







## **Discussion Paper**

# The Fundamentals, Ambition and Value of Foresight

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#### **Abstract**

This note proposes to examine the fundamentals of the foresight approach, its approach, its purposes, its ingredients, and finally its interest in relation to stimulating collective action. Without attempting to go into detail about its working methods and exploratory techniques, it reminds us of its ambition and interest to better understand and domesticate our future.

In these times of widespread uncertainty and crisis, exacerbated by the Covid 19 pandemic and the resulting health crisis, this note underlines the need for Mediterranean countries, today even more than before, to have common tools to anticipate, adapt and take advantage of current and future developments. With a view to increase their room for manoeuvre, their freedom of action and their ability to control risks and uncertainties. In a nutshell: to improve their potential for anticipation in order to strengthen their resilience, reduce their vulnerability to shocks and consolidate control over their development.

The content and opinions outlined in this Discussion Paper are the sole responsibility of its author.

### An uncertain future that has always questioned mankind

Our future, individual and collective (the former being very largely dependent on the latter) is a crucial question for each of us. The future, this unknown, questions and preoccupies us, all the more in times of crisis. Very often, the future is even frightening and a source of concern. Because our earthly future is nowhere written down and no destiny is programmed in advance, there can be no deterministic futurology, even if a good understanding of the past is essential to shed light on our future.

## ... but which, at the same time, is to be constructed

Nor is the future inevitable, the advent of a series of events responding to a particular purpose whose course we cannot change. The future is plural and remains open to a wide variety of possibilities, the "futuribles". This is basically our greatest opportunity: the future has yet to be invented and built. It is thus a fundamental dimension of our freedom. "*The future cannot be foreseen, it must be prepared*" (Maurice Blondel).

This is why man has always tried to anticipate and prepare for the next day.

## Foresight: a look at the long term in order to prepare and tame the future

In an attempt to shed light on the terra incognita that is the future, foresight is established as a method of structured investigation aimed at producing representations of the future. For Michel Godet, the aim of foresight is "to shed light on present action in the light of possible and desirable futures". Expressed differently, it is "an attitude of questioning the paths of the future in relation to the present situation" (Guy Loinger and Claude Spohr).

Foresight invites itself to think the long term in order to act now to guide decisions engaging the future. Through an iterative interplay between temporalities, it thus introduces a double relationship to time and long-term dynamics, between past (retrospect) and future on the one hand, and between distant future and present time (decision, today's strategy) on the other.

Neither crystal ball, nor exact science, nor deterministic or random mathematical models, still less a "black box", foresight does not claim the status of science. Neither forecasting, nor projection, nor planning, foresight is both a method and an action-oriented attitude (praxeology), handling the dialectic of anticipation and action. Its purpose is to help us better understand and domesticate our future: "It is less a question of describing the future than of building it, less of predicting the probable future than of preparing the desirable future" (Pierre Massé). In this sense, foresight stands as a counterweight to simplistic and reductionist determinisms and conceptions of the future.

#### Based on a culture of questioning and anticipation

From the outset, the forward-looking attitude is opposed to the short-termistic vision, the imperative of immediacy and the compulsive reactivity that too often govern today's behaviour in the name of those contemporary grails that are the search for maximum short-term gains (the "invisible hand"), the modes of communication (the volatility of social networks), the determinants of the political game (short electoral cycles, popularity ratings), the individualistic ethic.

Contrary to the dominant mode of operation and thinking, and to the overwhelming majority of today attitudes (such as our inability to face the climate challenge), foresight defends a posture of anticipation and questioning about the futures that lie ahead of us in order to steer the future

in a desirable direction. Moreover, when it takes place in a participatory framework, it becomes a vehicle for collective debate and democratic expression.

## A tool at the service of decision making and the political project

As a factory of the future, foresight aims to help build desirable futures, by trying to anticipate developments and changes in order to better accompany them. Potentially, it can be applied to any fields of human activity, including the individual. Are we not led throughout our lives to test, inwardly, the pros and cons of alternative options which are offered to us as events unfold, and which correspond to choices between which we have to arbitrate?

Foresight has thus seen, and continues to see, many developments in the field of industrial or corporate strategy. Its field of predilection is, however, the field of public policy. Put at the service of public action, foresight aims to guide the policy maker in his or her work of appropriating the long term in order to enlighten present management and to act with greater hindsight and efficiency in the short time frame, that of decision-making, to facilitate the resolution of problems encountered. By designing a range of possible futures and the paths to get there.

## Strategic approach and effective change management

Foresight thinking is by nature strategic in that it aims to produce a long-term overall vision of its object of study in which each component or sub-set is characterised and analysed within the framework of a system of hierarchical interdependencies, and that it articulates and builds its approach around priorities of issues and actions.

Foresight introduces the long term into strategic thinking, because the long term allows us to take the necessary distance to understand issues that the short term hides and does not allow us to grasp, either in their temporality or in their entirety. In doing so, it offers a framework for reflection likely to open up new horizons and new room for manoeuvre for proactive and voluntary thinking.

Foresight thus intends to be an agent of change, to provide levers for transformation, to get things moving and stimulate initiative on the part of the stakeholders by encouraging the desired changes. Thus understood, it can be seen as a major tool for decision support and change management, action-oriented and supporting of the implementation of the political or societal project.

## Change engineering as well as attitude and state of mind

"Philosophy, way of being, culture before being a technique and a know-how" (Hugues de Jouvenel), foresight is a forge of ideas, a philosophy of change, a collective intelligence at the service of strategy. An "intellectual indiscipline" (Pierre Massé), possibly "jubilant" (Philippe Mirenowicz), a disruptive approach that breaks with preconceived ideas, conformism, dominant representations and political correctness, it claims to see and produce tomorrow's world differently.

This "Engineering of change" is generally based on three types of complementary and not necessarily sequenced ingredients:

- 1) Data collection, retrospective analysis, diagnosis and evaluation of past policies and actions, hypotheses on future trajectories.
- 2) Debate and exchanges between experts, and nowadays, more often than not, between actors, on current and future developments that are serious, probable, disruptive, feared or desired.

3) The construction of visions and scenarios, which can give rise, depending on the "order" originally placed, to intervention strategies, or even an action plan.

## Foresight and participation

For a long time the work of experts alone, and an exercise reserved for a small circle of insiders, foresight has gradually opened up, particularly in its territorial applications, to public debate and collective construction.

Practised in a participatory framework of organised exchanges, foresight can be a formidable facilitation tool, at the origin of a group learning process, during which the participants influence each other, modify their perceptions, projects and behaviours, and create the conditions for a common language while improving their capacity for action.

Used for the purpose of formulating a political project, participatory foresight can, if it succeeds in creating the conditions for an authentic expression of the needs, expectations and desires of those associated with it, enable collective ownership and thus strengthen the legitimacy of public decision-making.

## What foresight aims to be

Ambitious, that is for sure, foresight aims at several objectives simultaneously:

- Reducing uncertainty about the future and collectively exploring for possible futures through the co-production of knowledge.
- Anticipating future developments in order to go beyond the limits of sight-seeing navigation, preparing and accompanying changes by clarifying present and future action. In this way, enabling to stand back from issues that decision-makers most often deal with in an emergency or reactive manner.
- To be an open-minded factory of the future, free of restrictions.
- To assert itself as an interactive tool for organisational learning and change management, at the service of strategy and decision-making.
- To encourage a collective expression of wished and desired futures, by establishing a
  genuine culture of debate, confrontation of points of view and dialogue on representations
  of the future. Participatory by nature, foresight is based on the mobilisation and
  organisation of collective intelligence. In doing so, it is a tool of participative democracy,
  pedagogy and good governance by generating dynamics of collective appropriation and
  responsibility.
- By creating a framework conducive to the confrontation and exchange of ideas, solutions
  and successful practices, it is potentially a formidable incubator for new visions, strategic
  innovations and experiments. Foresight is intended to be a creative instrument for
  constructing reading grids that break with pre-existing analytical frameworks, aiming to
  stimulate imagination and the ability to act by mobilising creative energies.
- Decompartmentalize disciplines and knowledge by relying a) on the systemic analysis to address the complexity of reality and b) on transversality in order to better understand interdependencies and encourage complementarity and cross-fertilisation of knowledge and skills.
- To allow in fine, in the most voluntarist cases, to build a shared collective project and lead to action.

## The steps of the foresight method known as the scenario method

The starting point for any foresight reflection is the carrying out of a retrospective diagnosis over a long period of time, the analysis of the major trends at work, the detection of the seeds

of change and the weak signals, the identification of the disruptions and discontinuities feared or desired in the future. Then, in a second phase, it sets to music this "foresight grammar" to enable the elaboration of scenarios.

The key steps are:

## Step 1: The building up of the foresight baseline

To engage in foresight, it is first of all necessary to have access to a solid and reliable knowledge and analysis base. This base or "foresight baseline" is usually composed of several elements:

The retrospective analysis

The questioning of the future begins with an examination of past trends (retrospective). Indeed, what will happen in the future depends to a large extent on past and present policies and activities. It is therefore critical to start from a good understanding of historical trajectories and the current situation, distinguishing between endogenous and external factors.

The state of play or diagnostic assessment

The diagnostic assessment is the dynamic and structural evaluation carried out, by cross-referencing the themes, on the factual elements gathered in order to identify the strong and weak points as well as the main challenges faced by the object to which the foresight analysis is applied. It aims to study changes in the external environment, list the main medium-term strategic issues, describe tensions, identify blockages, handicaps and potential disruptions, but also to highlight strengths, opportunities and potentialities. In particular, knowledge and prioritisation of current issues, i.e. key evolutions and decisive questions for the future, is a fundamental dimension of foresight. Its preferred tool is the SWOT Matrix (Strengths-Weaknesses-Opportunities-Threats). The diagnosis also benefits from a benchmarking exercise that will enable useful comparisons to be made with other similar systems.

The diagnosis requires a look back at history and an assessment of the present situation, and also to learn from the past, both successes and failures. It is intended to serve as a support and basic material for foresight construction.

A good diagnosis is a key step in identifying the first strategic orientations, identifying priorities for action and drawing up a list of monitoring indicators. It must give a central place to examining the effectiveness of the policies put in place.

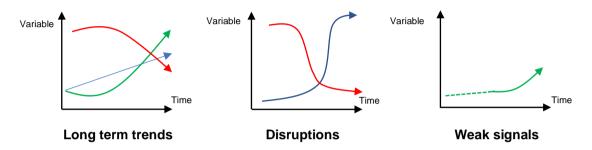
Although difficult to carry out and often politically sensitive, the analysis of the interplay of actors also proves to be central, making it possible to highlight and "map" the role and positioning of each of the main protagonists, their representations, power relations, interactions, influence, shared stakes, and room for manoeuvre (Mactor instrument).

Long term trends, disruptions, weak signals

In order to be able to answer the questions "What is going to happen?", "What should we expect?", to which foresight endeavours to respond, it is then a matter of building a system of representations of the future, in order to apprehend the dynamics at work and the factors of change, the events and phenomena that are likely to influence the future.

It is not just a question of extrapolating the major trends, but also of looking for and imagining certain deep changes that are feared, desired, dreamed of, innovative alternatives and predictable bifurcations.

Major trends (forces at work and foreseeable), weak signals (seeds of change, elements prefiguring inflections and bifurcations) and ruptures (sudden or gradual transformations affecting one dimension of the system under study and causing it to change more or less rapidly) are fundamental components of the foresight baseline, making it possible to identify the dimensions or structuring variables of the future, to help select the relevant evolutionary hypotheses, to choose coherent combinations of hypotheses, and to identify likely pathways.



At this stage of the exercise, the aim is to identify the factors or variables deemed to be the most decisive, characterise and qualify them (driving variables, dependent variables, etc.), in order to classify and prioritise them, identify and characterise their relationships, the intensity of these links and cross-influences.

This work can be carried out empirically or by using more or less sophisticated methods that can be combined: Régnier's abacus (highlighting consensus and dissensus), structural analysis and MICMAC method (matrix of cross-effects between several variables, driving or dependent), Delphi method (expert guess), fact sheets (syntheses of major data and hypotheses allowing to understand the future stakes of key issues for the system under examination).

## Step 2: Foresight itself with the construction of visions and scenarios

This stage constitutes the very heart of the foresight analysis and marks the passage from a reflection centred on the past and the present to the construction of representations of the future. It entails making the qualitative leap, which is not without risk, from the examination of the current situation and the accumulation of data and elements on perspectives (trends...) to coherent and structured visions of the future.

Exploratory foresight or the answer to the question: what can happen?

In an exploratory phase, foresight endeavours to investigate possible futures and factors of change on the basis of an in-depth examination of gathered retrospective elements, an assessment of the present situation and major issues, major long term trends, generic and specific, seeds of change and future developments (weak signals), feared or desired disruptions and projects carried by the stakeholders.

The aim is to examine the components of the system and their potential combinations in order to provide a relevant basis of analysis for the development of scenarios. It also highlights points of agreement and disagreement, controversies and major uncertainties and leads participants to take a position on the evolutions and transformations at work (for example using the Régnier abacus).

The intention is not so much to draw up a true picture of what the object of analysis (in our case, the Mediterranean region) will be at the set time horizon, but rather to identify the critical questions that will be asked of its actors. Through the confrontation of often contradictory, sometimes conflicting points of view, it is a matter of reaching consensus around outlook visions that make sense for the participants, but also of identifying divergences and controversies, dissensus, that will allow the scenarios to be contrasted.

By crossing and combining the contextual hypotheses of the system and the evolution of its structuring components, classified into sub-systems, factors or (macro-) variables, it is possible to formulate representations of possible futures<sup>1</sup> through the construction of scenarios<sup>2</sup>. Scenarios describe transitions and pathways reflecting what could happen by varying a set of factors and their combinations. Scenarios produce images and narratives expressed mostly in literary terms, more qualitative than quantitative. The relevance of these scenarios is then measured by the robustness and consistency of their assumptions.

In general, this work leads to the design of a trend trajectory (projected present or Business as usual scenario) around which several alternative trajectories are articulated, oriented or not, contrasted or not, sometimes of rupture, intended to illustrate the diversity of possible futures. These scenarios are the expression of multiple visions, ambitions and strategic challenges. In general also, one of these scenarios will stand out from the rest to be designated as a "desirable" or "desired" scenario. Nowadays, it is easy to assume that it will convey an image of sustainability. The benefit of building contrasting scenarios is to be able to simulate the plurality of possible evolutions of the system.

The construction of normative scenarios: from exploration to guidance and action?

Once the exploratory scenarios have been established, foresight seeks to bring out the vision of a desirable future (desirable or desired scenario³), as well as the orientations, strategic objectives, expected results and trajectories for achieving them, by identifying the room for manoeuvre and the necessary means to be implemented, either starting from the present to move towards the future or, conversely, starting from the future to return to the present (backcasting). This "normative" phase of foresight aims to answer the question: what do we want and how can we achieve it? What path or trajectory should we take to reach this or that vision?

The desirable scenario may be the product of the projection of a dream or, preferably, an ambition.

At this stage, the aim is to draw up for each of the major cross-cutting issues, a list as exhaustive as possible of possible strategic orientations that respond to the key issues and questions for the future. To assess these strategic options in the light of criteria that will need to be made explicit (effectiveness, urgency, appropriateness, relevant scale of intervention, degree of maturity, probability of success, etc.). To combine them in a coherent and realistic framework. Then, to establish the courses of action, the tools and levers to be mobilised and

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<sup>&</sup>lt;sup>1</sup> Thus, morphological analysis can be used for the purpose of "exploring in a systematic way the possible futures from all the combinations resulting from the decomposition of a given system. It is used to build scenarios, in a progressive process of decomposition of this system at more or less detailed levels (into variables, components, subsystems), then of re-composition" (Jacques Theys and Denis Lacroix, "MED 2050: The methodological framework", December 2020, p.5).

<sup>&</sup>lt;sup>2</sup> A scenario can be defined as a description of the future sketched out from a given situation and according to combinations of contrasting hypotheses that are both plausible and open to a wide range of futures and organised in a coherent and chronological manner. A (good) scenario must meet the following criteria: 1) relevance, 2) likelihood, 3) coherence and 4) transparency.

<sup>&</sup>lt;sup>3</sup> This inevitably raises the question: desirable scenario for whom or wanted by whom?

the implementation steps to build an operational framework for intervention and to retrace the path over time of the future(s) envisaged.

The desirable scenario, once built and endorsed, provides in principle a tremendous material for developing a strategy and action plan. However, we will not address this point in this document, which goes beyond the strict scope of foresight.

## Methodological issues

Foresight must be rigorous in order to address the complexity of the systems it intends to set in motion. Firstly, because it is a question of imagining possible futures by relying on a body of knowledge and data that is as reliable as possible. Because it is then nourished by the collective reflection that it stimulates, mobilises and structures using more or less formalised methods that make up the foresight toolbox.

To do so, it relies on one or rather several methodological approaches and a set of instruments and techniques favouring creativity, the deconstruction of dominant representations and the fabrication of visions as part of a process of collective construction.

In this respect, the foresight approach appears to be a jigsaw puzzle whose scattered components need to be brought together and combined to ultimately produce one or more visions (or scenarios), which constitute its common thread.

The choice of the method used depends on the nature of the object studied, the aims of the exercise, the spatial and temporal scales considered, and the constraints of time and available means....

Foresight requires prior acculturation to the concepts, methods, tools and know-how of this discipline. Because it is necessary to be able to agree on the purposes and meaning of words when discussing complexity. Foresight does not elude semantic confusion. However, without a method, there is no common language, no exchanges, no coherence, no structuring of ideas possible.

Foresight is a global, resolutely holistic and transversal way of thinking, which articulates fields of knowledge and practices that are still too often compartmentalized and it brings together disciplines, fields, actors, policies, sectors, scales, temporalities... with different horizons.

To tackle this complexity, foresight is by construction multidisciplinary and is based on the systemic approach in order to investigate reality, identify the interdependencies between the multiple components of the system under investigation, link and integrate them, cross disciplines and tools, articulate the different scales of analysis, make intelligible doubts, controversies, stakes and bets about the future.

To achieve its goals, foresight combines documentary and information research, cartography, work and statements by experts, consultations, exchange workshops, creative exercises to free speech, various analytical grids, communication techniques, etc. Its mission is to clearly explain the plurality of visions of the future while identifying consensual trends. However, it cannot avoid taking risks in the strategic choices it proposes. In any case, it must "remain modest, not fear failures, mistakes and backtracking"<sup>4</sup>.

<sup>&</sup>lt;sup>4</sup> Philippe Durance, Michel Godet, Philippe Mirénowicz and Vincent Pacini, "*La prospective territoriale - Pour quoi faire ? Comment faire ?*", Cahiers du LIPSOR, Série Recherche n°7, novembre 2007, p.76.

### The foresight toolbox

The methods used in foresight are not an end in themselves, but they do make it possible to organise exchanges, stimulate creativity, bring coherence to the foresight baseline, identify priorities and prioritise strategies.

The scenario method, for its part, escapes the register of rigid and strictly formalized formulas to take rather the form of a flexible and iterative approach seeking to adapt the methodology followed to each context by enriching itself as the work progresses through a trial-and-error mechanism that allows for adjustments.

Thus, foresight offers a toolbox for arranging, on a case-by-case basis, the instruments made available. In return, the latter must be completely transparent and evaluated after each stage, and adjusted or replaced if necessary.

In the case of the MED 2050 programme<sup>5</sup>, it is proposed to combine four foresight tools: the scenario method<sup>6</sup>, the DEGEST method, the backcasting approach and the morphological analysis. The core of the approach is the classical scenario method, coupled with a system analysis framework derived from the DEGEST approach<sup>7</sup> and the application of a "backcasting" approach (i.e., feedback from the future to the present). Taking into account the operational context which characterises the MED 2050 programme, marked by the complexity of the object to be projected over the long term<sup>8</sup>, the numerous uncertainties involved in the exercise and the scarcity of the means available, the proposed approach will be pragmatic, iterative, flexible and adaptive, of the trial-and-error type.

## The mobilisation of collective intelligence

With the evolution of models of democratic expression, foresight increasingly aims at the construction of a long-term, strategic vision, in a participative and concerted framework, with the aim of producing a collective discourse. In this sense, participatory foresight, which is based on the engagement of the living forces of society, is opposed to "experts" foresight, which is the output of only experts and/or technocrats.

From then on, foresight becomes the art of organising and producing collective intelligence, a maieutics putting its know-how at the service of mediation and the structuring of a group reflection. In doing so, it favours collective learning and the mutualisation of skills and allows the emergence of shared visions, through the confrontation of points of view, even if they are often contradictory at the beginning. In its role of facilitation and intermediation, foresight must promote attitudes of listening, dialogue, innovation and voluntarism.

The underlying principle is that collective intelligence is infinitely richer, more creative and more productive than a compartmentalised set of individual intelligences, however brilliant they may be.

If possible, consultation should be initiated at the beginning of the process (diagnosis) to promote ownership, capture knowledge and develop common expertise, identify expectations and mobilise stakeholders and, last but not least, put people back at the centre of the project. It must be based on the broadest possible range of stakeholders while combining bottom-up and top-down approaches.

<sup>6</sup> Source: Michel Godet, Philippe Durance, Strategic Foresight for corporate and régional développement (également en Français), Dunod et UNESCO, April 2011.

<sup>&</sup>lt;sup>5</sup> Jacques Theys and Denis Lacroix, op.cit, pp. 4-5.

<sup>&</sup>lt;sup>7</sup> Source: E. Cornish, Futuring: the exploration of the future, World Future Society, 2006.

<sup>&</sup>lt;sup>8</sup> We are not, in fact, in a configuration in which it is possible to easily represent the interactions and establish clear causal chains between variables, or even to have a clear representation of the system of actors.

## Some of the difficulties of foresight

- Foresight is a complicated exercise which requires time, an acculturation to its own semantics and tools, a deepening of reflection and an effort of ownership.
- Uncertainty is the rule, certainty the exception. Paradoxically, debate and knowledge raise, at least initially, more questions than answers.
- The interdependencies to be described are complex, with multiple protagonists. Phenomena marked by non-linearity and entanglement of the scales to be unraveled.
- Having to fight against the widespread idea that, in the face of the acceleration of history
  and the increasingly rapid and unpredictable changes in the contemporary world, only
  short-term action can be effective. This feeling is amplified by the ephemeral nature of
  events and the primacy of immediacy.
- The need to articulate top-down approaches, which are the expression of the representations of specialists and decision-makers, and bottom-up approaches, which are based on the expectations and the capacity to act of the stakeholders.
- The conservatism and resistance to change of organisations, barriers to participatory democracy and cross-cutting collaborative work.
- The difficulty for foresight to establish its credibility and to be listened to by decision-makers. The latter are often caught up in the management of everyday problems and find it difficult to step back.

Still other obstacles could be mentioned, such as the very classical access to information.

## Expected results and indicators of success of foresight

Foresight is as much interested in the images of the future that it allows to emerge as it is in the trajectories, mechanisms and strategies of actors that need to be articulated in order to achieve it.

If we refer to foresight as a tool for anticipation at the service of change management, we can therefore assess its relevance, impact and degree of success according to the dynamics and type of transition it is capable of instilling. Also, according to the level of awareness by the actors - and not only the decision-makers - of the need to act to take their destiny in hand, through the formulation of a shared and appropriate long-term ambition.

## Value of foresight in tackling the future of the Mediterranean

First of all, in a context of great uncertainty that characterises the current period, particularly in the Mediterranean basin, the anticipatory attitude is the only possible alternative to a reactive posture in the face of events. This is indeed the primary objective of MED 2050. Anticipating or being side-lined, such is the dilemma. And the step that must be taken if one really wants to ensure the long-term protection of the Mediterranean ecosystem, to enable the transition of the region towards sustainable and inclusive development, and finally to prevent the risks of major crises.

Because of its approach to the complexity of today's world, foresight is particularly well equipped to help in the pursuit of these objectives. As we have said, the aim of the latter is not to predict the future precisely but rather to enable the stakeholders of the region to collectively forge a vision of possible and desirable trajectories, to build a common future, and to adjust and adapt their policies when necessary: "the essential thing is not so much to imagine in detail everything that could happen tomorrow, a futile exercise, as to anticipate in broad outline the

main probable futures in order to maintain our capacity for action in the face of what will really happen<sup>19</sup>.

As a tool at the service of the co-construction of sustainable strategic visions, new modalities for "acting together", mediation, change management and decision support, the MED 2050 programme is also intended to become an agent for the mobilisation of the protagonists of the Mediterranean scene in order to bring public policies and actors' strategies towards sustainable trajectories.

In doing so, the MED 2050 programme aims to promote the proactivity of the Mediterranean region, to reveal and consolidate its identity and integration factors, to support innovation and the logic of cooperation, to improve its positioning and its image, and thus to give it the means to better control its future.

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#### **Bibliography**

Durance Philippe, Godet Michel, Mirénowicz Philippe and Pacini Vincent, "La prospective territoriale - Pour quoi faire ? Comment faire ?", Cahiers du LIPSOR, Série Recherche n°7, novembre 2007.

■ Godet Michel, "Manuel de prospective stratégique", Dunod, 2007.

- Loinger Guy et Spohr Claude, "Prospective et planification territoriales: Etat des lieux et propositions", DRAST,
   Notes du CPVS, Mars 2004.
- Mirénowicz Philippe, "La prospective territoriale", Module de formation, 2006.
- TEDDIF, "La prospective appliquée aux projets territoriaux de développement durable", Cahier n°10, Février 2013
- Theys Jacques and Lacroix Denis, "MED 2050: The methodological framework", December 2020

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<sup>&</sup>lt;sup>9</sup> Patrice Miran and Rachid Mellak, "Exercice MED 2050 - Déclinaison régionale en région Sud", projet, Février 2021.