

We need international agreements, even if they change, and to avoid roadblocks linked to differences in competitiveness for businesses. Major blocs such as the European Union have extremely important roles to play in setting challenges for Member States and acting as a driving force on certain issues. For example, **the Marine Strategy Framework Directive is the world's only binding piece of legislation on the goal of achieving good environmental status in the marine environment**.

50% of climate change is due to the richest 10% of the planet. There needs to therefore be a fair distribution of the financial effort to finance a socially-just transition.

A dream for the Mediterranean would be to be able to circumnavigate the Mediterranean by train at a fare ten times cheaper than by plane. Today it's the opposite, which is utterly absurd and an example of what needs to be resolved in terms of public policy.

❖ Interview 11

Interviewee characteristics: business and academic background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- The first challenge is **demographic pressure**, in terms of the number of countries affected and their size. Another issue is tourist flows, which have slowed down temporarily due to the pandemic. But tourism will pick up again as the Mediterranean remains the world's leading tourist destination, for reasons that have not fundamentally changed.

Second challenge: **degradation of natural environments**, particularly under pressure from human activities. This could affect long-term balances, with risks of irreversible damage. This is a national and international challenge for all Mediterranean countries. International cooperation has quite a way to go in this respect. Climate change also threatens to degrade ecosystems. If heatwaves or mega-fires were to become a recurring event, tourism would certainly suffer. Anticipating this is a real long-term challenge.

A major opportunity: tourists are also an opportunity to finance smart actions. However this has its limits, because if coastal areas are degraded, they will become less attractive. Leaders therefore have an interest in maintaining ecosystems and heritage sites in good condition. Conservation and/or protection technologies are available. They just need to be implemented over a number of years, with great consistency, political willingness and cooperation. There are numerous fields of application: urban planning, wastewater treatment, agroforestry, urban mobility, management of tourist flows at high-traffic sites, etc.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- It is desirable to manage consistent coastal development policies collectively. La Grande Motte is a success story, because before sanitation, the coastal area was unfit for tourism. Construction must be balanced by a coastal protection agency (e.g. Conservatoire du littoral) or its equivalent in each country. Southern Mediterranean countries could commit to development agreements to balance all activities, especially tourism. But there are many other areas of development, particularly in terms of historical, cultural and natural heritage.

It would be unacceptable not to react. Leaving things as they are would be suicidal for *laissez-faire* countries and everyone living around this sea. A current example of failure is Lebanon. Mediterranean solidarity must therefore be stepped up to help countries affected by war or excessive internal political dissension to catch up.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Disruption: for people to become reasonable and understand their common long-term interest.

But how can you work towards a better tomorrow if you are living in misery?

We need to abandon the illusion of a kind of Marshall Plan, which was actually designed to turn the countries helped during the war into America's client countries.

There is a **potential source of revenue from tourism**, which can be generated by concrete actions in the regions. The UN level is too general, and specialised Commissions (FAO, UNEP, UNDP, etc.) are not very effective except in special cases.

The second source of hope is sustainability education, from kindergarten to the doctorate level. We have to start by fighting against despair, which remains far removed from the real problems, when there are many regions eager to make progress and are implementing local solutions.

❖ Interview 12

Interviewee characteristics: political background, northern Mediterranean, > 60, Male

Q- Starting from the situation of the Mediterranean as you perceive it from your country, your living and working environment, what are the major challenges (problems and opportunities) that you perceive for the long term (2050)?

A- no doubt it's climate change

impact of climate change: the more we move forward and the bleaker the picture is.

We are talking of survival life on the planet, livelihoods and all aspects cultural economic and political

we are on a trajectory which doesn't take up to the challenge: **we are dancing on the Titanic**

I won't say it's like dancing on the Titanic, but we still can continue with human activities that if anything are becoming more and more negative in the impact they have on the basic and that is very worrisome. Not the activity in themselves, but the fact that we haven't done this famous shift that we all talk about.

In front of a tragedy such as COVID opportunity to change, we are still hesitating and still policies, the financial situation, the political situations don't move towards really taking those opportunities.

This is still a region that has all the numbers in my mind to claim a leadership role at the global level: This is one region with probably one of the highest levels of education, where there are urban centers that have led the way for millennia. Actually, in terms of civilization and there's also a over sound relationship with natural resources.

North-South divide and inequality; in past few decades, if anything, the inequalities have increased.

I can only imagine what's going to happen if we need to start, if we need to increase the exploration and exploitation for hydrocarbons in the Mediterranean because other sources are drying up or for political reasons or economic reasons as we see these days,

Institutions: Even in a moment of crisis like this post-everything we are still appealing to the UN, to this global mechanism in order to find together responses to an issue that you cannot possibly face individually or by a single government. Especially at this moment post - war, it's reassuring and I think that is still the way to go. The EU is still something, I believe amazing in its success because you have a regional community of countries now working together for some shared values.

Where the younger generations come in: the structures maybe become at some point obsolete. Change coming from a different way of looking at the world or working together within using instruments that are the ones that we know: How to choose ?

When you look at these young people, be the ones who are in Russia protesting, the ones who are in Poland volunteering, the ones who are in France or Italy preparing or commenting etc. there seemed to be such almost homogeneous.

We are looking at life, clearly there are huge differences in terms : cultural, historic,... But **the commonalities are much more than at any time in history before**. Fundamental values which are shared it is an asset and we need to build on. The problem is that often countries don't build on that, but rather invest on the differences because we are in a very competitive system. And so my wealth translating to your spending.

We don't know what **the role of China is going to be also in our region**.

If anything, Ukraine war is proving that European ties at least through the wider West are quite strong - even to overcome the fear of Germany with weapons and it's been quite extraordinary.

Globalisation of values and understanding, which is such a new way to speak about globalisation.

It's not anymore the Middle Ages where you have the Arabs dealing with astronomy and here we were copying greek Classics.

The North African camp in general, the Arab countries are in such a bad shape and that is scary. It's unnecessary, It's unfair. I feel there lie **huge responsibilities in the West, including us Europeans**, in making it happen because otherwise we are missing out as a community around this basin.

I am very confident that the youth is much better equipped and probably even less focused on the things we where in the 80s and 90s - materialism

I'm reading a very interesting history book about the 14th century, written by an American, a lady historian, winner of Pulitzer Prize a few times. **It's about the 14th century. By chance there are so many**

parallels with what's happening now: that was the century of the big plague, the black plague; and of the 100 years of war between France and England. And a moment of incredible transition from one type of civilization to another, from the small feudal community to actual states.

It's amazing how much a profound crisis opens up in terms of a future better world in the sense that these crisis, and I think that's what we are going through now, are necessary crisis to find the new models. And I'd like to think that the pain that comes with this crisis at this time, and even for us now, is followed by new time. **After that 14th century (black plague and 100-years war) came the Renaissance**, which was a splendid age, certainly in the West. So to me, that is something to keep in mind, **historical warfare where systems of values go through profound painful changes, have resulted in huge improvement**. So in a way, this is a hope for me, for these next 2-3 decades.

I see now we are in an age where our children are in stable relationship and it's time to have grandchildren and these **grandchildren don't come**. I'm amazed at how many at my age, about my group of friends, my siblings, cousins, etc, have this concern. This is a fundamental shift, maybe, culturally more than biologically. The fact that people are much more aware of the type of life they want to lead and the things they want to do.

❖ Interview 13

Interviewee characteristics: academic and scientific background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- The Mediterranean concentrates all the problems seen around the world.

Take Egypt, for example. This country is a powder keg, with major forces creating growing risks of structural instability, as in many countries in the South, particularly in the Mediterranean.

The major issues at stake are well known on a global scale, but sometimes poorly explained at the Mediterranean level:

The first is food security, because it combines water and soil shortages, in a context of population growth.

The second is the development model. Democracy, with its win-win economy, is not adapted to many countries, contrary to the official doctrine of most official Western bodies, such as the United Nations Commissions. **Strong authoritarian regimes are sometimes more effective in managing a country and avoiding acute crises (e.g. Syria, Libya, Tunisia, etc.).**

The third is cities, with the risk of a social explosion in the suburbs; yet there are opportunities for urban agriculture, particularly with fruit and vegetable farming in poor suburbs. There are local food projects (like the allotments in the Paris region until the early 20th century). **Many Mediterranean cities have anarchic urban development, including “shantytowns” that could be transformed into garden estates.** Surplus food should be able to be preserved simply through canning, provided that people are trained and organised at peak production times.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- Desirable:

The Mediterranean's main asset is its historical and natural heritage. UNESCO certifies mixed sites, of which there are still too few, such as the Cedar Forest of Lebanon, which could be combined with a historic site. In Lebanon itself, this forest and other natural heritage, such as the protection of sea turtles, is of more interest to local youth than historical heritage, such as the ancient port of Byblos, which is a world tourism site.

Sustainable tourism could be a real opportunity, including mass tourism (which could instead be called "popular" tourism), provided that it is managed and supervised. Even cruise passenger numbers and cruise types could be controlled to protect the balance of the destination.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- To achieve the desirable outcome:

Museumification of the Mediterranean should not be confused with the promotion of its natural, architectural and cultural heritage. For example, pastoralism is a heritage treasure; we need to revitalise it by returning to the positive values of a balanced ecosystem.

Shift towards a "garden Mediterranean" based on the model of some oases where organic matter and water are well managed for the benefit of popular tourism, avoiding one-off mass influxes.

Respect meaningful traditions and avoid standardising globalisation. A fine example is the Mediterranean food systems, and in particular the Cretan Mediterranean diet.

Control the birth rate! For this, a degree of interventionism could be useful.

Rally public opinion for a great long-term collective project, such as reviving the traditions of pastoralism via transhumance, local domestic breeds, and all the associated cultural, gastronomic and musical customs and assets.

Relaunch cross-cutting political initiatives through politicians and, above all, through academic and scientific networks, as they cut across all divides while addressing fundamental issues.

Develop spaces designed to bring people together, where they can listen to each other in confidence and share their differences, mirroring **Mediterranean cultures, which were once hostile to each other and now complement each other with multiple mutual influences.** This is a valuable asset for everyone.

❖ Interview 14

Interviewee characteristics: academic and political background, northern Mediterranean, 40 - 60, male

Q- What challenges do you see for the medium and long term, and what positive or worrying changes do you foresee?

A- Major challenges / 3 or 4:

First of all, political challenges may seem insurmountable, but they're not. So it's both a problem and an opportunity. The rise of nationalism and populism and their ethnic underpinnings, not only in the North but also in the South, and the underlying major role of social media and new forms of information and disinformation. The problem of distrust in the broadest sense, and the rejection of established authorities or institutions, which can be observed in both northern and southern Mediterranean countries. It's not an inevitability, because the Mediterranean has been like this for a very long time due to its history. So **the Mediterranean has this complex personality, which requires us to find ways of managing this conflictuality.**

Social issues, inequalities and environmental/ecological issues, especially in the Mediterranean: climate change, the world's most polluted sea, etc.

The third issue to be addressed is the question of production and the economy. Growth in the North is a big problem, but in the southern Mediterranean it is even more acute and significant, because it is compounded by paralysed political situations and struggling or even failed states.

The fourth and very cross-cutting challenge is the growing difficulty of managing crises. For example, right now, not in the Mediterranean, but in Ukraine, the difficulty of managing crises of all kinds which have disrupted and destabilised an initial state, creating political, environmental, economic, demographic, health and refugee crises. We are finding it harder and harder to find ways of managing and resolving crises, for many reasons: there are more of us in the world. We have shifted to a multi-polar world; a world full of rivalry and competition. **Before, all it took was a summit between the 2 superpowers to find a solution, but today, it's complicated.**

The Mediterranean has never been in such bad shape if you look at the last 50 years. Today, we're so far removed from the momentum of Barcelona that it is staggering and astonishing to see how far we've regressed. The UfM could have been a tool for managing and resolving certain crises, but it can't be, because there is no mandate and its mode of governance is not suitable. We do not have any management tools, or even any tools for consultation or effective cooperation at the regional level.

There are opportunities because there are issues that are not depoliticised, which are perhaps easier to deal with and less politically inflammatory, and on which we can address and build coalitions: our positive agenda.

Q- How do you see the Mediterranean in 2050? What would be your dream or nightmare of the Mediterranean in 2050? What do you expect? What is your vision?

A- In a way, the nightmare is right in front of us, because we just have to extend the curves on every subject: political crises, conflictuality, ethnic divides, pollution and so on.

3 reasons for hope:

The Mediterranean's young people. Faced with problems that older people and decision-makers no longer think about, especially in the southern Mediterranean, **young people who are on the fringes of institutions, are the driving forces, the beating heart of these societies.**

Consensus is emerging, and people are becoming generally aware of these issues of global and Mediterranean interest. **The idea that the Mediterranean should be something other than a wall, a**

rampart or a fortress is gaining ground, along with the idea that we need to develop positive, intelligent mobility and new tools to encourage it.

The third reason for hope is more political. Let's not be fatalist. Things couldn't be worse so they can only get better. I'm convinced that history is pointing towards greater cooperation, greater freedoms, a wider political field and more pluralism.

Q- I'd like to pick up on something you said about those on the fringes of institutions. Doesn't this mean that there's a potential risk of institutional breakdown? It is no longer sustainable that those engaging in thought are only those outside institutions.

A- We need to differentiate between an apparatus, a kind of political skeleton, since it continues to be somewhat active despite everything. These bodies are not completely dead, but have mostly shrivelled up, fossil states are slowly sliding through the cracks in the door of regimes and systems, while vitality often comes from civil society.

❖ Interview 15

Interviewee characteristics : civil society background, northern Mediterranean, 20 - 40, male

Q- From the situation of the Mediterranean, as you perceive it, what are the major challenges or problems or opportunities that you perceive for the long term of the Mediterranean region?

A- Overfishing and marine plastic pollution; they are severe threats to the Mediterranean ecosystem. And climate change - temperature rise.

Q- What visions do you have of what would be desirable? Or, On the contrary, unacceptable in the possible developments of the region in the coming decades.

A- By 2050 Mediterranean will not be inhabitable anymore, with higher average temperature, drought seasons and so much plastic in the sea. The communities in the coast wouldn't be able to survive anymore and also the ecosystem is just going to be destroyed.

What I'm striving for is, first of all, a plastic free Mediterranean because I believe that would help the ecosystem a lot.

Q- The third question, what are the disruptions or the transformations that we need to operate in your region ? Either to get to the desirable future or to avoid the unacceptable.

A- Collecting the used fishing equipment from all the communities in the Mediterranean: that will reduce around 20% plastic pollution in the area and also motivate the fishing communities collect plastic from the sea, maybe ideally also instead of fishing.

We need to have circular economy both in the designing of new products and the designing of new plastic packaging, plastic nets etc, but also in the collection. Recycling collected material instead of sending it to a landfill. Turning something from waste to a resource.

For CO2 emissions, I strongly believe especially in the Mediterranean and if we take care of the sea, then we will drop the CO2 emissions in the region significantly.

We need to create win synergies between the human societies and the environment.

We need to realise that nowadays we're not only talking about the destruction of the planet and ecosystem. Our life quality is going to decrease a lot. We need to fight not only for our planet, our home, but also for ourselves. I think **maybe it is the greatest challenge that humanity has ever faced, since the Ice Age or something so**. We should unite against this common enemy, and this common enemy is climate change.

Governments need to understand all that is deeply affecting their economy and their GDP. For example, marine plastic pollution is severely threatening the economies of coastal communities. It destroys the fish stocks. Plastic gets tangled in the propeller of ships, so it creates huge damages to the shipping sector and at the same time it severely affects tourist areas.

❖ Interview 16

Interviewee characteristics : business and political background, northern Mediterranean, 40 - 60, male

Q- Main challenges

A- 1. climate change: an important pressure, not only the big ones (heat waves) but also the small increases not always recognized (small increase every year in temperature increasing evapotranspiration).

2. The globalization trend in the world. Immigration South north, but also immigration within countries towards cities: **urbanization creating hot spots of water demand, of energy demand, of waste generation, of demand for materials..**

Q- How do you see the development of this region in the coming decade, both in terms of the nightmares, but also the dreams ?

A- A very difficult aspect because we're moving from science into the social area. It's very easy to say we need to use less water, but who is going to use less water ? It's me at home ? It's the farmer ? Industrialists ? It's always not me, but someone else. So sometimes I say that **everyone is an environmentalist in other people's lives**.

an important element of technology and innovation which can make processes more efficient. But even though technology can provide solutions, technology alone is not a solution. Technology is part of the solution. For example energy efficiency has a tremendous effect on desalination. The specific energy has gone down tremendously. But now we're seeing the costs of energy go up. Having water from a spring which goes down by gravity remains the best and sustainable solution, but we need to protect such natural resources..

The nightmare effect is that we forget our culture, which is behind our resilience, certain solutions, which have been developed in the Mediterranean throughout the years and are now forgotten.

Q- And do you anticipate ruptures in terms of the way we are together in the Mediterranean sea between countries, communities, religions ?

A- There are positive moves in the region towards getting together, but this movement is at a dead political level. What's important is that this now filters down also to practitioners to people.

The Mediterranean needs face to face and personal contact. It's our way of communicating, it involves our hands, informs our sounds. I cannot say that there are no differences between Mediterraneans but those differences can't be kept at the background to reach agreements. **The more we stick together, the better chance we have of addressing our common challenges.**

With insight, there's added value when you get people together discussing a single topic and also building that level of confidence and friendship which moves things forward.

Q- Do you see any risk of ruptures in the way we are cooperating or we are managing our societies in terms of institutional setup ? Do you think we can continue the way we are ?

A- The risk of rupture is always there. The more countries collaborate, the less issues there are for misconceptions which can lead to conflicts. Risk remains but can be reduced through collaboration, because knowing that there's a problem is the first step to solving it.

Our conditions are more or less resilient and a two week drought can lead to an issue of water supply, whereas four months without water in our countries it's a normal situation. So conditions do make us different.

Multiculture has taken the best of every country in the Mediterranean and mixed them together. But in every part of the Mediterranean, you find this openness, which comes from the sea, from having harbors and being open to different cultures coming in.

Mediterraneans are used to react to challenges and take technologies from other places and adapt them to our reality. A culture of being flexible, to accept that you can learn from your mistakes, and to be open to share the mistakes with others.

❖ Interview 17

Interviewee characteristics: academic background, northern Mediterranean, > 60, female

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- There has never been a strong, shared political commitment to our *Mare Nostrum* on the part of Mediterranean states. Even the Barcelona Declaration does not give the southern Mediterranean countries equal status: they are considered only as neighbours. Nor has the Union for the Mediterranean

(UfM) been any more successful in creating a common dynamic, whereas **the EU has been able to emerge thanks to the determination of states that built a common political framework, which does not exist between Mediterranean countries.** This has two effects:

- A lack of unifying political energy. Other organisations, such as NGOs, intergovernmental organisations and civil society organisations, lead collective Mediterranean projects as best they can.
- Heads of state and ministers who meet on a more or less regular basis are unable to put conflicts rooted in recent history on the back burner (e.g.: Turkey-Greece, Arab states-Israel, Algeria-Morocco, etc.).
- Only **crises reveal that the collective framework makes sense in the Mediterranean.** For example, the pandemic. Some equipment and staff were pooled under the pressure of an extreme emergency. But there's no shortage of emergencies! Climate, water, pollution, uncontrolled urban sprawl, migration, food security...

Planning is therefore vital. Generating scenarios for changes and disruptions is important, as is disseminating research. **We need to start with territorial governance and concrete common issues, because we can't start with a vision shared by all states.** The feasibility of reforms and adaptations can be demonstrated locally. Models may even emerge that are more or less easy to extrapolate.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- One is a reflection of the other, so my answer deals with both sides of the same issue. We need to:

- **First save resources:** soil, water, forests, etc.
- **Avoid or mitigate disasters:** droughts, famines, mega-fires, etc.
- **PLAN PLAN PLAN!** Hence the need for risk plans and prevention tools.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Business as usual (BAU) or indifference are not options. **As a result of increasing interdependence, only collective responses are relevant:** And southern Europe's problems are ahead of those facing the rest of the world.

There are many risks of breakdown: political chaos, climate chaos, total powerlessness of states and government systems, the despair of young people, the fragmentation of local initiatives with no knock-on effects, etc. The challenge is to move from a static system to a dynamic one.

It's also important to develop collective awareness of the issues, which means discerning the risks as well as the opportunities. In this type of approach, **communities of citizens are often more imaginative than experts or commissions. All actors therefore need to be mobilised as long as they play a collective role.**

How can we help technocracies to catch up (e.g. the administrations of large ministries) that hold back visionary policies and communities of citizens?

Ideally, strong political initiatives should drive change: the impetus given to ministries and the mechanisms for implementing directives and adapting standards and rules should coincide with the ability

of the promoters of local initiatives to make themselves heard and known at the regional, national and international level.

One way of improving the current situation is through collective, permanent and up-to-date training in all political science schools, technical institutes, and R&D networks. The sclerosis of intermediary bodies stems above all from a twofold absence of impetus: (1) from the top (politicians) and (2) from the bottom (grass-roots groups, think tanks, and non-profits).

In addition to training, we need to work on the transparency of all decision-making processes, on fighting corruption, and on long-term support for all North-South cooperation partnerships: we need to think ahead for the coming decades!

Politicians continue to play a major role in easing tensions. Where there is failure, mediation with certain communities can prove effective. In Rome, for example, the San Egidio community has handled crises between national factions. The idea is to get experts with very different sensibilities to work together in the same place, in a constructive atmosphere, until a solution can be found.

Ministries need seek out local initiatives. These initiatives are often under the political radar, but when these two forces cooperate, they produce good results. **Examples are more convincing than theory** (the English pragmatic approach is better than the French theoretical approach). Ministries are fond of success stories. Successes then need to be passed onto the right political level. And even when politicians seem deaf to success stories, we should never stop promoting things that work. In all organisations, eventually actors emerge who understand what's at stake and make things happen. These are precious driving forces, and there are more of them than you might think.

To make progress, we need to use all networks, including the most modern ones, such as LinkedIn, and disseminate all visions of possible scenarios, while avoiding utopian scenarios. This requires working collectively, respecting different sensibilities and therefore being genuinely open-minded, for a project that transcends all the participants, but also values them. This ideal is worth fighting for, without ever becoming discouraged or losing patience. This is the only way to ensure the sustainability of an initiative.

❖ Interview 18

Interviewee characteristics : scientific background, northern Mediterranean, > 60, male

Q- Major challenges for the Mediterranean region

A- First, a common challenge for all Mediterranean countries: **climate change**. The degradation of natural resources : soil and water, more in the South and in the east; water scarcity.

Second: **social dimension**. More in southern or eastern countries. This challenge is demographics, is population increase. Food insecurity, important today and could worsen. Unemployment.

Third, more intense for the southern and eastern is the **concentration of population in the coastal areas**, with all the travels and all the problems created.

And finally, political instability. The political, economic, social crisis create conflicts: bilateral conflicts, regional conflicts, geopolitical conflicts. Towards the future, these conflicts could increase and be more serious, posing a big threat.

Q- What visions do you have of what would be desirable or, on the contrary, unacceptable, in the possible evolutions of this region in the coming decades ?

A- In the political area, in my opinion, the region needs **more democracy, more freedom, more human rights, more justice, and more opportunities**. Different situations in the political area and regarding the desirability of these improvements in the north, the south and the east.

In the economic area, the region needs development and increased income per capita, more in the south and in the east. Current poverty rates are not sustainable. Need to promote **productive diversification**, a lot of countries depend on a very few sectors and rely too much on raw materials and food production. Desirable to reduce inequalities between North, South and East.

Q- What are the transformations necessary to move towards your desirable vision, or to avoid what you consider to be unacceptable in the long term ?

A- The first point is **to promote more and a better education**. Related to education, we need research, development and innovation, because otherwise, the best of our students, the best educated people move and go out. And such development is needed to create economic value and reduce the gap.

Key is an **open society and inclusive institutions**, both political and economic, without institutions at the service of elite creating barriers. This disruption requires political reform and change of values.

Let us look at what Europe did since the 50s, Paris Treaty in 1951 or Rome treaty in 1958: 60 years of integration. For me, the bilan is positive. A clear argument is that a lot of people from everywhere in the world would like to stay here: welfare state, open institutions, still some big differences, but a common framework and denominators: "l'état de droit". We are able to maintain, let's say, inside some limit a good society. **We should create something like Rome treaty for the Mediterranean in order to create a political community and pursue integration**. It is very difficult but a key element, maybe more realistic a Mediterranean integration with 2 speeds, like has been discussed for Europe: starting with a group of voluntary countries. That is very slow but we don't have time to answer the big challenges.

Technology is an important tool, but doesn't allow by itself to create real sustainable and social development and to change the framework and the incentives. **The best technology in a poor hand doesn't matter. What is important is what you can not buy: education and institutions.**

❖ Interview 19

Interviewee characteristics: political background, northern Mediterranean,> 60, male

Q- What is your personal view of the current situation in Mediterranean countries and medium-term developments? What major challenges (problems or opportunities) do you see for the medium and long term, and what positive or worrying changes do you foresee?

A- This question needs to be approached through the lens of the Mediterranean Sea, since this semi-enclosed maritime space has an influence on all the countries in the region and vice versa. The health of this sea, which scientists define as a transboundary large marine ecosystem, is dependent on the actions of all the countries bordering it. Pressures from human activities are weighing heavily on the ecosystems of the Mediterranean, which has become one of the most polluted seas in the world. **Intense**

maritime traffic, overfishing, tourism, and plastic and chemical pollution are all scourges that directly threaten marine ecosystems.

This is not all! This pollution also has a financial cost, estimated at €641 million a year, according to the WWF report, “Stop the plastic flow”, published in 2019.

The Mediterranean is known as a biodiversity hotspot with a high level of endemic species. The rapid degradation of these rich resources is accelerating due to the adverse effects of climate change.

If we choose to take a positive view of medium- and long-term development of the Mediterranean Basin, we could think of this geographical area as a laboratory for sustainable, innovative solutions that can then be replicated on a large scale. Many actions are currently being carried out, but to ensure an impact on a Mediterranean-wide scale, we need to make every effort to connect the various actions together in order to capitalise on what has already been put in place and share the successes and problems encountered.

The Mediterranean is a unique example of an “enclosed” space shared by several countries, but with diverse local contexts. Environmental issues are common to all countries, but the priorities for action and the solutions to be implemented depend on the local context. This mechanism reflects what can happen on a global scale. **The challenge is not to see the Mediterranean as a border, but as a space for collaboration**, where the solutions of tomorrow can emerge.

Q- What are your perspectives about what would be desirable or unacceptable given the changes you foresee in the decades to come? Does the sea have a place in these concerns and visions?

A- The sea is a cradle of life that we need to protect, given that our health and part of our economies depend on it. In the decades to come, we need to raise our regional and national ambitions for better preservation of marine ecosystems, in order to ensure a sustainable future for all populations. To achieve this, we need even greater Mediterranean-wide cooperation to ensure that we can support developing countries. Waste management has been identified as one of the main sources of plastic pollution in the Mediterranean, and remains a sensitive issue, which we can work on together. **By building a dynamic between different countries and stakeholders, we could increase the impact and facilitate the replication of effective actions. We already have examples of success, and this approach is often necessary. For example, the creation of isolated marine protected areas, limited to the territorial waters of a few countries, would not be enough to effectively protect our seas and their species, many of which are obviously migratory and know no borders.**

Finally, the blue economy opens up very interesting prospects for us in the years to come, both in terms of conservation and value and job creation, to help us emerge from our carbon-based economies and build a healthier relationship with nature.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Given the urgency of the environmental situation today, we need to take determined, collective action, so I'd say that **disruption and transformations must go hand in hand**. To give a concrete example linked to limiting plastic pollution in the Mediterranean: **we need to disrupt some consumer habits**, such as reducing plastic use, while encouraging transformations such as the integration of eco-design or the development of alternatives to avoid any transfer of environmental impacts. Disruption and

transformation are two sides of the same coin, which should not frighten us but instead encourage us to act, whether from an environmental, energy, commercial or social standpoint.

From a more philosophical and social point of view, **we also need to disrupt our approach to environmental problems** in order to transform our approach and deploy more innovative solutions. We need to stop thinking in silos and adopt a more holistic approach to the issues at stake, both in the Mediterranean and on a global scale. Above all, we must break with the easy contrast between a richer north bank and a poorer south bank, because we are in fact united by a shared destiny. We must therefore also transform our approach to make it more inclusive, and assume our responsibilities towards the poorest countries to support them in their environmental transition.

Q- What are the chances of the necessary disruptions or transformations occurring in order to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term? Are you optimistic or pessimistic about the likelihood of these disruptions or profound transformations, either in general, or based on your country or institution's specific situation?

A- I'm a natural optimist, and the widespread awareness we can sense reinforces my belief that we are at a key moment in our history. First, because the health crisis has shown us that we can make rapid, far-reaching changes when the situation calls for it, but also because we've seen the **resilience of nature when humans take a back seat**. One example is the **cetacean listening project in the Mediterranean using marine drones during the first lockdown. The sounds collected are quite astounding. In the silent waters emptied of all activity, cetaceans reclaimed their space.** In this world on pause, we also rediscovered nature and returned to values that may have been put aside for too long. Of course, remaining optimistic is not the same thing as remaining clear-sighted about the difficulty of making change. Reflection is under way in every sector to find more sustainable solutions, without sacrificing our well-being or fearing economic downturn. Civil society is demanding a shift towards more sustainable models. It would be unacceptable to fail to seize this opportunity to build a fairer world and a healthier Mediterranean, even though time is running out.

❖ Interview 20

Interviewee characteristics: scientific background and civil society background, northern Mediterranean, 40- 60, female

Q- The first question is about the major challenges, problems and opportunities you foresee for the long term?

A- Today's various challenges are all linked to the same problem: economic development without regard for nature and the laws of nature.

Seeing that all these crises are in fact linked; they are the result of the same process of extractivism that we have towards nature. **If we stop believing that it's a good thing to continue this extractivism, we could try to resolve the various inherent crises.**

But I also see the dangers of not living in peace with other countries, because as environmental conditions worsen, it is normal for people to seek a better life and detach themselves from their country. When you

have limited means, you have to do things that are “against the law”, because you are trying to make a living, support your children, etc.

The lack of water and problems related to the privatisation of water are also very serious issues. Water should be a common good.

Another danger: shifting baselines: tuna in the Mediterranean were 2 metres long 40 years ago. Today, we fish ones that are one meter long. We’re used to smaller fish. But we’re also used to finding plastic waste on beaches instead of posidonia leaves. So our point of reference has changed. We can’t remember how things were not that long ago. The elderly are going to die so if they don’t tell us what it was like...

This is a problem because people only want to save nature if they love it, have an intimate relationship with it and emotions. Someone who has never had the chance to live in the countryside or be on the sea or live in a nice, clean place... To want to change things, I think it’s **good to have the desire to go towards something beautiful, but if you’ve lost the baseline of what’s beautiful, it’s hard to go there.**

Instead of considering ourselves all separate, Italy, France and the other countries..., no, we’re in a network. We really need to focus on the relationships between us, and the idea that what I do will have an impact on others too. So together, we could achieve something more beautiful; on our own, we won’t succeed. **If the Mediterranean is our shared home and a common good, we should be keen to help protect it.**

An example is renewable energies. We could democratise access to energy and achieve energy independence. These are geopolitical issues, but we also all need to take more ownership. If you have your own solar panels and produce your own energy, it will be easier for you to say “oh, I’m using too much, or the wrong way”, because you’ll be able to assess your energy use directly. **Today, at both the national and individual level, our activities have an impact on the environment, but we don’t see it because the impacts are displaced elsewhere.**

Waste: if I had to keep all the waste I make in my house for a month, maybe I’d start making/buying in bulk. I think that sometimes we don’t measure the scale and results of our activities because they are displaced - they go somewhere else and we don’t see it. So all the waste that ends up in dumps or landfill sites or incinerators, etc.

Q- Do you expect there to be any disruptions or transformations that you feel are really necessary? You talked to me about people taking ownership...

A- Considering the Mediterranean as a common good. Increasing knowledge and contact with nature, so that people can fall in love with it.

I’d like to mention a book called “The Ecology of Law: Toward a Legal System in Tune with Nature and Community” by Fritjof Capra and Ugo Mattei. It shares the idea that laws and jurisprudence have evolved. Today’s laws are man-made, not laws of nature. In 1500 - 1600, there were still a lot of common goods, but with the development of jurisdiction, private property began to be given greater importance and legitimacy, and we favoured private interest in extracting resources from nature. **Laws, legal systems and jurisprudence can be rewritten to take better account of common goods, including the Mediterranean.**

New scientific discoveries, such as nuclear physics, show us that there is no such thing as an object as we perceived it in the past. Every object is first and foremost the result of relationships.

Example of plastic waste: **extended producer responsibility**. If a product cannot be recycled and reused, **it should not be brought onto the market**. Today, it's possible. You can flood the market with things and then not know what to do with them. **We need to ban advertising that suggests needs that aren't real needs, fads to be cool that lead to overconsumption.**

Q- On the institutional side: in 2050, will countries function as they do today? Or completely differently?

A- When we work together, you have to find ways of being together. We don't have all the freedom we used to have. And the fact that we like to feel important, have recognition, have our own position, our own role. **If we have this vision of "what is the common good?" and "what is the major goal we can achieve if we all work towards it together?", we can team up like on a regatta boat:** it's not that one position is more important than another; if we want to perform well, everyone has to do their bit. But can this be applied to different countries? We have different cultures, and something that seems impossible in one country is accepted in another.

Globalisation is also linked to capitalism and private property. If I'm in a private business whose aim is to make a profit, it's in my DNA for my actions to generate profit. **The role of citizens is to put pressure on lobby groups and governments to change things: not just to collect plastic waste and clean up beaches, but to see if there are lots of one type of bottle and ask the government to set up a deposit return system.**

If you look at the civil rights movement for African-American people in the United States, we've seen the law really change. The laws were recognised because people started saying "no, it's not ok like this". So changes in jurisprudence really can happen when demand emerges in the collective consciousness.

Economic law is presented as an objective discipline. But it is very different from the law of physics, as it can be changed to avoid short-term benefits for a select few and long-term damage for everyone.

❖ Interview 21

Interviewee characteristics: business background, northern Mediterranean, 40- 60, male

Q- Based on the situation of the Mediterranean as you see it, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- Having lived on the Mediterranean coast for thirty years, I've seen a lot of changes. Environmental problems have worsened and regulations are much stricter. Unfortunately, this is essential.

One of the challenges for the future is the widespread desire to provide access the sea as a free leisure activity, with no regard for protected areas.

Two major opportunities are currently under-exploited: the ability to install more solar power and wind power, including offshore. The experience of others, in relation to biodiversity for example, has been hardly been taken into account. A lot of time has been wasted on this issue. Offshore wind farms can be a nuisance for boats, but we have to make choices.

Q- What potential changes would be desirable in the region in the decades to come?

A- It would be good to see more ambitious maritime policy, and real support for the industry in transition, and also for our neighbours. In the 1970s, some people spoke up about protecting the environment, but

the population as a whole benefited from the arrival of all this industry. Today, the context is much more difficult. It is pushing businesses to make progress, but **the coming transition will considerably change production methods**. Businesses would really like to have local support, for example, so that residents can understand that the transition will make it possible to continue to meet our societies' product needs while also protecting local jobs and reducing the environmental footprint of industrial sites, but that this may require new infrastructure (hydrogen pipes, new power lines).

A better overall understanding of the issues is needed. To achieve this, we need to shift away from our reactionary approach. Industry provides jobs, wealth and materials. If people no longer want local industrial production, then it will come from elsewhere, through ports... In Europe, the consumption of basic products will stagnate, with perhaps slight growth, and the share of recyclables will increase, perhaps up to 50% for some materials. On a global level, the assumptions are far from that. If we want to harmonise lifestyles, we can't prohibit three quarters of the planet from using basic products.

Q- What potential changes would be unacceptable in the region in the decades to come?

A- It would be unacceptable for the Mediterranean region to be transformed into a major tourist region, with massive summer migration. Some people, especially young people, are unable to find housing in the region because prices are rising. There needs to be more balance in this area.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- The first disruption needs to be to shift away from the way business currently interacts with local communities. Efforts are needed on both sides. For example, a number of initiatives have been set up around some sites, bringing together all interested parties (local residents, authorities, elected representatives, industry professionals) to tackle the issues in a different way, and go beyond the clichés conveyed in certain documentaries, for example. We need to stop the opposition and discuss transitions further upstream, by explaining more and educating people.

A lot of engineers work for businesses, so they believe in science. They are ready to try to explain and communicate ideas more widely. Historically, some companies may not have been very attentive to certain complaints, but today, some are in the process of reducing emissions, and want to stick to their roadmap of building decarbonation facilities in factories, and meeting the deadlines set to achieve their commitments. However for this to happen, **industry needs the support of both the public authorities (for instance in terms of subsidies) and the general public. The context is right and the planets have not been aligned like this for a long time.**

❖ Interview 22

Interviewee characteristics: academic background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- The Mediterranean is spectacular: in a small area, you can find EVERYTHING: the struggle between rich and poor, and the history of mankind, or at least of Western civilization.

The Mediterranean is a bit complicated, because we don't even know how many states there are in the Mediterranean (e.g. Palestine, Northern Cyprus, United Kingdom). This is a particularity of the region, which is a bit anarchic, a bit individualistic and creative.

Geopolitical tensions sometimes prevent agreements from being entered into, including tensions caused by third parties (e.g. Japan over fisheries).

The Barcelona process, which was very ambitious in terms of cooperation, has failed, but the Arab Spring and terrorism have transformed the landscape.

A risk for 2050: a completely destroyed environment coupled with more conflictuality than in ocean areas.

Problem: the lack of cooperation and coordination between states, even if the EU has tried to propose solutions.

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- Desirable: willingness to make an economic sacrifice to help less developed countries. Create cooperation (we've done it before). Ratify the Protocols to the Barcelona Convention everywhere (in particular the SPA Protocol and SPAMIs). We need to act! The time has come to accept that cooperation/coordination is needed.

Unacceptable: people still fighting for basic necessities (food and drink) and democracy in 2050, because that kind of situation will not allow us to solve our environmental problems.

We can't stand the idea of having more plans (versus action).

More drowning tragedies in the Mediterranean.... Life is sacred!

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Towards desirable outcomes: "buried" political problems, for example between Italy and France (the question of Libya: what support should be given and to whom? What action should be taken in Syria?). Sharing decisions, moving together in the same direction. A non-colonialist vision that leads states towards more harmonised living standards. Helping people to have a decent life and not lose their lives at sea. It is disgraceful to see people still dying like this.

Avoiding the unacceptable: avoiding unilateral decisions by states. Prioritising joint development in areas of the Mediterranean where states have different claims. Working together to use resources (fisheries, seabed).

The Mediterranean begins where there are olive trees and wine. Today, there is another vision of the Mediterranean. Even the issue of Crimea/Ukraine has direct consequences on the lives of Mediterranean people.

For the future: I often go kayaking on the sea, I visit the coast, but I see Roman ruins threatened, and pollution (sometimes you can't swim because of pollution). These are things I fear for future generations. It's already late to take action.

If we don't make drastic decisions, I see very negative things for the future of the Mediterranean. I've already seen negative changes in the last few years.

I used to go to Egypt and Turkey without any problems, but now I have "uncertainties" in going there.

❖ Entretien 23

Interviewee characteristics : Academic and political background, northern Mediterranean, 40 - 60, female

Q- Starting from the situation of the Mediterranean as you perceive it, what are the major challenges, problems, but also opportunities you perceive for the long term, for 2050, in the Mediterranean?

A- Uncertainties constitute one of the main limitations for any foresight and the risk of the increase, the potential for conflicts. The war in Ukraine will cause a lot of additional new problem, not only in geopolitical context, but also regarding the energy prices, energy poverty, global value chains, deficit of food stuff. We can expect some repositioning on global scene. which will impact for the first, work of the International organization.

Regular flows of migrations and the changes of demographic picture. We will never stop it, but it is very important to somehow control the process, improving and solving problems on spot not to try to just close eyes to all of these challenges. Of course, **climate change** is there and the need for common action adaptation and mitigation is also linked with the problems of international partnerships and finding proper model for financing, especially for less developed countries. One of the most important issues is about the energy crisis and energy poverty. It will definitely impact all of the countries.

Yes, of course there are some natural hazards we already have. Regarding politics, we are living in divided world and also divided within the regions.

We talk about developed and undeveloped regions, regional gaps and inconvenient changes in demographic trends - Europe on the decline with population aging, and elsewhere for example in some coastal parts of Africa, problems of demographic sustainability.

Urbanization and pressure on the coastal area, adaptedness of less developed countries, desertification; sea level rise, precipitation change, wildfires and many other issues. The wildfires caused extremely high damages regarding the national wealth, potential for tourism and the environment and protection. So there are a lot of risks and not enough investment into economy.

If we want to improve our living conditions, there are a **lot of unused potential for developing sustainable blue economy in all Mediterranean region.**

Desperately we need more solidarity and more unity to fight against all these risks. There are no borders when they talk about all these risks. We are all tackled.

Q- Second question is what visions do you have of what would be desirable or, on the other hand, unacceptable in the possible development of the region in the coming decades for the long term ?

A- Desirable: definitely clear strategies, reduction plans. We are producing a lot of strategies but not decisive. We always need to revise it and to put it on the public opinion tests to be all the time monitored, improved and of course, criticized if it is not enough. And prepare regional environmental impact assessment regularly.

So, of course, as an economist, I always could mention financial limitations and the need for finding additional sources for financing. **We need the support of the international community to implement all actions agreed, in countries with less financial resources.**

What is unacceptable ? **Isolation. It is one of the key pillars in the UN 20-30 agenda. No one could be left behind. We are together in this.** Different GDP's, different budgets, but same problems, impact is definitely over the border. Impact, especially climate change, will be probably even higher in 2050, we need to think about it today. Of course we welcome this idea of a Green Deal for the European Union by 2050. But I am familiar with this dilemma today. What is in fact Green Deal for you ? Are we talking about nuclear energy also ? Having in mind specially this gas deficit without export from Russia. So I also read about some new progress in developing new models of nuclear energy. On the water, near the big cities, on the coast. And they promote it as one of the solutions for urban areas in the future as small nuclear power plants. And they said that they will start to produce it by 2025. But nuclear energy, is it clean energy or not? The issue of waste storage is problematic.

So if science will be in that sense advanced to find the solution that technology could be improved in the sense that all uranium will be used without unused uranium, then definitely it can solve problems with the waste settlement and maybe it could be even more acceptable for others. There are some kind of tough dialogue on nuclear energy between EU members, France being the leader to promote it and Germany the most opposed. Other countries such as in the Western Balkans we are just following. But if I may say, let's talk about the greening of our economies. Let's talk about the potential of blue economy. Let's talk more transparently about problems, as you mentioned, to touch a human approach towards that to feel it personal, to explain that it is not only a debate for high political spheres but impacts everybody's daily life.

Each country is part of the region with its own specifics, problems and maybe proposals, but definitely we are all in the region together. So let's talk and work together. It is the only way we can solve our problems and save our planet.

Q- The third question is on the necessary disruptions and transformations to move towards what you consider desirable, or disruptions and transformations needed to avoid the unacceptable.

A- You know, in my country, but I think it is the most common approach always, people try to criticize why there are not enough results. Then we accuse politicians for that. So definitely **preconditions for any kind of a result and result oriented common approach is a political support. On the local, regional, national and international level. So each level is important.**

I can mention it also in the case of our country, we have some kind of political instability. Or you know some tough dialogues between the political elite in countries. A pre election campaign or something related to that definitely then there are no places, no free room for economic reforms and for better Environmental Protection. So **strong political support and support of the international community for common problems is definitely preconditions for any progress.**

Interviewee characteristics : scientific and political background, northern Mediterranean, 20 - 40, male

Q- The first question is about what you perceive in terms of major challenges, both problems and opportunities by 2050 in the Mediterranean ?

A- Climate change. I would like to avoid both personally and professionally these worst case scenarios at least in terms of temperature, heatwaves... **Definitely we will not reduce the risks to zero, under any scenario we will see temperature increase over Mediterranean until 2050.**

And my thoughts before preparing for this meeting, water opportunities, for me is interesting to see that different countries in the region have common issues. So I feel I don't have any proof like numbers to support but what I expect is that : "OK, we will have intensification of climate issue over the Mediterranean, for sure". At least some parts of the system are quite sensitive, the most important is heat waves. But it will increase collaboration between countries: for example some of these large fires cross the borders and you can't ignore the problem when there is an issue in your country.

This is in sense of adaptation In sense of mitigation, I hope countries will become more proactive, using solar, wind and hydro energy, and try to promote both single sites like homes to have their own solar panels, but also large systems.

On the climate side, there are some small trends where there is possibility of reduction minus 10% of the less cloud cover over Mediterranean region. This will increase these issues of heatwaves and drying, and we definitely have a bad impact on the water cycle.

Sea level will definitely rise at least half a metre by the end of the century.

People don't get upset about this issue, but we are trying to repeat this problem more often than not. But definitely in terms of this climate, part of the issues in the Mediterranean region. I think the heat waves is the biggest one.

I remember in the case of France, the most famous heat wave was in 2003. It was very well studied in climate literature. It had large number of casualties. But I was surprised, when looking at the map of France and comparing it to which part of France were mostly affected in terms of casualties. It was actually the northern parts of France who were not so adapted. Southern part of France will already face these type of events but not the northern part. **An example showing that Mediterranean regions might be more resilient than others, already more adapted to climate change impacts.**

And then my final comment on the 2003 event. I shared this graph on my Twitter or Facebook account. There was a graph about mortality graph in France last couple of years. There are two spikes, one from 2003 coming from the heat wave and then the second one from 2019 that came from the COVID. For me it was really amazing, it's hard to find many **analogies between COVID and climate crisis**. I know people try to do this, but in terms of casualties those are really amazing events and we have to adapt. They will definitely repeat.

Heat wave is something that will definitely make an impact in the following not decades, but really years. Sometimes we have luck and year passes. We don't have major fires, but we know they will come in a year or two and there were lots of efforts trying to reduce their spread and they often go across the borders.

In terms of responding to sea level rise, I think each community, each county would have to do its own work. Nobody will come to save you.

There are also some topics that are really new for me, like the plastic pollution. This topic needs to be followed. It seems that in the Adriatic Sea, a large part of the fish quota already has microplastic in their bodies, but there are also large quantities of plastic in sea salt production. I participated to one workshop. One professor from Italy talked about the microplastic. And he has some small demonstration with his students at the University of Trieste, where they evaporate water from the seawater and they are left with the salt and they count the number of micro plastic and you can pick by yourself there are pieces of different kinds of plastic inside. Now this plastic becomes even another plastic. You can't see it by your eyes, but it can enter your lungs and cardiovascular system. I was just amazed about how much plastic is already in the Mediterranean. I thought, OK, those are some rivers in Asia or Africa where there are low environmental laws or something like that. But no, we have tons and tons of plastic in Mediterranean also.

Q- And do you think we are going to face it or is it going to worsen ?

A- I don't know. There are some ideas for system collecting large parts of plastic but for this microplastic one of the solution at least this professor shared there are types of bacteria that can speed up this plastic degradation so. But these are all expensive and still prototype.

My view of 2050. There will be some positive issues. I hope more cooperation between countries, more solar and wind energy in the Mediterranean. Hydro potential will unfortunately reduce because depending on scenario of reduced precipitation amounts in Mediterranean between minus 10 and minus 30%.

Q- What are the major changes you can think of in the Mediterranean?

A- In terms of migration, there was the well-known case of Syria, and I understood that: "A climatic anomaly had a contribution to the beginning of this advent". It increased all the pressure that was already there by additional maybe 20%.

We also have this continuous immigration from Northern Africa over Mediterranean. Southeastern Europe is specific instance, it has the demographic deficit, so the number of population constantly and continuously decreasing. But then when you look at the numbers in Africa, they are still booming, Nigeria will have 750 million people. If only 1 % tries to go to Europe, we will face major pressure to Mediterranean region.

Change in hydrological cycle will be the major force, but also heat waves, heat by intensity and their trends. It will be a major major issue. It will couple with the full production issues. I'm not aware of any other major environmental issue that could have such a large catastrophic impact.

Water cycle in particular. Now we have small amounts of precipitations; if further reduced by 10, or 30 % it will make an impact. **In terms of this emission scenario, which is always global, we we can do our part of the work, but we really depend on the greenhouse gas emissions all around the world.**

There are now more and more discussions about the need for more trees in the city. There was a very nice project done by the students where they had mobile thermometers and they either walked or had a bike and they walked around the city and one can really notice the difference is up to couple of degrees in streets where you have a tree shade and open streets on the concrete or asphalt: it really makes an impact if you have a heat wave. It's very important to have natural solutions in the city because they help to stabilise the climate of the town, they provide a long term shade.

❖ Entretien 25

Interviewee characteristics : political background, northern Mediterranean, > 60, male

Q- *The first question obviously is about the major challenges, problems, but also about opportunities that you perceive for the long term for 2050 for the Mediterranean and its 21 countries ?*

A- The Mediterranean will be seriously dealing with the **climate consequences**, that might be decisive for the life of people around Mediterranean. Not only on the next 20 years, but in the years to come. The other big challenge, a bit connected to that, but not entirely, is the water challenge.

All Mediterranean countries have advantage because they have an access to the seawaters and the beauties of the Mediterranean. This gives them of course a kind of starting advantage.

But the major challenge which all those countries have to find out, it's the **balance between industrialization and the needs which are linked to maritime transport, energy transport and so on, on one hand, and preservation of their waters on the other.**

Q- *Are you convinced that this could trigger changes about our strategies, our decisions ?*

A- I'm not confident at all, because **humans don't act until it's too late, we are simply showing that on many fronts. Nobody acknowledges that those economic systems as we have created it, are actually unsustainable and that we have to dig much deeper into the structures and incentives which are leading our behavior.**

Only when a serious accident happens we move. Everything before such an accident, it's moving, but moving too slow and not achieving exactly what we all want to achieve.

We like to privatize profits and socialize the costs. And we prefer to maximize profits in our own pockets and subsidise even our own kids from these pockets instead of providing them with a safe future and the kind of a different perspective as they have at this very moment.

A major issue is **in economy: we have created world in which human capital / labor is undervalued and nature it's not valued at all.** Put in place whatever regulation you want, if the market signals are working in different directions, the maximum you achieve is a lot of confusion on the market and a lot of lobbying from the big business, afraid to lose their dominant positions and their future profits.

Q- *Yeah, and is there any way to promote such a rupture ?*

A- We got used to not paying for nature. The terrible problem is when we got used to something, it's difficult to change our mind and behavior. Even if we are aware that something is wrong. But there are still possibilities which are a bit linked to a different kind of approach. A lot is locked in around our ownership. So if we would better connect again producers with the products which they deliver because currently when they sell the product they have no more connection with the product, which means zero responsibility and that is also why they are the products which they are making today have lifespan which is much shorter than it was 20-30 years ago because they have an interest and **because we are manipulated to buy - buy - buy.** But if you would basically change these things in the direction of everything as a service, they would basically own the products; that doesn't change enormously the price for consumers. The only thing which is seriously changed is that the producers make their profit not on the sale of products, but on the sale of services; they would use much less natural resources because they are stimulated to save them: because in the case when they are selling the number of products, quantity is their base for profit, while in the case if they are selling the service, the number of products which they use is their cost, it reverts their incentive.

When we try to speak about the responsibility of consumer: the consumer is manipulated in a way that suits the interests of the producers. **It's in a way unfair to constantly ask consumers to behave more responsibly. But for anything where you act more responsibly, you actually pay double price.** So that not logical. It's simply against the interest, against the drivers of market economies. So we should simply change the monetary and the market economy, giving different incentives to consumers, and putting more responsibility on producers about their products: that's the only way we can reach a more sustainable situation in a relatively short period.

In the Mediterranean, specific focus should be on agriculture, water, sustainable tourism. We should revert from maximizing GDP, from maximizing the number of the products which we put on the market, to maximizing human needs. For example if you discuss transport you would never discuss how you design the city. Because the design of the city influences at the end of the day can, for example, avoid the need for mobility. Looking at needs, you look at how the societies are organized so that mobility needs are met in a different way.

Humans have many needs like sports, culture and so on, but these are not resource intensive so the resource intensive needs are nutrition, mobility, housing, consumer goods. Full stop. In the Mediterranean, the core issue is nutrition.

So, I can end and you should look at that and if you look at it from the point of view of the Mediterranean, I think it's probably nutrition. It's the core issue. But also housing and development of secondary houses at the seaside. Pollution: use of pesticides, plastic pollution. Because according to data, the mass of the plastic Kingdom is surpassing the animal Kingdom twice; and Animal Kingdom includes humans, by the way. **The Mediterranean is the final destination for stupidities we humans do on the land, and it is a close sea. If you don't start dealing with them on the land, you will not really fix them in the sea.**

European politicians have done an historical move **with the European Green Deal, finally somebody on that level actually admits that protecting environment is not against economic interests.**

Second, what is important for the question which you ask, is that, due to the historical reasons, Europe was faced with tragical things of the **First and Second War: due to that collective trauma, we have decided that the only way is to cooperate.** And of course, that's why today, for example, in Europe, regulation is pretty well acceptable, why in US it's not acceptable and they all believe in market rules while in Europe you have to believe in the regulation because it's the only way how you keep 27 countries on the same footing and developing in the same directions, still discussing and so on. So that's, I think the footprint, that attitude approach, thinking and cooperation, goes also down to the Mediterranean.

In the world **we are the first generation ever on this planet, which is living in socioecological space of a planetary scope.** Cooperation is a must. Simply because without that, how you will govern the things which are collective. It applies also for the Mediterranean sea..

Until there is no serious disaster and understanding that there is a need, there is no wish and no will. you should always be afraid of politicians, for whom politics is their job, if they have no alternative, then of course they will maximize their own interests. Things are moving, for example, acceptance of circular economy, but this goes too slow and and not deep enough. There are **three major gaps in policymaking. One is the system based approach is missing, so everybody is looking in silo. Second, the natural resource optic:** the way how we treat and use natural resources has terrible consequences, in climate, biodiversity and pollution. And the third is that we have pretty much focused on supply side, but cleaning the supply side, cleaning the wrong economic model will not make it right. So at the end you will come to economy and how to fix it. And if you want to fix the economy, you seriously need to go into the essence of democracies. If you go into the essence of democracies, you go to the essence of a human being, and here is with the philosophy and psychology and everything which is involved. And then, you start speaking

about lot of things and unfortunately they are human things, humans are complex and there are no simple answers and trying to simplify some of the things will not make them easier, nor effective.

Mediterranean will be hit first with the climate comparing to the rest. And also Africa will be hit more than others. So when we in Europe will be enjoying some nice temperatures, but probably in more extreme weather conditions they will be really exposed to something which will be a catastrophe. And Mediterranean is simply closer to that development than the rest of Europe.

I'm currently pretty much using the sentence which is revealing the essence of the truth. **If we want to avoid being affected by extinction of elephants in nature, we need to extinct elephants in our dreams, and that's pretty much the essence of the problem. There are some programs we don't want to talk about because they are too much touching our current comfort and our current ways of life.**

❖ Interview 26

Interviewee characteristics: political background, northern Mediterranean, 40-60, female

Q- Based on the situation of the Mediterranean as you see it, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- Numerous studies have identified eight main threats:

1. **Climate change** is having a particularly severe impact on the Mediterranean compared with the global average
2. **Exponential population density in coastal areas.**
3. The major health effects of air pollution
4. The health impacts of a shortage of drinking water and wastewater treatment facilities.
5. Waste and waste management
6. Fishing practices
7. Fossil fuels
8. Excessive use of pharmaceuticals and chemicals

Q- What are your perspectives about what would be desirable or unacceptable in the region in the decades to come?

A- A Macro-Region could be formed to pool projects and research, and establish a common base of mandatory rules that would evolve over time to ensure a real impact on the environment. Priority should be given to five areas in particular:

1. Like energy, water is essential and precious. It is also an important health issue. Develop water treatment, wastewater recovery, encourage agronomic research, limit seawater desalination, etc.

2. Take action for a more responsible tourism industry that uses less water, food and transport (cruises) and respects the social situation of employees in the sector.
3. Significantly reduce industrial fishing over 5 years and encourage more small-scale fishing, while maintaining temporary or permanent restrictions depending on the state of resources.
4. Develop green energies: solar, wind, etc.
5. Support the transition of existing industries over a 5-year period, encourage and develop new clean industries and new industrial sectors that promote research and production geared towards environmental improvement.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- It would be unacceptable to do nothing and not recognise that **whatever the political, economic and social situation in various countries around the Mediterranean, their future depends on concerted action and working together.**

Some of them have already been affected by the impacts of climate change and the scarcity of certain natural resources. Their difficulties are sometimes compounded by internal and/or external conflicts, and we are seeing increased population displacements. Successful joint action means not only helping those who are already facing this situation, but also preventing other countries from reaching this tipping point. To achieve this, we need to establish a strong bond of trust that enables us to tackle these crucial challenges on an equal footing, even though there is a disparity of wealth between countries, which should be managed by equalising the common funds allocated to this approach.

We know the effects of inaction and of spreading funding too thinly, so let's have the courage to tackle the problems of the Mediterranean head-on, and give ourselves the means to do so.

❖ Entretien 27

Interviewee characteristics : political background, northern Mediterranean, > 60, male

Q- First question : which is starting from the situation of the Mediterranean as you perceive it. What are the major challenges, the problems and opportunities that you perceive for the long term ?

A- It's an important question and most possibly, **if you had asked this question on 23rd February 2022, my answer would have been completely different from what I will tell you today.**

Over the centuries, you know the Mediterranean has been a cradle of culture of people who know each other. You go to any part of the Mediterranean and you will know something about your neighbors. We have been mixing each other.

I come from the Mediterranean myself and I am one of those person who grew up, maybe, luckily, ... to know who was **Jacques Cousteau and the way he made us discovering the the sea. I grew up with him as my idol**, he was the person I admired most of my life. When I was child Jacques Cousteau was something special for me. We take life from or one of those child where you are : Ali Baba, Simba, Pinocchio. These characters of the stories for children do not have a passport, they belong to all of us. The Mediterranean is

something that links us, that we share. This is the Mediterranean I grew with and I wish to protect for the future, we have the duty to protect. .

We had always challenges, opportunities. You have civilizations that from Cretians to the Greek, Roman, Arabs.... **We have always been mixing, learning from each other.** Now the challenges ahead of us. The impact of the Russian military aggression against the Ukraine has shown, how we are even more interdependent and how we have to increase the resilience of our communities to be more autonomous and ready to help each other to face **a sudden unexpected event, which in a few hours has changed the life of all of us and also the perspective for all of us.** Even if we were late, we were in a good path toward achieving the goals of the Paris agreement. Sadly now we are 20 years back: all our countries are using again coal and reinforcing the production of energy with fossil fuels. **Just because of an emergency need, countries have been obliged to change path resulting in pushing back 20 years the green agenda, which in reality we cannot afford.**

Challenges : social and economic together.

And the first thing is for the food-security. Our countries, especially of North Africa, the Middle East, even some of the northern Mediterranean shore, were **dependent from import of cereal** from Ukraine and suddenly lost their main supplier. Prices are going up. The FAO index in a month has increased by more than 20 points. Food security is a major critical element of stability.

In 2011, the Arab Spring started because there was a sudden increase in the price of staple food. Price of petrol was so high that it was convenient to produce biofuels. There was a rush for company producing biofuel to buy cereals. Cereals which were originally used for human consumption, were not longer available or the prices were so high that people could not afford them. Countries started closing borders, started blocking the export of food to neighboring countries. On top, Syria was affected by a major drought in 2011. As a result, we had all this wave of disorganization in North Africa and the Middle East. Countries like Germany who were buying this cereal to produce biofuel, then suddenly by law stopped such import because of impact on world stability.

In the Mediterranean, **regarding energy production, we are in an ideal win-win position** with the country of South having excess of potential to produce photovoltaic or wind energy: an opportunity to create jobs and invest in the South, and to import an alternative source of energy to the North to complement the efforts in having access to a greener, non polluting energy. Also the production of blue hydrogen, green hydrogen that can be easily transported, and is a by-product of green and blue hydrogen, which are very much needed for as fertilizers.

Regarding climate change, I'm afraid only to think about this scientific prospect. That means less water available for the countries which depend on the melting of the snow, a very erratic and less rain in North Africa, problems to fill dams, advance of desertification, extreme weather conditions. Warmer weather has impact on health (new diseases come), on land and marine biodiversity, on agriculture (will olive trees in the next 20 years stand the up to 5-6 degrees increase foreseen in the worst case scenario?) more than the present temperature. And consequences, for example, loss of marine biodiversity has an impact on snorkeling and tourism, but also on food security again. **Climate change can, if it's not managed fast and in the proper way, have catastrophic effects on our lives.**

Q- What vision do you have ? What would be desirable or, on the contrary, unacceptable in the possible developments of the region in the coming decades ?

A- It would be unacceptable if our countries don't do anything to address this situation. **Often parliamentarians say : “we have the freedom to look at the medium term after the longer term” while**

government, because of the duration of the period between elections, focus on very short term goal, almost a day by day approach. For climate change we don't have the privilege to differentiate between longer term and short term. I would consider blind those governments, which, in spite of all the difficulties we have mentioned before, would not be able to take very practical concrete and real steps to implement what they committed to the Paris Agreement. We must do it and we must do it now, not in five years.

I hope for a collective conscience of the governments. But in a way, the governments are the mirror of what people want. And therefore, if people are serious about saying "I want a better future for my children, and I want a nature which is clean", **people have to be prepared to make sacrifices**. Each one of us can make the difference to have a better world in which we live.

Q- What are the disruptions or the transformations necessary to move towards your desirable vision or on the other hand, to avoid what you consider as unacceptable in the long term ?

A- The two go together. One is the other side of the same coin.

We need indeed people to assume more responsibility. When they buy something, even if in all respect, knowing how much difficulties today, unemployment, very high inflation in Europe, salaries not increased, and passing from one disaster Covid to a man made disaster.

COP 27 will be a thermometer about the seriousness of governments to tackle the real problem of climate change and mitigation, adaptation or what to meet without hiding themselves, hiding behind "there is the Russian aggression against Ukraine, we are obliged to use fossil fuel because otherwise the price of energy will be unbearable, otherwise we will have riots in our country".

Salinization of arable land due to level rise, it shows how much this is important, already in Palestine (where aquifer is polluted at 98%) or Libya, but it will be the same in Europe

Let me use a negative experience with at least something positive in it, so that we can have hope. During COVID pandemia, all of us were confined at home for lockdown for longer periods, and **we saw in a very short period, like two months, the capacity of nature to regenerate itself**. So if we have the will and we assume a more respectful approach of life toward the nature, nature might clean itself back.

❖ Entretien 28

Interviewee characteristics : political background, northern Mediterranean, > 60, female

Q- What are the major challenges (problems and opportunities) in the Mediterranean that you perceive for long term (2050) ?

A- The Mediterranean region has unique but vulnerable resources, increasingly under pressure. growing population, concentration in cities and coastal zones. Pressure: tourist flows, one of the world busiest shipping lanes.. Climate change, warming faster, but this one is really a global issue. Plastic, marine litter, air pollution, invasive species. **Vision: sea of plastics, a dustbin of plastics and waste. Hope on biodiversity, less on pollution and CC**

Science has spoken, need to take action. Lack of implementation.

Changing of lifestyle is needed. Human waste management is an issue in particular in the context of **population growth**.

Progress happened, this has to be recognized, but it is not sufficient.

Need for an important change in governance, but **belief in markets**. There is the need of a transformational change in the way we understand change. Solidarity is crucial: integration among sectors (horizontal) and among authorities (vertical).

Q- What visions do you have of what would be desirable or, on the contrary, unacceptable, in the possible developments of this region in the coming decades ?

A- The Mediterranean is on a collision course with nature. Humanity is facing an existential threat.

There is a risk that we continue going for development but leaving environment aside

There are good chances we do better on biodiversity. Climate change is a different issue since it is a global issue; also less hope on addressing pollution or CC than on addressing biodiversity loss

Q- What are the disruptions or transformations necessary to move towards your desirable vision, or to avoid what you consider unacceptable in the long term ?

A- I am a strong believer in the EU. If something happens to EU, it would affect us in the Mediterranean, we would miss an ally and source of inspiration, and we would see reduction of standards

We can be brave and change but if we know where this change leads us, otherwise change means uncertainty

❖ Entretien 29

Interviewee characteristics : political background, northern Mediterranean, > 60, male

A- Perception versus scientific fact. The perception is that the Mediterranean is one of the most beautiful things, attracts 1/3 of the global tourism, is the 2nd strongest cruise destination. But the scientific fact is that the Mediterranean is deterred, most polluted. It is very overfished, some 85% of our stocks are overfished; even if we made some progress in this regard down from 95%, 85 is still a high percentage. We must highlight the specific peculiarities of the Mediterranean. For example, in 80 % of the fishing vessels in the Mediterranean are small scale fisheries, exempt from a number of regulations. So 80% of the vessels in the Mediterranean are totally exempt from new regulations. But because they are small, they always demand incentives and subsidies, so they are getting more help because they are small, but they don't have responsibility because they are exempt. The challenge in the Mediterranean is always to maximize economic benefits and to minimize environmental costs.

Mediterranean States, even those of the same shore, operate in silos.

Second challenge is that **unlike northern Europe countries, Med countries tend to be non-compliant** - all kinds of compliance: paying taxes, implementing EU decisions (for EU Med countries).

As much as we need ocean literacy in general, here we need Mediterranean literacy in our region, for young people, for leaders and policymakers and politicians.

In times of social turmoil or economic difficulties, the environmental issue is no more a priority and is always placed on the back burner. During two years of COVID, there's an issue, so we forget a little bit about the environment. When there is political turmoil like today, which costs money investment, the environment plays a very minor role. **The Mediterranean is a sea of conflicts. Conflict in the Mediterranean is always there, so the risk of putting environment on the back burner is always there.**

The only way to get common solutions to common issues in the Mediterranean is to bring all Mediterranean states together. GFCM does it for example, but experience shows that it's not easy to bring a level playing field because of the difference in scientific and technical capacity. **Differences in culture, education, religion,... could be a very attractive diversity from a tourist viewpoint, but are resulting in a weak collaboration** between Mediterranean states. To strengthen collaboration, we need to address the difference and strike a political good deal at the end of the day.

Opportunities: the Mediterranean is a big region with a population equal to the EU - a 500 Million population. It has a diversity of the best cultures in the world history, the best history, traditions. 1/3 of the global trade passes through the Mediterranean. 1/3 of the global tourism comes to the Mediterranean. So these are opportunities that we can grow further. Greening economic sectors (shipping, tourism) might be an economic and an environmental opportunity, because greening involves investing, upscaling and so on, both in traditional sectors and in emerging sectors like more sustainable aquaculture. In aquaculture Europe should have more culture and less capture (EC report "Food from the ocean").

We need more public private partnerships. But on a multi national level. Not private partnership in Malta, between the private and the public sector. But maybe the public sector in Malta with the private sector in Italy.

There is still a big divide between all Med countries. **Even connexions, for example, a Maltese to go to Algeria. The distance is very small. But in practice he has to go up to Paris and bend down to Algeria.** So the Mediterranean is not even connected properly, neither by air or by ship.

Challenges and the priorities: climate, overfishing and more man-made pressures. In 77 when the Mediterranean Action Plan was drawn up, we had never dreamed of the problems of plastic in the ocean or climate change.

Need to align the Mediterranean policy with other global policies and policies in European Union and African Union, so that our Mediterranean policy draws down from both European and African sides.

A number of blue economy projects are not finding financial support because **commercial banks know sectors like real estate and construction, but know very little about blue economy.** They think that if you invest to clean up the ocean you're not going to have any returns. It is time that when we talk about assets, we bring in the environmental aspect as well, not just the monetary returns because not doing anything in the environment, obviously will lead us into economic costs and financial costs as well.

For an enclosed sea such as the Mediterranean. I think we should be very careful not to have bluewashing and not to fund and finance projects which might be presented as sustainable projects, but then in reality they are not, as we have on land with greenwashing.

Need to be concrete. For example, the target for marine protected areas was 10 % by 2020. A lot of Member States are identifying areas but then when you check how much of that area is being managed ? The answer is zero.

Problematic: year 2050 is the magic date. Everything will happen in 2050 or by 2050. And from my experience, whenever we put a target and we say we need to reach this target by 2020 or by 2030 everyone will say no, it's impossible. And then we tell them OK, can we do it by 2050? They all say "Yes", because in 2050 they are not going to be here, so they will pass this problem to the governments which come after them.

Things (climate change, biodiversity loss) are happening much faster than even the scientists are telling us. In my speeches I always use the example of the Great Barrier Reef in Australia. Some 15 years ago an English scientist questioned : “Will degrade Barrier Reef manage to stand up to climate change.” And the answer was “no, it will not be able to withstand the effects of climate change. And in 2050 we will start seeing the effect”. In 2020, half of the Barrier Reef is already problematic. So what was expected to happen in 2050 is already happening now.

I don't think that the subdivisions in the Med (West Med, Adriatic, Ionic...) are useful. I'm not saying we should remove them because they correspond to real diversity. **But we need to strengthen more the One Mediterranean, in particular to address the very big skills gap transfer.** For example those who want to embark on a blue economy are finding it is very difficult to find the right qualified people for blue economy, **we need to bring the industry with the education closer together. Education, educational institutes, should play a very important part. Also science, today we have enough scientific advice to make certain that policies are driven by scientific advice.**

And obviously, in the Mediterranean we need to unblock geopolitical barriers, we need to go for more dialogue, for more solidarity because these are not economic objectives, but in the Mediterranean they will have a huge economic effect because it can bring countries together.

Plastic litter receives focus, but everyone is assuming that if we solve the plastic problem, we have solved the problem of the ocean, not knowing that nitrates, pesticides, fertilizers from agriculture are harming the ocean some 30 times as much as plastic. But agriculture is a taboo, you cannot mention agriculture, why?

Political divide in the Mediterranean will be there for sometimes. For example Libya itself is already divided. But to make it worse, even European Member States are divided about Libya. One Member States supports one faction, the other Member States support the other.

Migration issue in the Mediterranean. Today we are talking about refugees moving out of their country because of wars or conflict, but we have already started to see climate change refugees, and we might see food security migrants.

❖ Entretien 30

Interviewee characteristics : business background, northern Mediterranean, 40 - 60, female

Q- To your perception, what are the major challenges that could be problems or opportunities for the Mediterranean in the long term, in 2050?

A- I would say that the major challenge for Bosnia in protection of the Mediterranean region would be waste management. We have a very short cost, maybe three kilometers but we produce through our rivers. The problem you know, is that for my country, waste management is **a cross border problem**. The most challenging part is somehow, at the first level, plastic. Maybe in the future this era will get a name, **like the plastic part of history. So plastic, we are choking with plastic.**

Q- What visions do you have of what would be desirable? Or on the contrary, unacceptable in the possible developments of this region in the coming decade?

A- The ultimate thing that I can wish for is a more environmentally responsible society. When I'm talking about waste management, I would like to see more projects with the topic “not to produce waste at all”.

Right now, for example, in Bosnia Herzegovina, I have two kids at school. They are talking about how to put the waste in the right place ! **We really have to accelerate our pace** until 2050.

Q- Thank you. And what is, on the contrary, unacceptable for you by 2050, what kind of vision would be unacceptable?

A- Well, again talking about waste management and environment protection **not to be responsible would be unacceptable**. Plastic still in use in 2050 would be unacceptable. Not in 2050, but maybe in 2040. Also from a different perspective, we didn't talk about climate change which is really a priority for the Mediterranean, giving its greater vulnerability. Having still transport engines powered by fuel in 2050 is also unacceptable. We should develop electric mobility.

Q- OK, thank you. Now we could go forward to the third question ; what are the disruption or transformation necessary to move towards your dishonorable vision or to avoid what you consider unacceptable in the long term?

A- I'd say that the first transformation necessary is **to have a really clear and honest environmental propaganda starting from the schools, through the media, through everyday topics**. I would say that. I'd also mention innovation to have a sustainable production.

Q- So I understood that you would like to have more innovation to have a sustainable development and to switch from plastic to other materials. How could this be effective? I mean, what kind of transformation do we need to have this?

A- We should have more connection between industry and academic research centers. That would be something really good to have more efficiency. Because as we know research centers, they always need some challenge to research and industries need better solutions.

Q- Ok, so is there anything else you think could be a transformation which could be important towards your vision, to achieve your desirable vision?

A- We definitely should have more environment protection topics at school and in the mainstream media. I don't know, but we should find a way to favor these environmental topics. Regarding the ecological transition, **institutions should be firmer in their regulation and inspection capacities**. Today, we are very loose, given comparison with other institutional topics. This question is really a law level. We should decide to regulate with force, also in order to respect European conventions.

Q- OK, so you mean that we need to strengthen the capacity of public institutions to respond to the engagement of European environmental directives as well. To strengthen this capacity to have more initiative from the state to regulate.

A- Yes, that's correct, not only European legislation, but also conventions. We are not European for the moment, but we have ratified some conventions, like the Barcelona and Stockholm convention.

Q- If Bosnia joined the European Union, do you think this could be a change in what you are observing now? And could this bring some change on the future of the Mediterranean, and especially on the environment?

A- Of course, whoever works in Environmental Protection wishes Bosnia to become a European member because not only would we regulate Environmental Protection better, but also will we, as a state, have more opportunities to invest in, for instance, in better waste management treatment plants. But not only

that, also trying to engage more in building a more environmentally responsible society. You know, when I go out in other European countries what I like to see is clean rivers, at least clean without wasting signs. I don't know about quality. But what I can see is rivers without floating waste, something we can't possibly enjoy in Bosnia Herzegovina. On the contrary, when you travel through you can see waste everywhere. So it's easy to conclude that entrance into the European Community is a good solution for Bosnia Herzegovina.

❖ Entretien 31

Interviewee characteristics : business background, northern Mediterranean, 40 - 60, male

Q- Starting from the situation of the Mediterranean as you perceive it from your country, your living and working environment, what are the major challenges (problems and opportunities) that you perceive for the long term (2050)?

A- Happy Air land for all. It means not only maintaining, but increasing and improving the production of **healthy food while respecting the tradition and standards of production. Now we preserve the landscape and other natural beauties and resources of the Mediterranean, limit construction on land, especially to areas for agriculture, areas for public good, **respect the needs of residents and not only tourists and various investors.****

Q- You're talking about agriculture. Can you develop this point?

A- Yes, my country, as you know, is small. But very beautiful. It has a very, very beautiful nature. Agriculture is the 2nd priority in our strategy of national development, and that's why I think that agriculture and tourism must be connected in the best way for all interests in the country. Both for the people holding up agricultural production and for the people who are living from tourism.

We have to try to preserve our villages, to revive them. Many of them are not connected to the electric network, so youngsters who are looking for better living conditions are leaving them. There is no society. So young people should educate themselves, go to the world, but they also should after that come back to their origins, to give support to the process of revival of villages and tradition. That's why **we need to protect and support agriculture production, to improve its diversification, to help young people to find the way to stay, and found families here. The potential riches are here.**

Q- So in terms of problems or opportunities, what could you say about the challenges?

A- We should have a fundamental strategy, which would be adopted by all countries in the Mediterranean to develop our economy, our social and cultural differences and our social and cultural needs. We should find support in the region, to help us promote this and to face different challenges. For instance IPA, European funds for the FAO. Many people are invested at local levels in several countries but should be helped to connect so as to focus on the tackling of common main problems. It could be one strategy or platform for all of us in the Mediterranean.

For example, our association is part of a program to which Montenegro contributed establishing, a network of olive producing cities. And it is a very nice organisation which gathers 17 or 15 countries. It is an example of good practice between three countries, who are building something together.

Q- Yeah, OK, good. So uh, skipping to the second question. What vision do you have of what would be desirable or on the contrary unacceptable ?

A- First of all, we seriously need to enforce the rule of law. We have good laws, but we need to apply them at all levels. For example, in olive production, if the law says that buildings inside olive yards are forbidden, it should be forbidden not only for me, or for you, but also for people with greater power and influence. I mean that **law should be the same for everyone**. Next, we need to adopt and implement strategies for development of Environmental Protection and public health. We also need to **increase women's influence** and introduce women's representation in all processes of decision making because women are very strong and capable.

We should motivate, encourage citizens to take initiatives and plan their future together with the local ministries and governmental authorities. Our region in the future could really be the heaven of the Mediterranean, but only if we stop to do the wrong things. It's the best place, the best land in our country. I saw a few days ago that where there was before a long beach, today there are four big buildings. **Massive tourism is unacceptable**. For instance, if I go to the old City of Qatar, it is impossible to pass the street. It's impossible to go inside a bar to have some coffee with your friend, because it is crowded by tourists. If only the crowd, but prices are also higher. It is a real issue for me and my people. So that's clearly a problem.

We are losing our identity. The people who are living here have to be asked their ideas, and have to be involved in local and governmental levels. People who are living in these areas in the country should be asked what they want for their future and be involved in the decision making process, so that their future is in touch with the one they are longing for.

Q- OK. So now we can go forward to the third question which is more about disruption or transformation. What kind of transformation do you think is necessary?

A First of all, I think you need local governments, public sector bodies and country governments to respect people, their thoughts, their words, you need to listen to them. I've been in some meetings or appointments with representatives of public bodies. **They listen to us as if we were coming from another planet**. For example, if we say that we don't want roads cutting through our olive yards they say their project is of higher level and higher needs etc. You are talking, they are not listening. We, the people, also need to see the good examples from other countries, how people changed some situations on their own. I don't know, we can see the Netherlands or Switzerland. They are not so big countries, but they are very structured. People are involved, the people are in the whole levels from thinking to deciding and processing, implementing actions.

I think the most unacceptable thing is to do nothing. We maybe can't directly do something to change the politics in the big sectors, like building or roads, but we can always ask for that, for what we need. After all, we have experts in every sector who are not in the government or local authorities. We could ask

them to help us. We need to organise ourselves to form civil society organisations, who will talk, who will be active in that plan. It is not necessary to have every man or woman in the village, but it is very useful to have some representatives of each community, able to contribute to the wellbeing of its people and to fight for economic, social and cultural prosperity for the communities.

You know I'm sure that, I don't know, maybe some people accept globalisation. Some people don't. I'm not for globalisation because I think we can't be everywhere. It is not good. If we are all the same, we're losing richness. Everything being standardised is a negative thing. I'm sure that it is not the best way for the Humanity? Oh no, I'm being a philosopher. Yeah, **to keep the specificities of different local regions is important.**

a) Interviews with people from southern Mediterranean countries

❖ Interview 32

Interviewee characteristics: political and scientific background, southern Mediterranean, > 60, female

Q- What major challenges, problems and opportunities do you foresee for the long term, up to 2050?

A- Someone once said that **“the Mediterranean is a place where anything is possible”**, where it is possible to promote a collective and inclusive Mediterranean identity.

Migration is seen in a negative light, and the positive aspects of exchange and mobility are overlooked. **Broaden the vision of the Mediterranean to Africa:** we talk about Tunisian migration, but it's also above all a transit route for many sub-Saharan. The TICAD8 summit with Japan will take place in Tunisia, as Japan sees Tunisia as a gateway to the African continent.

We are the most vulnerable region in terms of climate, which is a major challenge. There are problems associated with pressure on natural resources and pollution.

All these challenges can also be opportunities for dialogue and work between countries.

In a way, water forms our entire Mediterranean identity, with all these political, geographical, strategic and cultural dimensions.

Continuum between water - catchment area - sea, but also from the sea to the catchment area and all that marine and coastal areas can contribute. **The coast is like porous skin, and there are a lot of exchanges** taking place, so this can also create opportunities in terms of employment, dialogue, cooperation, culture and so on.

Maritime space, and all the problems associated with defining Exclusive Economic Zones (EEZ). These well-defined zones are important for sovereignty issues, to limit overfishing and illegal activities, and to prevent any takeover of the seabed, which is rich in minerals, fauna, sea relics and so on. It's an issue that touches on the law of the sea, which we can work on together while respecting legality and sovereignty.

Q- What potential changes would be desirable or unacceptable by 2050?

A- We need the Mediterranean to truly become a space where there is integration, dialogue and cooperation, where there is greater well-being and fewer migration problems and inequality between the northern and southern countries. **Water is a vector of peace and a key element** in all this.

Q- So your vision is based on the positive side of the integration exchange?

A- You can't develop at the expense of others.

Q- Does it involve disruptions? For example, governance-related and/or institutional disruptions?

A- Disruptions are necessary and are opportunities to do something different in terms of governance, actors and behaviour, technology and innovation.

We need to seek out existing seeds of change, such as startups, young people and women to work towards a better future. In Tunisia, the **recovery and rebound will come from women**. It's not just me. A lot of people are saying it.

Q- But these are mainly national changes. Is there a risk of imbalance?

A- It can't just be done at national level. **We need to work on different scales, like Russian nesting dolls.** These are things that can fit together, but it goes further still. There are links and bridges between different forms of exchange and governance.

The challenge is going to be how to break away from the silo approach and work much more cross-functionally. You can't address water without addressing education, training, agriculture, industry and culture. I think it's fundamental. It's about developing through shared values.

❖ Interview 33

Interviewee characteristics: artistic background, southern Mediterranean, 20-40, female

Q- What major challenges, problems and opportunities do you foresee for the Mediterranean in 2050?

A- Problem of plastic in the Mediterranean, and immigration. I don't know if this will be resolved by 2050. I think it's a very big problem right now.

I would like Mediterranean countries to be less closed and isolated, especially in the South and East.

In the Mediterranean, there are different cultures, languages, traditions and religions. It's a challenge to reach true agreement between these countries, but even so, there are many common languages in this region, which can help us to exchange ideas. And there are many things that unite us, such as culture, music, food, but also temperament, which is important for working together.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- We need the region to be well united, without borders. I don't know whether that will be accepted, but personally, that's how I see the region, like the European Union. I don't know if there's such a thing as a

mayor for the Mediterranean or a president of the Mediterranean, but **I would like there to be something like a Mediterranean assembly, with a president.**

I would also like to see more exchanges between the Mediterranean, especially for schools. School exchanges, but also sports competitions, things like the Mediterranean Olympics.

Q- So what's unacceptable?

R- An unacceptable outcome would be the disaster that will happen if we carry on; if we all stay enclosed in our own countries; if there's no dialogue. Pollution of the sea and beaches, destruction of the natural environment.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- All the presidents and heads of state need to get together to discuss a whole range of issues in this region, find solutions and make recommendations. Soft power is also important, that's why I talked about culture, sports, and things like that. Many more cultural events are needed in this region.

I'm well aware of this problem: Alexandria has the sea, and behind the city, parallel to the sea and even further inland, there are a number of lakes where birds migrate. We know they come at a certain time and then go on their way. But it's well known that lakes are very important for them, for eating and resting. And now, they have started removing some of the lakes to build streets. We also need to stop removing trees and changing the nature of this region. We also need to watch out for rising sea levels, especially in coastal towns and cities.

For this to happen, **we need to be an open and free region, and a special one, with a shared common space, an economic space.**

❖ Interview 34

Interviewee characteristics: civil society, southern Mediterranean, 20 - 40, female

Q- Based on the situation of the Mediterranean as you see it, what major challenges, problems and opportunities do you foresee for the Mediterranean in 2050?

A- **The Mediterranean is a condensed hotspot: what happens on a global scale happens in the Mediterranean in an accentuated and accelerated way.** There are lots of different countries with different problems, different standards of living, different issues, so a key issue is collaboration to find joint solutions that can be applied on a global scale.

The environmental issue in the Mediterranean is not just related to the sea. Everything that affects the sea, affects the land, and affects humanity. This is what the Prince Albert II of Monaco Foundation says: **"Save the ocean to save humanity": a direct link with our quality of life, our health on earth, and all the socio-economic factors.**

There is a communication gap between the already visible consequences of sea degradation, scientific studies and people's quality of life. We cannot rely on individual wisdom to bring about change. It doesn't

work, otherwise all the IPCC reports and scientific studies that have already been published would already have had an effect. **Just like in the film *Don't look up*, scientists are fed up with not being heard** and not seeing any concrete action in the field: **"As long as we don't have to go out in the street wearing a gas mask", we'll always think that the problem is far away. The challenge is to make the general public hear the messages.**

If we had centuries ahead of us, we could say, "let's take the time to educate and convince people, etc." Today we don't have that time, so what should we do? Do we impose change? If the rod doesn't work, you need a carrot, but what kind? Today we discussed the fact that ethical finance could be profitable, that there were innovative projects that could be good businesses, and above all, that **showing how to protect the environment is not just about protecting a polar bear or a coral reef or posidonia sea grass. It's about protecting your children, your dietary health, your own environment, your home and your life!** We really need to revert to a simplistic, TikTokable, Instagramable, summarised and streamlined message.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- It would be unacceptable to carry on as if everything were fine and keep on holding forums. The researchers invited want to cry because they've already been telling us the same things for 20 years. We need politicians and local authorities to have the courage to take clear, high-impact action. We need the courage of civil society, which will be asked to change their lifestyles and consumption patterns.

Q- What disruptions or transformations would be needed to achieve your desirable outcome or avoid the unacceptable outcome?

A- We don't need small cosmetic measures or highly local projects, even if they are important. We need a **profound transformation, a social revolution, a radical change in our behaviour, our habits, and our consumption patterns**, without losing sight of the fact that this change is not necessarily negative or bad; it's not necessarily catastrophic.

We just need to change our habits and not be resistant to change; not remain stuck in our old rhetoric and our old ways. Only fools don't change their minds. We can't all be stupid and arrogant. We simply need to listen to what science is telling us and take action. We are a society; we are a civilisation; we represent humanity. We can't behave like teenagers who say, "I don't want to," or a child who says, "I don't want to take a shower." These are not times of consensus, reason or moderation. We need radical change.

For the future of the Mediterranean, we often talk about collaboration, culture, or universalism etc., but there is no Mediterranean identity as there are too many inequalities and too many disparities. **There may be a desire for a Mediterranean identity, but it doesn't yet exist.** When you go from the North to South, you're an expat or tourist. When you go from the South to North, you're a migrant.

One of the current battles is the search for sustainable, concrete and high-impact solutions. **For example, reducing our consumption of animal products. It takes between 6 and 15,000 litres of water to produce one kilo of beef.** Some will say, *"What will happen to all the butchers?"* That's where accompanying measures need to be taken. That's what they said about steam trains: *"What will become of the coal miners?"* If we really want to bring about change, we have to be willing to support these societal disruptions. This is a key measure as it has a huge real impact. Livestock farming is one of the world's

leading sources of pollution and sources of water consumption. It is better for public and human health; it's more ethical for those who are sensitive to animal suffering; it's more inclusive, because we won't need to get into controversies about pork-free meat in lunch cafeterias; and it's cheaper.

❖ Interview 35

Interviewee characteristics: political background, southern Mediterranean, > 60, male

Q- What major challenges, problems or opportunities do you see for the medium and long term, and what positive or worrying changes do you foresee?

A- The major challenge facing the Mediterranean today is climate change and the environment. It is warming 20% faster than the rest of the world, with all the risks that entails. If we don't take the necessary mitigation measures, we'll reach 2.2°C in 2050 and 3.8°C in 2100. It's pretty scary.

Sea level rise, 20 cm by 2050, and its impact on coastal plains, salinisation and water resources. The Mediterranean is one of the places in the world with the scarcest water resources, and there is a risk of even greater shortage, with 250,000,000 people considered to experience water scarcity, and soaring population growth and increasing urbanisation.

Biodiversity in our Mediterranean region accounts for more than 10% of the world's species, and in the past 20 to 30 years, at least 37 species have been lost.

Q- If we follow the pessimistic scenario, how do you see things in 2050?

A- The pessimistic scenario is one of political instability, migratory flow that is dangerous for the geopolitical balance of the region, and an increase in the imbalances that already exist between our countries and within them. For example, some countries are experiencing negative demographic trends, while others are experiencing soaring population growth.

The answer is regional integration: renewable energies in the South, regionalisation of certain production and supply chains, and intelligent mobility policy.

Q- What role can the sea play in this regionalisation approach?

A- The sea is our ecological and environmental lungs and our first line of defence against climate change.

Q- What do you consider desirable? Are there any encouraging signs or glimmers of hope?

A- Awareness is starting to rise among policymakers, and even more so in public opinion and our young people.

Q- Yes, I'm a big fan of regional integration, but recently I've noticed a lot of bilateral tension, between countries. It's a tense period.

A- Bilateral relations have always been tense between many countries around the Mediterranean. It's almost a permanent phenomenon in the region's history. That said, we're also seeing very close ties being forged between countries around the Mediterranean, and even in cases where there are political tensions, trade, economic and industrial relations continue to develop.

Q- So you really think that economic integration will contribute to...

A- The COVID crisis has very clearly shown that we can't depend on supply chains stretching over 7,000 or 8,000 km. This isn't going to stop. Globalisation is here to stay, but we still need a certain degree of regionalisation to meet the needs of our industries and consumers.

In geopolitics, size matters. If the European Union wants to maintain its key global position, it will need closer integration with its wider neighbourhood, to the South and East.

Q- Should we expect major institutional changes in the region?

A- Rather than institutional changes, there are reforms to be made.

Q- Are there any major disruptions you'd like to see?

A- There needs to be a cultural rather than a real revolution - a collective realisation that our fate is interconnected and that, in reality, this region knows no borders; climate knows no borders. If we carry on like this, in 30 or 40 years there will be nothing but plastic in the sea.

Investing in your neighbour is investing in yourself.

❖ Interview 36

Interviewee characteristics: civil society, southern Mediterranean, 40 - 60, female

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges, and opportunities do you foresee for the long term, for 2050?

A- There are quite a few dangers threatening our coastal areas and the sea: erosion, the disappearance of posidonia sea grass, rising sea levels with towns and islands that could be completely wiped off the map, and pollution. Today, we really have to take action and put a stop to these things.

We need to use simple technical solutions (sewer filters, waste collection on beaches, replacing plastics with seaweed-based products) and, above all, raise public awareness and change behaviour, not just for ourselves, but for others. The culture of respect for others is therefore very important.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- In 2050, I want there to be less pollution in our Mediterranean, to see recovery of all the biodiversity that has been threatened by shipping, overfishing, illegal fishing, fertilizers released into the sea, and to

develop a sustainable blue economy. **This is key, because the blue economy cannot be dissociated from the sea, the oceans or the development of countries.**

The other thing I would advocate for is a real emphasis on research, not to over-exploit the seabed, but to get to know it better. And raising awareness through education. We can only protect what we love, and we can only love what we know, with well-thought-out curricula in education systems.

It would be unacceptable in 2050 to continue with an ageing shipping industry, which does not comply with the new laws, or update their ship disposal systems and machinery. It would be unacceptable to fail to protect our environment, to continue with illegal fishing, to use our coastal areas in an anarchic way and to build houses on our coastlines at night.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable?

A- We need to introduce much more intense and higher-impact national education programmes for young people and awareness-raising campaigns for the public.

Solutions for filtering municipal sewers, collecting plastic and waste, tracking and removing ghost nets. It's unbelievable that we are still finding ghost nets that could be a threat to animals, so it's inconceivable to not find solutions to detect these nets, so that they can be removed and completely eliminated. Exchange best practices between cities.

And **develop 30- and 40-year plans**. Scientists are speaking out, it's true, but unfortunately their voices are not being heard.

What are we waiting for to take action? What are politicians waiting for to implement all the recommendations made by the United Nations and the various world summits? Are we waiting until there's no future for us? Until the oxygen runs out? Until this biodiversity disappears?

Nature carries the message of everything we see in the Mediterranean that is caused by humans, and only humans can repair their mistakes.

And we as women have a role to play, **we have to make it possible for all women to enter the maritime sector and work in it**. They have their place. It used to be said that "a woman on board is a source of bad luck". No, a woman on board can mean a captain on board, an officer on board, a woman who knows how to manoeuvre, and women have proven it. In the Mediterranean, the first great female sailor was Queen Dido, who founded Carthage. So how can you be a descendant of this queen and not be in the maritime sector? It's unthinkable.

❖ Interview 37

Interviewee characteristics: political background, southern Mediterranean, 40 - 60, male

Q- What major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- Between now and 2050, southern Mediterranean countries will face three major challenges: sustainable food security, the energy transition and the impact of climate change on the availability of

key global resources (land, water resources, conventional energies, human capital, etc.). Added to this are the effects of population growth in the South and its decline in the North, urbanisation, westernisation of the food model, and internal and external migration.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Desirable goal: The “Diversification, Mitigation, Innovations” scenario:

This desirable scenario is mainly driven by proactive and participatory action on the part of stakeholders, and the implementation of a more effective, targeted food subsidy policy. These transformations are accompanied by real economic diversification, a successful energy transition, climate change mitigation and the resilience of national food systems. **These changes are driven by the production and dissemination of innovations** as the main vectors of the transition to sustainable intensification of agricultural and fisheries value chains. Agricultural growth and the development of aquaculture allow for **import substitution**.

Population growth (2050) would be lower than forecast. The predicted climate change is mitigated and remains in line with the IPCC’S minimum forecasts. The climate change adaptation programme and mitigation efforts for the agriculture, fisheries and aquaculture sectors are based on an ecosystem approach.

The economic model is evolving towards diversified growth, the knowledge economy, **endogenous, frugal and locally-driven innovation**, industrialisation and tertiarisation. The government is implementing a strong and active food security policy, with subsidies for staple foods and other measures to help the poor. Clear international relations, cooperation and participatory public policy are important levers for modernising local production sectors. There is growing awareness about food quality and its relationship with health, particularly through the rediscovery of the benefits of the Mediterranean diet.

Unacceptable: The “Turbulence, Divides, and Vulnerabilities” scenario:

The unacceptable scenario is quintessentially the result of turbulence in macroeconomic balances and global markets. It accentuates marginalisation and divides in the Mediterranean region (North/South), the failings of public action (budget deficit) and the aggravation of environmental vulnerabilities and the impact of climate change.

Population growth remains strong, especially in large and medium-sized cities, with major difficulties in managing public services and the environment. Urban sprawl occurs at the expense of agricultural land and the degradation of coastal areas, the marine environment, and therefore resources.

Re-industrialisation and tertiarisation of the economy are struggling to get off the ground: foreign debt, dismantling of social policy and subsidies, unemployment, under structural adjustment programmes supported by international financial institutions (IMF, WB). Cooperation in research and development in the Mediterranean region is limited, and R&D and scientific activities are in decline due to public budget cuts and the brain drain. There is very little transfer of research results and technologies.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- To achieve the desirable outcome

- ⇒ A Euro-Mediterranean area built on shared growth and joint resilience strategies
- ⇒ The diversification of growth, and transition to a knowledge-based economy and the diversification of exports from southern countries
- ⇒ Proactive and participatory action from stakeholders and the implementation of a targeted food subsidy policy. Participatory public policy
- ⇒ Industrialisation and tertiarisation of the economy
- ⇒ Acceleration of the energy transition (electricity and grid interconnection) and development of a strong energy mix that capitalises on the great potential of renewable energies in southern Mediterranean countries (solar energy, hydrogen).
- ⇒ Funding for climate change mitigation programmes
- ⇒ Active and strong food security policies, encouraging local production.
- ⇒ **Integrated maritime strategies and promotion of the blue economy on a Mediterranean scale** (clusters, investments, regulations).
- ⇒ Clear international relations and active regional cooperation for a Euro-Mediterranean area of endogenous, frugal and locally-driven research and innovation.

To avoid the unacceptable outcome

- ⇒ Building national resilience to turbulence.
- ⇒ Improving and rationalising public action and increasing development aid
- ⇒ Mitigating the impact of environmental vulnerabilities and climate change
- ⇒ Reducing the overexploitation of resources and spaces, especially coastal areas
- ⇒ Protecting farmland and coastal areas
- ⇒ Regulating foreign debt and implementing social safety nets and measures to fight unemployment
- ⇒ Prioritising R&D and scientific activities and limiting public budget cuts and the decapitalisation of human resources
- ⇒ Improving cooperation in research, development and innovation in the Mediterranean region.

Q- Open comment

The recent Covid crisis and the war in Ukraine have shown more than ever the need to co-build the resilience of Mediterranean countries through a strong, balanced and continuous Euro-Mediterranean partnership, with a collective and forward-looking vision for the following challenges: food security, energy security and shared economic prosperity. These challenges call for united, transnational responses.

Interviewee characteristics: civil society background, southern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you see it, what major challenges, problems and opportunities do you foresee for the long term (2050)?

A- A representation of the Mediterranean as a crossroads of civilization, as an act of peace. A beautiful region with many civilizations. But there are other divides that might tarnish this somewhat idyllic vision of the region, home to Arab, Muslim, Christian and other civilisations. It is currently beset by many crises: economic, social, political, violence, misunderstandings between peoples who used to get along but now quarrel and wage war against each other. **The Mediterranean is also a hotbed of warmongers. It's a confrontation between imperialist forces that want to appropriate this region.** Inequalities between northern and southern Mediterranean countries cause problems, and have historical causes: the colonisation of the South by the North. There has been no catharsis, collective therapy nor transitional justice to turn the page, as has been done after the revolutions. Without this reconciliation between ourselves, without recognition of colonial guilt, there can be no peaceful future. The truth will have to come out before 2050, and with it the reparation of economic problems, plundered wealth (referred to as "primitive accumulation of capital" by Rosa Luxembourge) and the hundreds of thousands of deaths in southern countries.

Other divides in the region stemming from this include current migration and all the suffering that goes with it. The FIDH throws out the word "war", and that's because of a policy of destruction and firmness. It's a policy of excessive security that the countries of the North are forcing on the populations of the South who are fleeing war in Libya or Chad, or miserable conditions in their countries.

The brain drain problem: children who are educated, brought up, have good qualifications and leave. The nation raises and educates them, and that's costly.

We need to calm our violent rhetoric. Violent Islamic extremism in the South is fanning the flames of Islamophobic and xenophobic hatred on the other side. I am, of course, fighting both.

Our policy needs to be much more responsible, and we need new economic relations between regions and sides of the Mediterranean, and peace education for everyone on both sides, using an approach based on human rights.

All civilian and government forces need to take action in their countries to educate about peace and empower young people. **We need to prepare young people to be leaders. We need to teach them about leadership, mediation and civic engagement through formal and informal education.**

We need to promote chosen mobility rather than chosen migration, and encourage exchanges between young people. How do you expect young people in southern Mediterranean countries to integrate, understand, live or adapt to this new relationship between the two shores if they can't travel? It's possible in the other direction, but that's part of the unequal exchange.

Our countries have too much debt, and are unable even to service their debts because of the restrictive clauses of the World Bank and IMF, the logic of mercantile capital, and the very high social cost of social unrest. We need a different way of thinking - a social and solidarity-based economy that will promote the integration of the most disadvantaged.

If only 10% of the global population controls 90% of the world's wealth, then there is a problem of wealth distribution. It is unacceptable that there are people and entire regions that do not know what to do with their wealth while children are dying in Africa and everywhere else.

This brings me back to the question of education. **First, reforms are needed in the southern Mediterranean countries to match education with employability, in order to combat the high level of unemployment. We can also do this through North-South expertise.** This is where the successful education systems of the North can help, without imposing an educational model.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- By 2050, I envisage an inclusive, sustainable and pluralistic Mediterranean. How can we achieve this vision of a pluralistic and tolerant Mediterranean, especially when it comes to religion and universal culture, because universality must take precedence over cultural specificity? **Each entity must be respected for their own culture, but all entities must also be universal, because we want a universal model. Human rights are universal. They are indivisible and interdependent.** It is important for this vision of the Mediterranean to align with these values of universality, independence and inalienability.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable?

A- To achieve the desirable outcome? Put in place tools to promote mobility, take a human rights approach, erase debt, acknowledge colonisation, etc.

The environment is another major problem affecting the Mediterranean region. It is warming 20% faster and more severely than other seas. It is a small sea, like a little lake, so global warming is forcing climate migration. Pollution is also a huge problem in the Mediterranean. **We also need a different mindset when it comes to production and industrialisation, responsible policy and state and corporate social responsibility. Citizens also need to know that they have a duty and a right to criticise their governments. We need a population that participates in public affairs, to immediately stop unacceptable projects.**

This requires **good governance and fighting corruption**, which impoverishes individuals, populations and countries. Governance must be democratic and open. Not dirty money, electoral money or political money, but the role of true citizens.

In what I said earlier, there are quite a few areas of disruption: a solidarity-based economy, youth participation, governance. These disruptions could lead to this vision of 2050.

❖ Interview 39

Interviewee characteristics: political background, southern Mediterranean,> 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- The importance of the Mediterranean has always stemmed from the fact that it is a crossroads, a passageway, a bridge, but also a centre of thought: **many ideas and concepts emerged from the Mediterranean.**

The **Mediterranean remains at the centre of all essential interests**. With its strategic position, the Mediterranean is affected by prolonged crises or by the crises themselves. The Mediterranean is at a critical period, mainly due to climate change. It will be the area most affected by the effects of climate change, and is therefore at the forefront of these challenges.

The Mediterranean affects sub-Saharan Africa, with an increase in migratory movements. The majority of migrants/refugees try to move north, also in connection with climate change.

The Mediterranean is experiencing soaring population growth in the south, adding to economic, social, security and other pressures.

Energy is another challenge for the Mediterranean, which is greatly affected by climate change.

Marine pollution will impact other sectors (fisheries, tourism).

These issues are all interconnected/have a chain effect, with humans at the starting point.

Another challenge is rivalry in the Mediterranean. Geopolitical issues have always existed in the Mediterranean (e.g. between Carthage and Rome, or between Greece and Rome). Today, it is taking on new dimensions. The “Western Lake” now plays host to Chinese fleets with anchorage points (Djibouti, etc.). Momentum was created by the Barcelona process in 1995, with a commendable aim, but ultimately, something else happened. Today, the Mediterranean is in an absolutely critical situation. It requires commitment from everyone, at all times and over the long term.

At most, **a handful of countries will achieve the Sustainable Development Goals by 2050**. However, beyond the efforts of the Mediterranean, there are **also goals that depend on what happens outside the Mediterranean!**

Two advantages of the Mediterranean:

1. Demographics: the area is vibrant with youth and ambition, and (in southern Mediterranean countries) gradually increasing awareness of the challenges. Young people feel concerned and under pressure. But **the young can't wait for older people to take action (e.g. Greta Thunberg). There is a generational shift that requires a paradigm shift. Change is going to come from pressure exerted by young people.**

2. Technology, which is both a challenge and an opportunity. It's quite possible that we will soon find ourselves in a technological divide (with one part of the world technologically savvy and another part not). The Mediterranean ecosystem needs to cooperate and find common solutions to global problems. Technology is an opportunity through telecommunications: Africa did not make the transition from wired technology. The continent went straight to mobile phones. **There is no mandatory path to follow. You can skip stages.**

An important issue for young people is **the brain drain**. It is linked to migration, development models and the technological divide/technological development. Economic development in southern Mediterranean countries is slower than in the North. Young people are leaving the South in droves. None of the graduates of two successive years of engineering students stayed in Tunisia. Young people are leaving, and the top 2 reasons are children's education and healthcare coverage. Their departure is a loss for their countries of origin. Skills are lost, depriving the country of all the generations that these skilled people could train. It prevents countries from benefiting from a return on their investment. Those who leave are the driving force behind development. People leaving results in a loss of earnings on several fronts, and countries will not be able to make sufficient progress to build a development dynamic. **The country remains dependent on external contributions, perpetuating and even reinforcing the development gap.** This needs to be discussed with the destination countries and with the young people affected by this situation. It's a

challenge, but also an opportunity: 10% of emigrants will come back and bring experience and energy, and will act as a relay for their own country in the destination country. It's about building bridges.

The Mediterranean has an important cultural advantage. Even if there are differences between us, we are united by a shared platform. It is much easier for someone from the southern Mediterranean to work/cooperate with a northern Mediterranean person than with people from outside the Mediterranean.

Is there a real **Mediterranean identity**? **Yes! Even if we're different, there's a very strong sense of belonging to this region!** Cultural diversity is part of what we have in common. Tunisians have inherited from Carthage, the Arabs, the Romans, the Byzantines, the French and so on. That's what we share. It's the same all over the Mediterranean.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- What's unacceptable? It's very simple: the status quo. That would be committing harakiri!

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- To achieve the desirable outcome: The prerequisite is general acceptance that we're all on Noah's Ark, all in the same boat. If something happens to one person, everyone is affected. If everyone contributes just a little bit, when it's all put together, change will happen.

It's also important to make a long-term commitment. **We have to look beyond 2050! We won't solve everything by 2050.** We need to introduce this change into the education process. There's no other way. We must work with future generations: Mandela created the Children's Fund. The children who were conceived yesterday will benefit from our actions. We need everyone to work together: businesses, governments, civil society, etc. Everyone needs to get on board. If we manage to get 70% of our society on board, we'll be able to make progress and get the others to follow.

To avoid the unacceptable, there are **sectors that need disruption, because they are riddled with faults.** There are other sectors where we need to continue (where strategies have been mapped out and started). **We have to STEP ASIDE for young people. We need to stop trying to solve problems with solutions based solely on the past. An operational and conceptual paradigm shift is needed. We need to think differently. It's very difficult for people with long life experience to change. It's like the student driver running the driving school, and the instructor only intervening in the event of a major problem. Disruption is needed. We need to change the way we think! Old ways of doing things won't work, but each generation clings onto what they know. We can't do that any more!**

The Mediterranean: it's hard to talk about something that is a part of me. I'm Mediterranean and can only be Mediterranean. Despite all the problems, there is a chance to turn opportunities into development for the region by reducing the negative impacts of the challenges. It's not a luxury or a choice to decide which direction to take at a crossroads: there's no turning back, you can continue straight on, or go left or right. Straight ahead, there's a wall. Change is a **MUST**, not a **WISH**, and it must take place at all levels, but especially in education, which is of paramount importance.

❖ Interview 40

Interviewee characteristics: academic background, southern Mediterranean, 40 - 60, female

Q- So the first question is really about the major challenges, the problems in 2050, but also the opportunities on a Mediterranean scale, in a very personal way.

A- I'll start with the major challenges. First, the problems that stem from **climate change**. According to the IPCC, trends in the Mediterranean are quite negative, in terms of water, desertification, rising temperatures and pollution. Because these are generally **countries that lack a clear target and strategy in relation to the SDGs, and are not ready for what's coming in 2030.**

Secondly, countries that have failed in their macroeconomic and financial policies are generally **over-indebted. They have no fiscal space for strengthening their development and establishing a social safety net.** These vulnerability factors already exist, but will be amplified and intensified in the years to come.

The third challenge is political. These are generally countries that have not really achieved a successful democratic transition. The 2010 uprisings had contradictory effects on the democratic transition and have only made the economic fabric more vulnerable. As a result, **political instability will also increase.**

The other challenge is social: rising poverty and inequality, especially in the wake of the health crisis and the war in Ukraine. These countries are not resilient and, generally speaking, are gradually heading towards the status of failed state.

Unemployment is a real challenge for these countries and for these young populations. There has been no clear strategy by governments to absorb this workforce: institutions were ready to train public servants in the 1960s and 70s, but have not modernised to meet the challenges of the digital transition. The administration, universities and schools have not modernised, and the public sector is no longer able to hire, with enormous costs linked to growing debt. We really need to streamline the public sector.

The interaction between all these challenges is like a time bomb. Countries have put themselves in very complicated situations, and there are also huge external challenges: health, climate, digital transition, the war in Ukraine, **militarisation**, Russia's position in Europe and in African and Mediterranean countries. This is creating a major paradigm shift, certain fragmentation, and huge uncertainties throughout the Mediterranean and Africa. We are in a wait-and-see scenario, which generates uncertainty and costs.

In the Mediterranean, **there is a total lack of collaboration and integration.** The Barcelona Process has not delivered, nor has the Union for the Mediterranean. **The European Union has favoured unsuccessful bilateral relations. There needs to be a paradigm shift towards a Mediterranean area. But is a paradigm shift possible while in a survival scenario?**

Opportunities come first and foremost from digital technologies, but you have to be prepared for the digital age. **Opportunities don't just fall out of the sky. They require preparation. Countries are stuck in a philosophy of paralysis from the neo-colonial period.** Can the private sector and public-private partnerships play a role in creating change? I don't believe so. There's a huge divide between the actors, between the unions, and between private and public stakeholders, etc. There is a total lack of trust and collaboration. Opportunities could come from collective action by the European Union with other players: a compromise with China, with India, and perhaps with Turkey, and Russia if there is a peace deal, with a philosophy and vision for the Mediterranean and Africa.

The Mediterranean is the gateway to Africa. If the Mediterranean is not organised, the migration challenge will cause setbacks on all sides. If it is well-managed and targeted with a clear goal, it could be positive, which is not the case right now. We need to think about an enlarged union to potentially create an area of stability and prosperity. The Israeli-Palestinian problem must be resolved. Problems in the Maghreb and even more so in the Mashreq are complicated at the moment.

Clearly, Europe can no longer depend on fossil fuels, and is investing in renewable energy and blue and green hydrogen. This will have an impact on fossil fuel exporting countries such as Algeria and Libya. They

therefore need to invest, otherwise they'll have to pay the consequences sooner or later. This will have an impact on their progress and development dynamics.

Q- I had a question about what you were saying earlier, about the political challenge and a successful democratic transition. Some believe that the positive transition to 2050 could be better achieved by remaining in authoritarian regimes.

A- It's not just about economic growth, it's also about well-being. Beyond basic needs (accounting: we need to create value to pay for expenses), we need freedom of expression, creativity, a healthy environment and a minimum number of health services. Freedom of expression and the values on which the European Union is founded have been fought for over hundreds and even several hundreds of years. But perhaps it would be better to talk about a regime or a political system that is based on a slightly more advanced philosophy. You can be creative in the political system and change the democratic system based on political parties. But authoritarian and military systems that base their control and leadership on force, in my opinion, are going nowhere with digitalisation.

Political education needs to be stepped up, and dialogue need to continue. **The European Union exists today because there was a recognition for the need to live in peace.**

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- The most positive scenario is based on 4 concepts: transparency, responsibility, inclusion and sustainability, while responding in a smart and digital way to the health and safety transition.

Ukraine is a complete game changer, because there is more global fragmentation, shifting from a globalisation scenario to a regionalisation scenario, with competing blocs.

From a foreign policy perspective, the United States is still present, albeit in a different way, without sending troops. China is intervening through these opaque mechanisms, with little transparency and accountability, with their own agenda. India is also taking action. They are very strong when it comes to digitalisation, and we're going to see what they can do.

Europe lacks leadership because it is a union of countries, not a federation. That could change: when the financial crisis hit, I never thought that the European Central Bank would start supervising European banks. Today, we have a banking union, and we're moving towards deposit insurance. We'll have a digital union, maybe an energy union. Will countries accept it? **Brexit has affected this whole concept of union and integration. We need to develop creative solutions for countries that don't want to be in the Union and lose their sovereignty.**

❖ Interview 41

Interviewee characteristics: political background, southern Mediterranean, > 60, male

Q- What do you see as the main challenges and opportunities for the Mediterranean between now and 2050?

A- The main challenges

- Environmental: **climate change, pollution of the Mediterranean (the most polluted sea)**

- **Geopolitical and security issues**
- All institutional, economic/social, food/energy issues
- And, of course, the demographic aspect: completion of the transition in the southern Mediterranean countries, decline in the North: complementarities to be managed, especially migration, which, if properly managed, can mitigate ageing in northern Mediterranean countries and pressure on the job market in the South. However, we need to be careful of the brain drain
- The Israeli-Palestinian conflict remains a festering issue, along with the insecurity it creates.

Another variable is increasing **foreign intervention in the Mediterranean**: Russia since the Syrian crisis, Turkey, as well as China, which has a strong presence in Africa and increasingly on the southern side of the Mediterranean.

Arab Spring: there is no spring.

The cooperation aspect, the neighbourhood policy, and the economic dimension are even more important. We need a real partnership. Not an à la carte version where you can pick and choose. Europe is only interested in security, but must accept a general partnership. There are complementarities between northern and southern Mediterranean countries. The problem lies in the lack of integration in the southern Mediterranean.

Climate change: a desirable scenario would be for the zero-carbon target to be shared by all countries in the region, including those in the southern Mediterranean. Complementarities in energy: the South can contribute to the North's energy deficit, with fossil fuels, and especially renewable energies. It hasn't worked for years, but with current energy prices, everything is profitable and this is an opportunity to develop renewable energies in the southern Mediterranean.

When it comes to food, the countries of the South are highly dependent on cereals. We need to talk about the **impact of climate change on agricultural systems and the issue of water, which is vital today, particularly in southern Mediterranean countries.**

The security aspect is linked to various kinds of illegal trafficking, which has always existed, but has been exacerbated by the Libyan crisis, resulting in the current chaotic situation and terrorist threats. All countries, not just France, need to take an interest in what's happening in the Sahel. The southern Mediterranean needs to maintain its neutrality. **The war in Ukraine is a case in point, where geopolitical competition is intensifying. The Mediterranean is a critical component and even a theatre, even for competition between the United States and China.**

We must **avoid a situation where the conflict in Ukraine causes Europe to focus all its efforts on the East, to the detriment of the Mediterranean.**

An important issue is the **definition of maritime borders in the Mediterranean**. It existed between countries (Libya/Turkey, now Turkey/Greece) but it is becoming more important.

The problem of terrorism, with the return of Islamic State fighters, the civil war in Libya, the involvement of foreign powers, and the Russian militia, are all increasing destabilisation and call for coordinated action focused on structural responses and not just on security problems, which are rooted in issues such as underdevelopment and climate change. Security is currently a global problem, but regionally we need coordinated efforts that address security, as well as poverty, control of the religious sphere, and the fight against radicalisation through a multidimensional approach.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Development is an approach. I'm making a bit of a connection with the economic dimension. For me, Europe's future lies to the South, in the southern Mediterranean.

The areas of growth that Europe has been seeking out for a long time are there, in terms of the potential for raw materials and development in southern Mediterranean countries. However, these complementarities need to be implemented in an approach based on partnership, co-production and homogenisation, but with countries that take their destiny into their own hands, retain their sovereignty, not in the sense of nationalism, but by taking their destiny into their own hands and reinforcing their strategic autonomy in the sectors they consider to be vital, without ignoring the others. Quite the opposite. Some southern Mediterranean countries have begun to implement public policies, particularly with an African dimension, which take account the high levels of investment they are making in Africa, and which cannot simply look at the money supply. These southern countries are both Mediterranean and African, with other specificities (Amazigh, Hebraic, etc.).

Climate change: the North is committed to carbon neutrality by 2050, and all countries in the South should adopt this target. It was originally a major project for the UfM (environmental dimension, depollution of the Mediterranean, development of renewable energies). It didn't happen, but there is no other body that unites all southern Mediterranean countries, so the UfM could play this role, or else we could start with a 5+5 style of cooperation if it cannot be done on the scale of the 21 countries. The most important thing is to take action. In any case, most countries have commitments to the international community, such as the Paris Agreement. They present their reports once a year and reiterate their commitments to reducing greenhouse gas emissions. The problem is not lowering emissions, it's adapting to climate change. It's a challenge that goes beyond the capacity of southern Mediterranean countries in particular, but also of others. I think that by 2050 we should all be carbon neutral; it's crucial. To achieve this, we need to address the nature of the partnership. Even the partnership between the European Union and the African Union has failed, particularly because the North pursues and imposes individual partnerships with southern Mediterranean countries, which remain divided. Whether it's with Africa or with countries such as Morocco, the European Commission has signed cooperation agreements that go far beyond free trade, with several areas of cooperation, etc., but without asking whether it's right for the country. **This vertical, country-by-country approach has prevented this partnership from delivering all the anticipated results.** We need a **global partnership** (and not just a technical partnership), starting with very high-level visits on both sides, joint work, and jointly-defined targets, etc. **I believe that the political dimension is very important.**

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Scenarios: there is **a business-as-usual scenario, a second reasoned and desirable scenario, a scenario of peace and prosperity, a green Mediterranean**, with carbon neutrality, ambitious socio-economic development targets, etc., and **a third scenario, which is the worst-case scenario, with fragmentation, widespread insecurity, and a breakdown in North-South relations.** The southern countries are looking for other partners by developing relationships with other foreign powers such as China, a scenario of geopolitical and agricultural tension, with the possible collapse of agricultural systems due to climate change, particularly in the southern Mediterranean, with the impacts in terms of famine.

2- Responses to the questionnaire from members of the MED 2050 platform

a) Questionnaire responses from people from eastern Mediterranean countries

❖ Réponse 1

Interviewee characteristics: academic background, eastern Mediterranean, > 60, male

Q- Starting from the situation of the Mediterranean as you perceive it from your country, your living and working environment, what are the major challenges (problems and opportunities) that you perceive for long term (2050)?

A- Problems - The coastal aquifer lies under the Mediterranean coastal plain of both Israel and the Palestinian Territory. The aquifer is the ONLY source of natural water for the Palestinian population of the Gaza Strip that is characterized by a very rapid population growth. With the extreme use of the aquifer and the lack of environmental awareness, a process of depletion has set in whereby the UN, given the dire situation of lack of potable water and the overall sanitation conditions, has declared that in 2020 the Gaza Strip would become uninhabitable. The water and sanitation infrastructure is outdated which further aggravates the ill effects of over pumping with accompanying wastewater contamination. The Palestinian population experiences constant shortage of water with its tap water salty and polluted. The 4 thousand plus fishermen in the Gaza Strip complain of the effects of this environmental disaster on the prospects and quality of fishing. Add to this, that periodic leaks of tons of oil and the inability of the Palestinian Authority, because of lack of appropriate resources, to deal with the consequences of such oil leaks further negatively impact both the human and marine life.

Opportunities - The environmental challenges facing the countries and territories on the Mediterranean call for adopting across the border policies and of integrating the environment into policies that overarch political divisions and disputes. **The Covid19 pandemic has highlighted that viruses, similarly to the environment, know no border; likewise the threat to the ecosystem of countries**, such as Israel, the Gaza Strip and Lebanon, due to climate change, depletion of aquifer and man made disasters necessitate responses and policies that emphasize the common rather than particular interests for the preservation of the ecosystem and for providing the needed attention to marine life and to the health and welfare of the populations of the coastal plain.

Q- What are the disruptions or transformations necessary to move towards your desirable vision, or to avoid what you consider unacceptable in the long term?

A- Desirable Developments - Inter-nation policies developed in concert to ensure environmental protection and the sustainability of marine life and the ecosystem of the Eastern Mediterranean. Resolve the political issues arising from counter claims to rights for offshore gas finds, Israel and Lebanon as a prime example. Raise awareness of populations on the ill effects of the lack of laws and regulations for environmental protection and to advocate for states to adopt such laws and to enforce them, regardless of political divisions and conflicts. Work on ending conflicts, Israeli occupation of Palestinian lands and the Syria civil strife, to create the political climate that would help focus attention on climate and environmental change. Provide needed budgets and financial packages to rehabilitate the wastewater

facilities particularly those in the Gaza Strip that were damaged by ongoing martial confrontations. Make the environment and the challenges facing the Mediterranean region part of school and university curricula.

Unacceptable Developments - **Countries disregarding environmental protection for the sake of short-term financial gains such as from offshore gas finds.** Continuing political conflicts and divisions that pit nation against the other and that touch also on policies and measures aimed at preserving and ensuring a balanced ecosystem. Populations that are young and that are not sensitized to issues of environmental protection and the costs these populations will pay in terms of their own health and marine safety. Not feeling responsible; individuals, communities and nations, for depletion of resources, excessive use of plastic, dumping sewage, plastic and other waste materials onto the Mediterranean.

Q- What are the disruptions or transformations necessary to move towards your desirable vision, or to avoid what you consider unacceptable in the long term?

A- The essential transformation is to develop a strategic framework for the Eastern Mediterranean countries to ensure environmental protection and to enforce the laws and regulations emanating out of such a common framework. Thinking as ONE is the needed essential transformation. The expected disruptions continue to be vested national interests as opposed to the overall welfare of the Mediterranean and its populations and ecosystem. Conflicts, lack of resources, demographic growth and non-sensitization of population groups, particularly young people, to the costs of non-adoption of ONE policy framework for the sake of the environment could play into other disruptive factors that would make the vision of rehabilitating the Eastern Mediterranean and preserving a viable ecosystem a difficult, if not unattainable, task.

❖ Réponse 2

Interviewee characteristics: scientific background, northern-eastern Mediterranean, > 60, male

Q- Starting from the situation of the Mediterranean as you perceive it from your country, your living and working environment, what are the major challenges (problems and opportunities) that you perceive for long term (2050)?

A- Financing of infrastructure and incentivizing investment

Q- What visions do you have of what would be desirable or, on the contrary, unacceptable, in the possible developments of this region in the coming decades?

A- Political instability is mostly undesirable; governance improvement is highly desirable

Q- What are the disruptions or transformations necessary to move towards your desirable vision, or to avoid what you consider unacceptable in the long term?

A Governance reforms, business climate, infrastructure investment

b) Questionnaire responses from people from northern Mediterranean countries

❖ Response 3

Respondent characteristics: scientific background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- High human, environmental and economic risks

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Desirable: accelerating the socio-ecological transition to address the systemic crisis. Unacceptable: extending the “old world” order under political and financial perfusion

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- The main problem is the **current mode of governance of states and businesses**. Most states in the world (particularly Mediterranean countries) are run through **collusion between political leaders and those in the financial sphere** (crony capitalism). The majority of companies are driven by shareholder governance, i.e. to **maximise profits for investors**. In both areas, we need to shift to partnership-based governance that includes all stakeholders, with a view to humanist sustainable development.

Q- Open comment

A- The United Nations SDGs have the merit of existing, and of being the result of international consensus that is increasingly publicised in the media. However, it is a complex and cumbersome process that is not always easy to understand. These SDGs could be integrated within **a simpler concept** that is able to clearly identify the interdependencies, a global priority, **the “One Health” concept**, with the ultimate emphasis on human health, which is the primary condition of well-being and therefore a prerequisite for a “good life”.

❖ Response 4

Respondent characteristics: political background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- Pollution, ecosystem collapse and South-North migration

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Strong cooperation between the EU, the Maghreb and Egypt is highly desirable, as is strong action to strengthen **democracy in Turkey**. This means improving the EU's common geopolitical awareness.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Help Algeria wean itself off oil and gas, support the fight against the climate crisis and food production in North Africa.

❖ Response 5

Respondent characteristics: scientific background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- Recreating historical ties between southern Europe and southern and eastern Mediterranean countries, in terms of cultural, economic, commercial and academic exchanges... and to take into account the challenges of the Mediterranean Sea itself, which concerns all these countries both in terms of their coastal areas and the open sea (water quality, aquatic populations, marine flora, fish stocks, etc.).

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- An inward-looking attitude in a global geopolitical climate that generates centrifugal tensions, when in fact this geographical area is structurally united beyond political differences. Recreating solidarity in the face of other global blocs!

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Relaunching multilateral mechanisms such as Plan Bleu, but while involving other competent institutions in the region, such as CIHEAM for agricultural and food issues, which are important in the Mediterranean, as events linked to the war in Ukraine have violently reminded us... In the same way that the EU is confronted with its exposure to the East, it must also mobilise its markets in the southern Mediterranean, which are just as much a factor of potential destabilisation and a breeding ground for power struggles between exogenous powers.

Q- Open comment

For me the issue is first and foremost political. However, it's clear that it's up to academia and social movements to sound the alarm and change the current lack of political insight into the situation, **which contents itself with short-term compromises that do nothing more than keep the fire smouldering.** Food systems and the quality of the land and marine environment are primarily political issues, but they must

be addressed first and foremost by researchers and citizens (consumers, environmental associations, professional agriculture and fisheries organisations, etc.).

❖ Response 6

Respondent characteristics: scientific background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- There are a certain number of constants in the Mediterranean, on both the northern and southern shores, which are challenges for the future:

- **The high concentration of people and activities in coastal areas**, correlated with a certain disintegration of societies and local cohesion, difficulties with social and environmental governance and the relative abandonment of the hinterland;
- Extreme **inequalities in income and social status generate tensions and conflicts, which are aggravated by the very high level of food dependency in terms of cereals and access to water** (water ownership will continue to be a major issue);
- The existence of a number of **social, political and military conflicts** of varying degrees of intensity in the southern Mediterranean (former Yugoslavia, Greece-Turkey, Middle East, Libya, Algeria/Sahara/Morocco);
- **Fairly authoritarian political systems** in the southern Mediterranean, destabilised after the Arab Spring, and everywhere, with varying degrees of intensity, governance systems marked by corruption and citizen mistrust;
- **Migration** (from the southern Mediterranean to the North, from West Africa to the southern Mediterranean)

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Widespread conflict caused by the exacerbation of the issues and tensions described above would be unacceptable. If the current situation continues with business as usual, it could lead to this scenario, despite the fact that progress has been made in terms of water supply, electricity supply, urban infrastructure, and support for economic players, etc. This may not be enough on a Mediterranean-wide scale (more information needed). **It would therefore be desirable for the role of citizens and local stakeholders to be better taken into account in the development of public action, in order to resolve the complexity of the issues at stake.**

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- The changes and transformations required will probably be difficult to initiate and implement across the whole Mediterranean, and drawing up a Global Plan for the Mediterranean would probably be doomed to failure given the diversity and complexity of regional and micro-local situations. To break away

from the prevailing pessimistic or over-optimistic vision, we need to establish **support systems for regional and local initiatives and projects, wherever cohesion between stakeholders is possible and offers a good chance of success**. The idea is to organise well thought out step-by-step support for promising initiatives! **This is a way of supporting local innovation. There is no transformation model, just processes to be encouraged.**

Q- Open comment

In my opinion, reducing the outlook in the Mediterranean to an opposition between what would be desirable or unacceptable, seems to offer little in the way of prospects, insofar as we fail to take into account the capacities of human populations to adapt and take initiatives at a local level (see previous paragraph).

❖ Response 7

Respondent characteristics: civil society background, northern Mediterranean, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- The Mediterranean region (sea and coast) is an area that offers humans agricultural resources through fertile soils, marine food resources, access to international trade and, finally, an extremely attractive tourist environment.

The Mediterranean Basin is exceptionally rich, with over 22,500 species of vascular plants, four times more than the rest of Europe, 52% of which are found nowhere else in the world. It also boasts around 500 bird species, 25 of which are endemic, over 220 species of land mammals, 25 of which are endemic (11%), over 225 reptile species, nearly 80 (34%) of which are endemic. The Mediterranean Sea also has abundant marine biodiversity, home to almost 7% of the world's marine fish species (according to Bianchi and Morri 2000). There are around 600 species of marine fish, including 400 in the eastern Mediterranean.

This region of the world is the cradle of universal civilisation, with 24 countries and a population of over 300 million. It has five climate regions and includes 5,000 islands. The Mediterranean boasts 46,000 km of coastline, numerous major cities, nearly 19% of which are tourist centres, ports of international importance, road networks and associated infrastructure.

The Mediterranean is a common good and a place for sharing and living together, except that today it is threatened and endangered by pollution and climate change. Mediterranean countries should recognise the need to implement strategies to protect the environment in general, and the Mediterranean's coastal areas in particular.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- The Mediterranean is in danger, but it also has many opportunities:

1. Priceless natural and cultural heritage:

- Sedimentary coasts and their ecosystems
 - 100 historic sites along the Mediterranean coast
 - A hotspot of land and marine biodiversity.
2. Unsustainable trends:
- Unbridled urban development
 - Artificialisation of coastal areas
 - Significant increase in the number of coastal towns with more than 10,000 inhabitants
 - Pollution in coastal areas (over 100 sites)
 - Habitat degradation and loss of biodiversity
 - Inadequate protection of natural heritage (sites with overexploited groundwater and salt water intrusion)
 - Degradation of fish stocks
3. New threats: climate change

The degradation of our common good, the Mediterranean, is a real threat to flora and fauna, and above all to mankind. That is why we need to act now to protect our Mediterranean and, by extension, the future of generations to come (2030/2050). To achieve this, 4 key priorities:

1. Take action: For our Mediterranean, to protect our natural and cultural heritage
2. Analyse: and gain a better understanding of this major trend (coastal development)
3. Change direction and protect our common space from these unsustainable changes
4. **Show solidarity and face up to these new threats.**

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- The dangers that threaten the Mediterranean, particularly the new threats of climate change, are jeopardising all prospects. They are unforgiving in the face of:

- **Inaction**
- **or the postponement of action**

We are convinced that the Mediterranean can be a prime area for democracy based on the recognition of all stakeholders, respecting their diversity and origins and pooling their resources and skills to work towards building a collective project based on solidarity, rejecting all forms of exclusion **within an economically efficient, socially equitable and ecologically responsible framework.**

❖ Response 8

Respondent characteristics: academic background, northern Mediterranean, 40 - 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- The degradation and depletion of fish resources and marine systems (particularly due to climate change) and coastal over-exploitation will exacerbate tensions between Mediterranean countries, potentially leading to crises and even major conflicts between the two sides of the Mediterranean. Furthermore, the **international community's failure to comply with the Paris Agreement will inevitably lead to climate tipping points, and the impacts will be most significant on the African continent.** These impacts, particularly in the Sahel-Sahara region, combined with regional geopolitical tensions (rise of terrorism) following France's disengagement from the region, may also generate **migration flows that cannot be controlled by neighbouring countries, with the crisis spreading to the European continent.**

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Unless we succeed in addressing the climate and environmental challenge in the next three years, economic aid and **political support must be stepped up in Africa, along with education in general, especially for girls and young women.** Technology and knowledge transfer must also be given priority, to **make the African continent the first in the world to enter the energy transition without having to resort to nuclear power or fossil fuels.** China's growing economic and military influence in the region must also be factored into the strategic thinking of France and the EU in order to identify avenues for cooperation and establish boundaries.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Unfortunately, the long history of our civilisations shows that humans only make progress when their backs are up against the wall, when facing major political, economic, cultural and health disruptions. Unfortunately, we have to expect this, and the current crises (health, war in Ukraine) are just the beginnings of a new world.

However, there is hope in the new generations, who are beginning to understand and learn from the mistakes of their elders. They could raise real awareness, not of how to avoid the worst, but of how to manage it by avoiding the mistakes of the past, both in substance and in form.

❖ Response 9

Scientific background, northern Mediterranean, > 60, Female

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- Region severely affected by climate change, rising sea levels, retreating coastlines and the submergence of large coastal areas, urgent need for planning, construction recession at regional, national and local levels. It's also important to properly manage the sea as a whole and the seabed in order to preserve marine mammal migration and ensure the presence of orquals, sperm whales and dolphins by

preserving their habitats and their main routes (attention to acidification, over-fishing, collisions with boats, especially cruise ships and recreational boats, etc.), microplastics and other waste. Opportunities (which are becoming necessary and urgent) to re-examine the operation, governance and participation of fishermen in order to reduce fishing and ensure species renewal, and to work with port stakeholders and major coastal areas to reduce activities in the first few nautical miles (jet skis, energy transition, etc.). We need to develop co-managed marine protected areas and protected areas outside national boundaries, and **reclaim the idea of the commons: the sea is the lungs of our biosphere. It is vital to our life.**

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- I'm very critical of the current management of the Mediterranean, which is based on excessive liberalism. **The sea is a free resource: there are too many cases of "sea grabbing"**. The macro-engineering projects I've seen to "solve" the rising level of the Mediterranean Sea as a whole (e.g. a dam to control the Atlantic surge in the Mediterranean) are unacceptable. Other measures, such as letting natural flows take their course and adapting to this trend, seem reasonable to me. Coastlines are constantly changing. Let coastal areas breathe. Let's take action to help nature (e.g. protection of posidonia sea grass, dunes and marshes, etc.). I'm very critical of blue growth. Why should we allow endless growth in a Mediterranean region harmed by so many open conflicts (Lebanon, Libya, the Gaza strip, etc.) or underlying conflicts (terrorism) that could explode at any moment? Many people see the sea as a marine graveyard. Migration and its victims. We have a terrible example in Ukraine and the Black Sea. Let's not bury our heads in the sand. The Mediterranean Sea shares important interactions with the Black Sea (water, ecosystems, wildlife, invasive species, migration, trade, etc.).

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- We need to stop thinking in terms of oil and gas reserves, and rethink everything from the perspective of the various necessary transitions (energy, but also looking realistically and with a vision of the future at the problem of water, which is crucial in Mediterranean geopolitics). We must **look beyond the ecocentric and egocentric circle of our consumption needs, and think about commercial, social and cultural exchanges from a new perspective. We will probably have to create a new culture of mutual support, through real dialogue and co-participation, with regional consciousness, without borders, where we are all Mediterraneans, where we consider the Mediterranean to be our birthplace and our biosphere.** It's my dream, but fortunately, utopias sometimes become reality!

Q- Open comment

I believe that only a conscious vision, far removed from politics and personal interests and clans, classes, etc., can bring us back to who we are. We are people who must live and work together for our biosphere and the common sea on which we all depend. Will obvious and rapid climate change make it possible to achieve this goal?

c) Questionnaire responses from people from southern Mediterranean countries

❖ Response 10

Respondent characteristics: scientific background, southern Mediterranean, 40 - 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- As a researcher in aquaculture and head of the foresight studies and expert analysis department, and from my position as an Algerian citizen, I believe that the main problems we encounter are linked to the harmonisation of development goals and tools on both sides of the Mediterranean. **Sustainable development of the Mediterranean by 2050 cannot really be achieved unless the different modes of governance are on the same wavelength**, in all aspects of general interest (research, development, policy, equal distribution of wealth, peace in the region, fight against inequalities, upgrading, cooperation, etc.). Forging alliances with partners who share the same societal goals is a major opportunity for our beautiful Mediterranean region

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- I think the most important thing to remember about the unacceptable options is **the widening development gap between the various countries in the region**, which could lead in the medium and long term to the chronic destabilisation of our region (demographics, poverty, illegal immigration, etc.).

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- The disruptions needed are to increase and intensify collaboration between the parties, and to bring together common societal and economic goals for our region.

Q- Open comment

Collaboration + equitability + shared goals = concerted sustainability

❖ Response 11

Respondent characteristics: academic background, southern Mediterranean, 40 - 60, female

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- One of the problems is increasing **urbanisation, settlement and activities in coastal areas, leading to the erosion of biodiversity**, which has consequences on the availability of **food resources**, which are already impacted by climate change. When it comes to opportunities, we need to map out a long-term strategy given the increase in changes observed in all areas affecting the environment. The focus should be on the environmental and monetary (i.e. economic) impacts of environmental protection.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- My vision is that there are effective mechanisms in place to enable Mediterranean countries, particularly those in the South, to achieve their goals.

Q- *What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?*

A- Good governance, increased funding and environmental education and awareness-raising are all necessary and must be improved to bring about transformation. Supporting countries (which need to be united) towards the same goal requires a long-term action plan, based on the use of the same instruments on a Mediterranean scale.

❖ Response 12

Respondent characteristics: academic background, southern Mediterranean, 40 - 60, female

Q- *Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?*

A- Main problems: increasing over-exploitation of fishery resources and pollution, the negative impact of climate change and rising temperatures on marine life, seawater desalination activity due to increasing water stress, particularly in southern Mediterranean countries, aquaculture and its impact on biodiversity.

Q- *What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?*

A- Segmented management without considering the importance of joint management of this space, which is a communicating vessel.

Q- *What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?*

A- Governance based on sharing a common vision to address challenges and, above all, cooperation projects and programmes, particularly between northern and southern Mediterranean countries to make it a reality. Promoting the adoption of new technologies for sustainable development.

❖ Response 13

Respondent characteristics: scientific background, southern Mediterranean, 40 - 60, female

Q- *Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?*

A- Limiting pollution of the sea, controlling beach erosion and the illegal occupation of public maritime domains, managing shipwrecks, promoting economic activities at sea while limiting damage.

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- Pollution and uncontrolled dumping at sea

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Sanitary outfalls

Q- Open comment

A- We need to use the resources at sea, but we must ensure the sustainability of the marine environment.

❖ Response 14

Respondent characteristics: academic background, southern Mediterranean, 40 - 60, female

Q- Starting from the situation of the Mediterranean as you perceive it from your country, your living and working environment, what are the major challenges (problems and opportunities) that you perceive for long term (2050)?

A- The challenges are the lack of effective management and institutions for environmental issues, and the lack of necessary measures to overcome environmental problems such as pollution and climate change, and the lack of tools to collect and manage data and information.

Q- What are the disruptions or transformations necessary to move towards your desirable vision, or to avoid what you consider unacceptable in the long term?

A- My vision, that there be effective mechanisms that enable Mediterranean countries, especially southern countries, to achieve goals

Q- What are the disruptions or transformations necessary to move towards your desirable vision, or to avoid what you consider unacceptable in the long term?

A- That there should be institutions in all countries **that work in coordination and harmony to deal with unacceptable in long term.**

d) Questionnaire response from one person from northern Europe

❖ Response 15

Respondent characteristics: academic background, North-West, > 60, male

Q- Based on the situation of the Mediterranean as you perceive it from your country, and your living and working environment, what major challenges (problems and opportunities) do you foresee for the long term (2050)?

A- There are numerous challenges: drought and extreme climate events, demographics (even though birth rates are rapidly declining), unemployment, inadequate training (e.g. need for more training in digital technologies).

Q- What are your perspectives about what potential changes would be desirable or unacceptable in the region in the decades to come?

A- It would be unacceptable to create ghettos through the gentrification of certain sites for wealthy tourists. Instead, we need to think about more inclusive, local tourism. We need to work towards smart tourism in smart cities.

Q- What disruptions or transformations are needed to achieve your desirable vision, or to avoid what you consider to be unacceptable in the long term?

A- Of course, the energy transition, but above all, educating people to have a different world view. Otherwise, we'll be heading for intense social upheavals. As I've often said, **before the climate disaster, we'll have social chaos that could lead to wars that are fatal to our environment.**