# Sustainable Forest Management

Participatory governance for the multifunctional management of Mediterranean woodland areas

June 2015

## METHODOLOGICAL GUIDE: FACTSHEETS AND TOOLS





FONDS FRANÇAIS POUR L'ENVIRONNEMENT MONDIAL Publication produced under the leadership of Plan Bleu's director, Hugues Ravenel.

#### Project Coordinator

Nelly Bourlion, Forest Ecosystem and Biodiversity Programme Officer (Plan Bleu)

#### Authors

This guide is based on a study carried out by CTFC and COFOR International in the framework of the project called « optimizing the production of goods and services by Mediterranean forests in a context of global changes », funded by the French Global Environment Facility (FGEF).

#### Graphic design and production

Hélène Rousseaux

#### Acknowledgements

We would like to thank all the experts who have contributed directly or indirectly to these method sheets and to the report and have enriched their content.

We would also like to express our gratitude to the international experts who participated in the regional workshop in Antalya (Turkey) from 25 to 27 June 2013 and who helped improve the quality and relevance of this document.

Photos © Image credit: Nelly Bourlion

#### Lecal notice

The designation employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of Plan Bleu concerning the legal status of any State, Territory, city or area, or of its authorities, or concerning the delimitations of their frontiers or boundaries

#### Copyright

This publication may be reproduced in whole or in part in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. Plan Bleu would appreciate receiving a copy of any publication that uses his publication as a source. This publication cannot be used for resale or for any other commercial purpose whatsoever without permission in writing for Plan Bleu.

Plan Bleu UNEP/MAP Regional Activity Centre I 5, rue Beethoven, Sophia Antipolis 06560 Valbonne France www.planbleu.org

© 2015 Plan Bleu

# Table of contents

Foreword	4
Sheet 1. Framework for participatory initiatives	6
Sheet 2. Stakeholder mapping	13
Sheet 3. SWOT analysis	16
Sheet 4. The scenario method	18
Sheet 5. The "Imagine" method	21
Sheet 6. The action plan and action sheet	25
Sheet 7. The Analytic Hierarchic Process (AHP)	27
Sheet 8. Participatory toolbox	30
Sheet 8.1. Surveys and interviews	32
Sheet 8.2. Focus group	34
Sheet 9. Reminder for the participatory management of Mediterranean territories	36

## Foreword

## Why is participatory Governance important for the Mediterranean forest ecosystems ?

Mediterranean forests are multifunctional areas as they perform multiple ecological, economic, landscape and social functions. They hold enormous wealth in terms of both tangible products and environmental services that are extremely important for the socio-economic well-being and development of societies.

The ways in which natural resources are managed in the Mediterranean are constantly changing and are the product of each society's history and its relationships within the area and with the outside world. In the current context of global changes (climate and socio-economic changes), managers of natural resources in general, and forests in particular, must face new challenges, which is made more difficult due to significant doubt about the medium and long term effects of these many changes.

Global changes can significantly increase the vulnerability of forest ecosystems and irreversibly compromise their multifunctional nature and the sustainability of forestry management. New challenges relating to the management of forest ecosystems require the active participation of a large range of both public and private stakeholders in the area who are affected by the use, development, management and conservation of forest resources and woodland areas. This is particularly relevant in the Mediterranean context, which is characterized by a wide range of functions, uses and users, where the direct profitability of forestry activities does not always maintain a sufficient flow of economic resources to support forestry policies and public development programmes.

### Figure 1: Countries of the Mediterranean region, Mediterranean bioclimatic and watershed limits. Source: Plan Bleu from Ewing et al., 2010

The watershed limit is defined by topography and the resulting runoff patterns of rainwater The bioclimatic limit is the limit of the Mediterranean region in terms of vegetation and climate.



Participatory governance is an approach to consultation and decision making that involves the stakeholders and people affected by management of the areas in a coherent and accountable way. It offers tools to involve and empower all stakeholders, by establishing rights, but also obligations, and by promoting more efficient management of available public resources. By involving stakeholders and taking into account their various interests and visions, better integrated/cross-sector policies can be created and applied that are better adapted to social demands and which take into account traditional activities.

### Foreword

By involving stakeholders in both defining sustainable development policies and alternatives and making decisions, but also in implementing and monitoring them, it is possible to reduce the social, economic and environmental vulnerability of an area and the people who live there and/or depend on it. Taking into account various visions and interests, jointly identifying issues, threats and opportunities, and building a shared vision of a better future greatly improves the ability of stakeholders and areas to anticipate and adapt to changes, thus improving their resilience and sustainability.





### Context and Objectives of this methodological guide

Plan Bleu coordinated the development of a synthetic report on the existing initiatives on participative governance issues.\* The report was produced by the Forest Research Centre of Catalonia (CTFC) and COFOR International in the framework of the project called « Optimizing the production of goods and services by the Mediterranean forest ecosystems in a context of global change » funded by the French Global Environment Facility (FGEF) and jointly entrusted to Plan Bleu and FAO (Secretariat of Silva Mediterranea).

This report has been completed with the production of methodological factsheets which synthetically cover the various methods and tools to implement participatory governance approaches. Reading the technical report is recommended to illustrate the points presented in these methodological factsheets and deepen the subject.

The objectives of these methodological factsheets are:

- To present a range of relevant approaches, methods and tools used for the participatory management of territories
- To focus on analysing their strengths and weaknesses, contexts and application conditions, geographical scope and the key stakeholders involved with regards to specific Mediterranean forested areas.
- To make recommendations for facilitating the design and implementation of a methodology and tools for participatory governance and management, which are suited to the specific nature of the Mediterranean region.

This guide is for everyone concerned and interested in the management of Mediterranean woodland areas: managers, public or private owners, companies or individual or collective users in all sectors of activity, including agriculture, water management, protection of fauna and flora, forestry, tourism, leisure, etc.

\*The report can be found in French and in English on Plan Bleu website at : http://planbleu.org/fr/publications/la-gouvernance-participative-au-service-de-la-gestion-multifonctionnelle-des-espaces

The methodological framework presented here is structured into five main phases guiding the implementation of a participatory approach for territorial development and natural resource management following a cyclical learning process and continuous improvement (Figure 1). Some of these phases may take place in parallel, for example the implementation phase (4) and the evaluation phase (5).

#### Figure 1. The different phases of the participatory process for local development and natural resource management

#### **IA)** Technical diagnosis

Inventory: quantify resources, analyse context, identify stakeholders, perform governance diagnosis

#### **IB) Shared diagnosis**

Record stakeholder visions and interests and specify environmental, social and economic issues

5) Evaluate the actions via performance and impact indicators (physical and participatory indicators)

• • • •

2) Decide on strategic guidelines and objectives for development and management

• • • •

4) Implement the actions as planned (such as forestry, communication, training or networking actions) and monitor them (via indicators)

3) **Specify actions and draw up action plans** with schedules, budgets and monitoring/ evaluation indicators

Possible components of a governance structure for a territorial development or natural resource management project



# Phase 1. Perform diagnosis of the territory and of its natural and human resources

#### Step 1. Identify stakeholders, their roles, abilities and legitimacy

- Which are the stakeholders involved?
- What are their roles in the current territorial dynamics?
- What are their interests and abilities?
- Do they have legitimacy to act?
- What are the relationships between stakeholders?

#### PARTICIPATORY TOOLS

 Stakeholder map based on the literature, surveys and interviews

#### Step 2. Plan stakeholder participation

- Which stakeholders should be involved?
- What roles could they and do they want to play in the process?
- · At what phases of the process should they be involved?
- To what extent will they be involved?
- · How and in what ways will they be involved?

#### Step 3. Identify local resources and issues at stake in the territory

- What are the territory's natural resources? (quantitative and qualitative assessment)
- What are the territory's cultural, social and economic resources? (quantitative and qualitative assessment)

#### PARTICIPATORY TOOLS

- Literature survey
- Mapping survey
- · Surveys and questionnaires
- What are the issues at stake in the territory?

#### Step 4. Identify the limits, conflicts, opportunities, synergies and challenges for the management of the territory

- What is the territory's potential for sustainable development and its opportunities?
- What factors limit or impede local sustainable development?
- · What conflicts exist between stakeholders?
- · What synergies exist between stakeholders?

#### PARTICIPATORY TOOLS

- Structured and semi-structured interviews
- Meetings and focus groups
- Collaborative SWOT analysis
- Site visits

# Phase 2. Specify strategic choices: development goals, guidelines and objectives

Define strategic choices to address the issues identified during the territorial diagnosis

- What is the main strategic concern of local stakeholders?
- What are the area's possible futures?
- What have been the major (positive and negative) issues experienced over recent years?
- PARTICIPATORY TOOLS
- Meetings
- The scenarios method
- The Imagine method

### Phase 3. Produce an action plan

Specific result of	lesired:					
Title and description of the planned action by the action				Risks and threats that could compromise the performance of the action		
• • • • • • • • • • • • •	Step I.	Specify the conc	rete activitie	es to l	be developed	
<ul> <li>What technical actions are to be developed?</li> <li>What awareness-raising and communication actions are to be developed?</li> <li>What capacity-development actions are to be developed?</li> <li>PARTICIPATORY TOOLS</li> <li>Working groups</li> <li>General meetings</li> <li>Analytic Hierarchy Process</li> </ul>						
•••••	Ste	o 2. Develop the f	unding plan	for th	ne actions	•••••
<ul> <li>What economic resources are needed to fund the various actions? (implementation, monitoring, evaluation and control)</li> <li>What economic resources are needed to fund stakeholders' participation?</li> <li>PARTICIPATORY TOOLS</li> <li>Participatory budget</li> <li>General meetings</li> </ul>			Y TOOLS			

# Phase 4. Implement and monitor actions, communicate and develop capacities

#### Implement the actions

 Involve technical, administrative and financial staff to ensure correct implementation of the actions suggested in the action plan, as per the objectives, planned schedule and available resources and methods

#### PARTICIPATORY TOOLS

- Internal work meetings
- Meetings with potential subcontractors for relevant services
- Joint actions

#### Develop a strategy and actions for communication and awareness-raising

- Which aspects require awareness-raising among the general public?
- What are the key messages to communicate?
- Who are the target audiences?
- What tools can be used for maximum impact on the target population, depending on project requirements and available resources?

#### COMMUNICATION VIA:

- Multimedia tools (website, mailing list, etc.)
- Collective actions (stands, open days, etc.)
- Office sundries (USB keys, etc.)

#### **Develop stakeholder capacities**

- · What capacities do local stakeholders lack?
- · Which stakeholders should be targeted?
- What tools could be used for capacity development, depending on project needs and available resources?

#### PARTICIPATORY TOOLS

- Workshops and seminars
- Conferences
- Courses and study programmes
- Networks of experimental plots
- Technical sheets
- · Site visits and study trips

#### Network

 Site visits, study trips during the launch and implementation phases of the initiatives, conferences, workshops, mailing lists, open days, etc.



### Phase 5. Perform participatory evaluation Participatory evaluation The participatory evaluation involves stakeholders and external agents in the process of assessing the impact of a project at a given point in time, both in terms of results and in achieving the objectives The evaluation can be performed via reliable and easily measurable performance, result, impact and context indicators, covering the environmental, social and economic aspects of the project. The assessment system used must be simple and inexpensive · What has to be assessed or is desirable to assess during and at the end of the project? PARTICIPATORY TOOLS · How can an objective and quantitative evaluation be External and/or internal audit ensured? Meetings What indicators should and can be measured and Evaluation surveys with users of the area and its according to what criteria? resources · What reliable sources of data could be used to Working groups update the selected indicators? Site visits • Who is responsible for the evaluation? · Logical framework method Should this person be controlled? If so, how? How will the evaluation data and results be analysed and presented? What is required in terms of time and human. technical and financial resources? THE PARTICIPATION OF STAKEHOLDERS AND EXTERNAL AGENTS IN THE EVALUATION ALLOWS TO: Provide a more accurate and more complete, transparent and objective evaluation of the results and impacts of the actions at the environmental, social and economic levels Group stakeholders around their successes and stimulate a feeling of emulation. Learn together about the mistakes and successes, so that the lessons learned can be put to good use in future projects

## Sheet 2. Stakeholder mapping

### Description and aims of stakeholder mapping

Stakeholder mapping helps to identify the stakeholders affected by the local development process and the strategic decisions, and to analyse their interests, abilities, legitimacy, influence and potential role in the approaches. This tool also provides the foundations and strategies to encourage the participation of stakeholders who may have conflicting interests, with a view to more pertinent decision-making.

Stakeholder mapping begins at the start of the diagnosis phase (Phase 1) as it helps identify sources of information and resource people, and it is continued and supplemented throughout the process, given that new data is integrated and that new stakeholders may join the initiative.



#### Figure 1: An example of a "mind map" of stakeholders in the forestry sector.

It is possible to place the stakeholders who are more involved towards the centre and those less involved on the periphery. A colour code can be used to separate large groups, or to indicate stakeholders of greater weight, interest or legitimacy as a key structure in the dynamics (for example, the grouping of municipalities shown in red on this map).

## Sheet 2. Stakeholder mapping

### Method to produce the stakeholder map

#### Step 1. Specify the objectives for stakeholder participation

#### Clarify the objectives and the reasons for stakeholder involvement

- Why is it desirable to involve stakeholders in the process?
- What is expected from this participation?
- What is the added value of this participation?

#### Step 2. Identify the key stakeholders affected

- Perform **brainstorming** sessions with associations, public and private institutions, research centres and universities involved in the sector:
- Build up a **mind map of stakeholders** by initially identifying the major groups of resource (e.g. the woodland) users towards the centre of the diagram, then detailing these groups toward the periphery of the image. Where necessary, use colour codes and annotations, symbols, etc.
- Take time to **assess the initial lists** of stakeholders and decide if there are less well known or less obvious stakeholders still to be identified.
- Supplement the initial list from secondary sources (such as historical documents or local newspapers, etc.), government statistics and data, lists of organisations, etc.

#### Step 3. Identify stakeholder interest in the proposed objectives and activities

 Stakeholder interests can be identified via a focus group (Sheet 7.2) or a meeting. Stakeholders are classed according to their interest in the proposed objective or activity and their decision-making power, for example by using the following diagram.



## Sheet 2. Stakeholder mapping

#### Step 4.Assess the influence and significance of those participating in the activities

• The above diagram can be used in group discussions and meetings, and steps 3 and 4 can be performed using a matrix like the following:

Criteria	Stakeholder affected l	Stakeholder affected 2	Stakeholder affected 3	
Influence.What is the influence of stakeholder X on the development of the activity?				
Significance. What is the significance of stakeholder X's participation in the development of the activity?				

#### Step 5. Implement a stakeholder participation strategy

Sort and classify the key stakeholders affected to identify (e.g. via a classification matrix):

- when they will be involved,
- · to what extent they will be involved,
- the way in which this involvement could change over time.

### **Resources required to perform stakeholder mapping**

· Abilities of the staff responsible for the activity

o Excellent facilitation skills are required.

• Equipment required

o Flipchart, post-it notes, pencils and, for group discussions, a suitable comfortable meeting room, along with participant incentives (such as refreshments).

Time required

o Once the stakeholders have been identified, each step may take an hour or two. A complete analysis may take a whole day or more.

### Sources of useful information for stakeholder mapping

- Forestry Commission, 2011. Public engagement in forestry: A toolbox for public engagement in forest and woodland planning: http://www.forestry.gov.uk/
- FAO, 2013. Website. Participatory Project Formulation: http://www.fao.org/Participation/english\_web\_new/ content\_en/exercise\_stake.html
- FAO, 2013. Website. Stakeholder analysis: http://www.fao.org/Participation/english\_web\_new/content\_en/ stakehold.html

## Sheet 3. SWOT analysis

### **Description and objectives of SWOT analysis**

SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is a strategic analysis tool to facilitate decisionmaking. It combines study of the strengths and weaknesses of an organisation, area or sector with that of the opportunities and threats of its context, to help formulate a development strategy. Strengths and weaknesses are internal factors that create or destroy value. Opportunities and threats are external factors that the area or organisation cannot directly control. The aim of the analysis is to enable both internal and external factors to be taken into account in the strategy, by maximising the potential of the strengths and opportunities while minimising the effects of the weaknesses and threats.

SWOT analysis is primarily aimed at planning, to identify the strategic goals to be developed. It can be used to check whether the strategy implemented is a satisfactory response to the situation described by the analysis and can be used in assessment.

### Method to perform a SWOT analysis

#### Step I. Prepare the meetings

Usually, this analysis is performed via meetings that bring together experts or people affected by the strategy. At this stage, decisions must be taken on the selection method for the group, its size and its possible breakdown into subgroups (such as topics, regions or stakeholder categories). Furthermore, preparation for the meetings shall be based on documentary analysis and on meeting with several key resource people.

#### Table 1. Important points to examine during participant selection

WHO ?	HOW MANY ?
<ul><li>Fair distribution by interest group</li><li>Avoiding bias via the influence of certain stakeholders</li></ul>	• How many participants are needed to ensure that local stakeholders are represented and that the anylisi is viable?
Compliance with speaking time for all participants	<ul> <li>How mant analyses are needed to obtain a satisfactory result?</li> </ul>

#### Step 2. Identify and study the four factors

INTERNAL and EXTERNAL aspects of the desired activity must be distinguished and those that could promote or hinder local development or the activity must be assessed (Table 2).

#### Table 2. SWOT analysis matrix for local strengths, weaknesses, opportunities and threats

Internal analysis	STRENGTHS These are the resources already available (high wood production, good mushroom production, etc.)	These are the area's deliciencies, and thus the needs (training,
External analysis	<b>OPPORTUNITIES</b> These do not depend on the local area but may help the desired activity (increased demand for non-wood food products, existing market for timber with potential for growth, legislation that promotes these activities, etc.)	<b>THREATS</b> These do not depend on the business but risk hindering the desired activity (high risk of fires, low wood prices, existing policies that do not promote management, excessive visitor numbers degrading fragile ecosystems, etc.).

## Sheet 3. SWOT analysis

#### Step 3. Interpret and decide

This involves studying how to make the best of the situation. During this phase, the ten possibilities offered by the analysis should be systematically explored. Ideally, this work should be performed by sub-groups during the meetings.

#### Figure 3. Relationships between the elements of the SWOT analysis

				Internal approach	
			List of strengths	List of weaknesses	Examine how the
			How can the strengths be maximised?	How can the weaknesses be minimised?	strengths enable the weaknesses to be managed
ıpproach	List of opportunities	How can the opportunities be maximised?	How can the strengths be used to make use of the opportunities?	How can the weaknesses be corrected by making use of the opportunities?	
External approach	List of threats	How can the threats be minimised?	How can the strengths be used to reduce the threats?	How can the weaknesses and threats be minimised?	
Examine how the opportunities can be used to minimise the threats					

### **Resources required to perform the SWOT analysis**

- · Abilities of the staff responsible for the activity
  - o Staff with coordination skills and, ideally, trained in this approach.
- Equipment required
  - o Office sundries (paper, coloured pencils, card etc.).
- Time required

o The number and duration of the meetings may vary greatly depending on the depth of the analysis.

### Sources of useful information about the SWOT analysis

• Jeune Chambre Économique Française (French Junior Chamber of Commerce), 2011. "Guide méthodologique pour une analyse du territoire" (Methodology guidelines for analysis of an area). 48 pages (in French):http://www. jcef.fr/communication/Guide\_m%E9thodologique\_prospective.pdf

## Sheet 4. The scenario method

### Description and objectives of the scenario method

The scenarios method is used to explore possible futures with a view to informing decisions on present actions. A scenario describes the logical path from a current situation to an imagined future. Building scenarios is particularly useful when analysis of past and present situations is inadequate to guide decision-makers on choices for the future, in particular where they are confronted with complex issues, where there is a high probability of major change, where the dominant trends risk being unfavourable and must be explored or where a long-term action is under consideration. Recourse to the scenarios method can provide planners with reference points to guide their considerations towards the various and contrasting future possibilities. The scenario building process can also help develop a shared vision among the participants. In particular, stakeholders involved in building the scenarios can better understand the issues and reasoning behind the strategies and policy decisions necessary to produce alternative futures.

#### The five key qualities of a good scenario are as follows:

- **Relevance:** the scenario adequately covers the initial question
- Consistency: it logically combines the various assumptions to give a consistent representation of the system
- Plausibility: it is assigned a probability of occurrence
- Transparency: it is clear and substantiated
- Significance: it is useful to help decision-making

### Method to implement the scenario method

Usually, this analysis is performed via meetings or workshops that bring together relevant stakeholders or experts. There are several possible approaches, each with different steps for building scenarios. This sheet presents the steps used for building scenarios using the Imagine method.

#### Table 1. Steps for building scenarios (Source: adapted from Plan Bleu, 2003)

#### Step I. Specify the problematic and the system to be studied

• Before starting the analysis, the issues and the chosen **perspective** must be specified (i.e. time frame, geographical scope, etc.).

#### Step 2. Determine the system's key variables

- The participants must **survey the variables**, including the system's stakeholders and groupings of stakeholders.
- A **retrospective analysis** of the system variables can then be performed. Knowledge of past changes in the variable provides insight into the current situation in terms of long-term dynamics. This requires a certain amount of documentary research to gather data regarding the area's internal and external trends, for example via government statistics on demography, reports from focus groups, etc. This data is initially used to specify the assumptions from which the scenarios are to be produced, i.e. the logic of the scenarios.

## Sheet 4. The scenario method

- It is important to have available the **key data for each variable** (for example, information on the affected stakeholders, relevant indicators, historical data, etc.).
- The participants must **identify the system's key variables** in order to reduce complexity. The main result of this initial phase is that the participants should have a clear grasp of the four or five key indicators that will serve as basis for the rest of the workshop.

#### Step 3. Produce "rich pictures" and brainstorm on possible futures

This phase is the bridge between the present and the future. Several teams work in parallel to **build mini-scenarios**, focussed on specific variables, which will be compared in the next phase. Each team produces "rich pictures", drawings that visually illustrate their discussions, questions and visions, based on the messages given by the key variables. These pictures provide a graphical representation (using pictographs, key words, humorous or satirical drawings, sketches, symbols, etc.) to aid understanding of complex situations.

#### Step 4. Share the scenarios

• At this stage, the various teams, who until now have worked in parallel, share the results they have obtained. The scenarios produced by each team are presented as contrasting visions of the possible future situation with respect to certain key indicators. It is desirable that the participants agree on the most plausible scenario.

#### Step 5. Compare the scenarios

- After the various teams have shared their scenarios, the work involves seeking the links and similarities between scenarios. Special attention should be paid to the following aspects:
  - connections between visions of the future,
  - similarities in terms of assumptions and underlying decisions,
  - differing points of view and assumptions,
  - the major changes anticipated.

#### Step 6. Produce an overall scenario

- During another workshop, the initial scenarios are submitted to all participants, who this time are asked to build
  overall scenarios, including all aspects of the system studied, as represented by the key variables. Those scenarios
  from the previous workshop that are considered to be the most plausible must be re-examined, with the main
  topics (constraints, strengths, institutions and changes) drawn out by consensus, and the properties that emerge
  from these topics debated.
- At least two overall scenarios based on these topics shall then be produced. They must include: the main characteristics of the **image of the anticipated future**, the **key changes** pertaining to the current situation, and the main **processes and stakeholders** (organisations, individuals, and institutions) that are assumed to be significant in the future.

Optimized production of goods and services by Mediterranean forest ecosystems in the context of global changes

## Sheet 4. The scenario method

### Resources required to perform the scenario method

#### Abilities of the staff responsible for the activity

o Staff with coordination skills and trained in this approach.

o All members of the team must be open and able to work in a team.

#### • Equipment required

- o Office sundries (paper, coloured pencils, card, etc.).
- o Facilities that enable convenient, welcoming meetings.
- o Meals and refreshments.

#### • Time required

o The workshops vary in duration. The development of each step may take from two hours (which does not allow for going into depth) to one or two full days (which allows for going into depth and thoroughly analysing the scenarios).

### Sources of useful information about the scenario method

"La méthode des scénarios, outil d'une démarche prospective" (The scenarios method, a tool for a predictive approach): http://breese.blogs.com/pi/files/methode\_scnario.pdf

"Méthodes participatives. Un guide pour l'utilisateur. Exercice de construction de scénarios." (Participatory methods. A user guide. Scenario building exercise): http://www.kbs-frb.be/uploadedFiles/KBS-FRB/Files/FR/PUB\_1600\_ MethodesParticipatives.pdf

A Practitioner's Guide to 'Imagine' – The Systemic and Prospective Sustainability Analysis: http://planbleu.org/sites/ default/files/publications/cahiers3\_imagine\_uk.pdf

## Sheet 5. The "Imagine" method

# Description and objectives of the Imagine method, a systemic and prospective sustainability analysis

"Imagine" aims to bring together all local stakeholders and offers tools to describe, assess and explore the level of sustainability of a socio-ecological system (covering an area's ecosystem and the system of stakeholders involved in its management) in the past, present and future. This method uses indicators and a participatory approach, relying on local stakeholders who are considered experts from and in the area in which they operate. Plan Bleu developed, tested and consolidated this method of analysis to inform stakeholders' strategic decision-making. The aim of this approach is to help provide and familiarise stakeholders with integrated predictive-analysis tools so they can imagine possible future scenarios – based on past and current trends and emerging threats – and produce Action Plans to move towards to a desirable and sustainable future.

### Method to implement the Imagine method

"Imagine" involves four successive phases and, ideally, five workshops involving local stakeholders (Figure 1).



Figure 1. The four phases and five workshops suggested as part of the Imagine method (Source: Plan Bleu, 2003)

The four phases of the Imagine method are as follows:

**Phase I. Consider together the socio-ecological system, the context and the main local issues**, and attempt to understand them via various exercises, for example jointly producing "rich pictures" (Figure 2). The groups of stakeholders who participate in this phase and the first workshop are the project leaders and the main local stakeholders, who will use and implement the method, along with representatives of the various aspects of the project and interests in play.

## Sheet 5. The "Imagine" method

Figure 2. Examples of "rich pictures" produced collectively in preparation for shared diagnostics (Source: Plan Bleu, 2003)



**Phase 2. Connect and study the various aspects in play, identifying key sustainability indicators,** clarifying their definition and assessing their value for sustainability. The groups of stakeholders who participate in this second phase and in the second workshop are the project leaders, the main local stakeholders (those who will apply the method), representatives of various aspects of the project and interest groups, and sometimes a team made up of experts and people affected and motivated by the project's performance.

**Phase 3. Model and explore via the pictorial representation of sustainability indicators** and by using different scenarios to picture future changes (Figure 3). This phase involves the third and fourth workshops: during the third workshop, the indicators are represented graphically according to the various scenarios. The groups of stakeholders who participate are the project leaders, the main local stakeholders (those who will apply the method), representatives of various aspects of the project and interest groups, and a team of experts. During the fourth workshop, the various scenarios are shared and clarified. Furthermore, stakeholders in the scenarios and the general public are informed.

Figure 3. Radar charts from the scenario modelling and exploration phase (Phase 3), produced on the basis of the system description (Phase 1), sustainability indicators and associated threshold values, the upper and lower extreme values, and the bounding values of sustainability (Phase 2).

They provide a visual image of the current situation and possible futures (Source: Plan Bleu, 2003)



Situation in 2003



Alternative scenario in 2015

## Sheet 5. The "Imagine" method

**Phase 4. Suggest and act by developing an action and communication plan.** This phase consists of a workshop to develop future actions for publicity and publishing stemming from the results of the Imagine activities, in order to communicate the messages to decision-makers and the general public. This leads to an indicator-monitoring programme, a schedule for reports and a system for revising and adapting the process.

### **Resources required for performing the Imagine method**

- Abilities of the staff responsible for the activity o Staff with coordination skills and specifically trained in this approach.
- Equipment required o Office sundries (paper, coloured pencils, card, etc.).
- Time required o This process requires about 12 months.
   o Each workshop can be performed in one to two days.

### Sources of useful information about the Imagine method

Details of the Imagine method. Plan Bleu's website: http://planbleu.org/en/outils-et-methodes/methode-imagine

A Practitioner's Guide to 'Imagine' – The Systemic and Prospective Sustainability Analysis: http://planbleu.org/sites/default/ files/publications/cahiers3\_imagine\_uk.pdf

## Sheet 6. The action plan and action sheet

### Description and objectives of an action plan and action sheet

Strategic guidelines and the operational actions to be performed must be specified in collaboration with stakeholders in order to deal with local issues. The action plan consists of deciding and clearly and precisely presenting the following, in line with the strategic guidelines:

- Which **actions** are to be performed?
- **Who** is to perform them?
- When are they to be performed?
- **How** are they to be performed?
- Which physical, human and financial resources are to be used?

The action plan is the plan that guides the day-to-day work. It operates well when all stakeholders, at national, regional and local levels, coordinate to take decisions on policy objectives, actions, implementation costs and deadlines. Local stakeholders can strongly contribute and decide on their role in the planning and implementation of the actions. All stakeholders can genuinely participate in the drawing up and performance of action plans via focus groups and working groups.

On the basis of a jointly produced action plan, "action sheets" (Figure 1) shall be produced for each action, detailing its content, objectives, the areas involved, the monitoring indicators, its cost, the responsible stakeholders, etc.

### Method to draw up an action plan and action sheet

Thanks to stakeholder focus groups, it is possible to:

- Identify strategic guidelines suitable for the policy objectives and local context.
- Identify specific actions to fulfil these policy guidelines.
- Define at what scale (local, regional or national) each action will be applied.
- For each action, determine who is responsible for decision-making and who is responsible for implementation, monitoring and evaluation.
- Determine a strategy to implement each action.
- For each action, draw up action sheets that include: a reminder of the issues and context, the local strategic guideline to which the action corresponds, its objectives, details of the action, area affected, targets, the action leader, partners, coordination with existing schemes, cost, potential sources of funding, evaluation indicators and criteria, and the schedule. The person responsible for the action shall produce the action sheet, in order to motivate them to maximum commitment to the performance of the action and to local life.
- Decide on the schedule for implementing all actions in the area.
- And thereby fill in the table below.

## Sheet 6. The action plan and action sheet

Table 1. Example of the basic content of an action plan. Source: adapted from FAO, 2005, and Pays du Grand Bergeracois municipal grouping, 2007

	Action I	Action 2	Action 3
Title of the action			
Description of the action			
Objectives targeted			
Areas targeted			
People targeted			
Level of implementation			
• Local			
Regional			
National			
Stakeholder responsible for decision-making			
Project owner			
Local party			
Technical partners			
Strategy for implementing the recommendations			
Estimated cost			
• Year I			
• Year 2			
• Year 3			
Sources of funding			
Implementation schedule			
• Short (I-2 years)			
• Medium (3-5 years)			
• Long (5+ years)			
Monitoring and evaluation indicators			
Performance indicators			
Result indicators			
Impact indicators			
Context indicators			
Foreseeable difficulties			

## Sheet 6. The action plan and action sheet

### **Resources required to produce an action plan and action sheet**

#### Abilities of the staff responsible for the activity

o A coordinator must be able to lead the collective discussion by ensuring the participation of all local stakeholders and relevant local technical and financial partners. They must be able to stimulate and manage the debates, ensuring compliance with speaking times.

o One person must draw up the strategic guidelines, and collaborate with stakeholders in drawing up the action sheets. They must be able to summarise this data and circulate it among local stakeholders. They must then seek funding and draw up funding requests with stakeholders.

#### Equipment required

o Office sundries (paper, coloured pencils, card, etc.).

#### • Time required

This process requires about 12 months. This varies depending on the context and on stakeholder involvement.

### Sources of useful information about action plans and action sheets

FAO, 2005. Participatory policy development for sustainable agriculture and rural development. Rome, 66 pages: www.fao.org/sard/common/ecg/2350/en/ManualEnglish.pdf

Pays du Grand Bergeracois municipal grouping, 2007. "Plan d'Action de la Charte Forestière du sud du Périgord." (Action Plan for the south of Périgord Forestry Charter). 58 pages: http://charteforestieresudperigord.jimdo.com/ charte-foresti%C3%A8re-du-sud-p%C3%A9rigord/plan-d-action/

## Sheet 7. The Analytic Hierarchic Process (AHP)

### **Description and objectives of the Analytic Hierarchic Process**

The **Analytic Hierarchy Process (AHP)** is a technique for organising, analysing and making complex, multicriteria decisions, using a systematic, rational and transparent process. This technique is based on mathematics and psychology and was developed by Professor Thomas Saaty in the 1970s and has since been refined. It is used globally by governments, industries, etc. in the health, education and natural resources management, and in particular forest management sectors.

It offers interesting possibilities for collective and participatory decision-making, the structuring of problems and development alternatives, group facilitation, consensus building, handling qualitative and quantitative data, conflict resolution, decision support and structuring of preferences (Schmoldt et al., 2001). It is relatively easy to implement and various IT programmes are available to help carry it out.

The process involves breaking down the decision-making problem into a hierarchy of more comprehensible subproblems (so that each one can be analysed independently), representing and quantifying their elements, connecting their elements to the general objectives and evaluating alternative solutions.

The hierarchical structure is made up of a variable number of levels, each one subordinated to the preceding level: 1) overall goal – decision-making problem; 2) criteria (or factors) and sub-criteria (number of sub-levels depends on needs); and 3) possible alternatives for each criteria and/or sub-criteria.

Once the hierarchy is built, the decision-makers systematically evaluate the elements that comprise it by pairwise comparison and giving them a weighting coefficient ("priority") with respect to their impact on the element above them in the hierarchy. To carry out the comparisons, the decision-makers can use actual data or their own judgments about the relative meaning and importance of the elements. The opinions of stakeholders can be treated equally, or can even be weighted in accordance with their skills, experience, connection to the theme, interests, credibility, etc. This technique involves an adapted questionnaire in which participants must carry out redundant pairwise comparisons.

## The AHP can be combined with a SWOT analysis to determine the importance of the factors and/or evaluate the connection between the SWOT factors and decision alternatives.

The AHP does not force participation but facilitates it and highlights the way in which the stakeholders' contributions are incorporated into the decisions. However, the extent of participation in formulating the hierarchy, that is, in defining the criteria and alternatives, is extremely varied. The hierarchy can be developed by the highest level decision-maker (without participation) or else by involving stakeholders who not only bring their judgments but are also an integral part of formulating management solutions and alternatives. Users of the method can, consciously or not, direct and influence the contributions/judgments of stakeholders and bias the results (e.g. by using mail surveys and avoiding face-to-face interviews).

## Sheet 7. The Analytic Hierarchic Process (AHP)

### Method to perform the Analytic Hierarchic Process

The process can be divided into four phases (Kasperczyk & Knickel, 2006) which include a questionnaire evaluating the stakeholders' preferences.

#### Phase I. Identifying and structuring the problem and selecting criteria and sub-criteria.

(1) Formulation of the decision-making problem: what is the question posed and what is the goal of the decision?(2) Identification of stakeholders: which stakeholders are affected by the problem and which of them jointly assist with the decision-making?

(3) Identification of criteria: which criteria are really essential for answering the question posed?

(4) Identification of possible alternatives: what alternatives are really taken into account? (For example, in the case of forestry, alternatives to extracting wood).

#### Phase 2. Setting of criteria priorities through pairwise comparison (weighting).

(5) Pairwise comparison and evaluation of criteria: which criterion is the most important, 1 or 2? For each pair, the relative priority of the most important criterion can be quantified using the Saaty scale, with a weighting of 1 (both criteria are of equal importance) to 9 (extreme importance of one criterion in relation to another), and the secondary criterion of this pair is assigned the reciprocal weight (e.g. 1/9 if the score of the 1st criterion is 9). The weighting coefficients are then normalised and averaged.

#### Phase 3. Pairwise comparison of alternatives for each criterion (scoring).

(6) Comparison and evaluation of alternatives in pairs, criterion by criterion: which alternative best corresponds with criterion X: alternative A or alternative B? A score between I (the 2 alternatives are equally good) and 9 (alternative is absolutely better) is given to the better alternative and its pair is assigned the reciprocal score. The scores are then normalised and averaged.

## Phase 4. Obtaining an overall relative score for each option (calculation of priorities and data interpretation).

(7) Response to the initial question: what is the weighting of the alternatives and criteria?

The alternative scores (calculated in step 6) are multiplied by the weighted criteria coefficients (calculated in step 5), in order to produce an overall score for each alternative.

At this stage, a coefficient is calculated to judge inconsistencies in the stakeholders' judgments and to validate or invalidate the final result.

Sometimes, the least important judgments can be removed from the process and the priorities can be recalculated throughout the hierarchy, with or without changing the judgments.

Figure I below illustrates, in a simplified manner, how the AHP can be used to choose a forest management alternative, depending on criteria, sub-criteria and priorities established in a participatory way. In practice, each alternative is assigned a final score from the calculations made by a software program depending on the judgment of stakeholders consulted, and the alternative with the highest score (in this example, alternative B) is selected.

## Sheet 7. The Analytic Hierarchic Process (AHP)

Figure 1. Example of how the AHP is used to guide the management of a forest.

The connections between the levels are non-exhaustive and depend on the context and figures corresponding to the weighting coefficients ("priorities"). For the sake of clarity and simplification, the sub-criteria coefficients are not given.



### **Resources required to perform the Analytic Hierarchic Process**

• Abilities of the staff responsible for the activity

o Someone trained to use the method, with basic knowledge in mathematics, science and sociology, able to produce the questionnaire and analyse the data, and aware of potential assumptions, limits and biases of this technique.

Equipment required

o A computer and appropriate free software to analyse and present the data (e.g. on a JAVA platform). The calculations are complex and so appropriate software is required.

Time required

o This technique is relatively straightforward but requires several weeks to prepare the structure, organise and carry out the interviews, and gather and analyse data.

### Sources of useful information about the Analytic Hierarchic Process

KASPERCZYK N., KNICKEL K., 2005. The Analytic Hierarchy Process (AHP). 8 p. www.ivm.vu.nl/en/Images/MCA3\_tcm53-161529.pdf

SAATY T.L., 1980. The Analytic Hierarchy Process. McGraw Hill, New York.

SAATY T.L., 2008. Decision making with the analytic hierarchy process Int. J. Services Sciences 1, No. 1: 83-97. www. fcmfmpep.org.br/.../Artigo\_Saaty\_2008.pdf

SCHMOLDT D.L., KANGAS J., MENDOZA G.A., PESONEN M. (Eds.), 2001. The Analytic Hierarchy Process in Natural Resource and Environmental Decision Making, 1–13. Kluwer Academic Publishers. Netherlands. www.srs4702.forprod. vt.edu/pubsubj/PDF/9501.pdf - www.srs4702.forprod.vt.edu/pubsubj/Pdf/01t16.pdf

## Sheet 8. Participatory toolbox

The table below presents a range of tools that facilitate participation and communication, and indicates the various types of involvement that they allow. A greater number of stars indicates a greater efficiency of the method or tool for the activity considered.

Participation and communication tools	Inform	Consult	Involve	Partner
Analytic Hierarchic Process		***	**	
Conferences	***			
Courses and study programmes		***	***	***
Events	**		**	**
Consensus building		**	***	*
Experimental plots		*	***	**
Face-to-face surveys and questionnaires		***		
Focus groups		**	*	
Imagine	*	***	***	
Internal and external audits		**	**	
Interviews		**	***	
Logical framework method		**	**	*
Meetings (annual, extraordinary, strategic)	**	***	*	
Method sheets	*		**	**
Multi-party monitoring programmes			***	**
Newsletter	**			
Online social networks	**	*		
Open days	**	**		
Participatory budget		***	**	***
Participatory mapping and Geographic Information Systems (GIS)		*	**	***
Participatory platform for monitoring and evaluation			***	**
Postal surveys and questionnaires		*		
Press	*			
Radio	*			
Scenarios method	*	***	**	
Seminars		**	***	**
Sheets with indicators of performance, results, impact, etc.	*	**	***	**
Site visits		**	**	
Stands	***			
Telephone surveys and questionnaires		*		
Website	**			
Working groups		**	***	**
Workshops		**	***	**

## Sheet 8. Participatory toolbox

The table below helps identify the most suitable tools and methods for the various phases of the process of participatory local governance and management. A greater number of stars indicates a greater utility of the method or tool for a given phase.

Tools and methods for participation and communication	Planning	Implemen- tation	Monitoring & evaluation	Finalisation
Conferences		**		**
Consensus building	***	**		
Courses and study programmes		*		
Events		**		
Experimental plots		***	**	**
Focus groups	**	**	**	
Imagine	***			
Internal and external audits		1	*	*
Interviews	*		***	
Logical framework	***	1		**
Meetings (annual, extraordinary, strategic)	**		**	
Method sheets		**	**	
Multi-party monitoring programmes			**	**
Newsletter	*	***		**
Online social networks (e.g.Twitter and Facebook)		**		**
Open days		**	**	**
Participatory budget	***	***		
Participatory mapping and Geographic Information Systems (GIS)	***	**		
Participatory platform for monitoring and evaluation			**	**
Postal surveys and questionnaires	*		***	
Press	*	***		***
Radio	*			***
Scenarios method	***	*	*	
Seminars	***	***		
Sheets with indicators of performance, results, impact, etc.			***	**
Site visits	**	***		**
Stands		**	**	**
Surveys and face-to-face questionnaires	**		**	
Telephone surveys and questionnaires	**		**	
Website	*	**	**	*
Working groups	***	***		
Workshops	***	***		

## Sheet 8.1. Surveys and interviews

### Description and objectives of the surveys and interviews

Surveys and interviews are techniques for collecting "live" data, i.e. data from stakeholders, which is then analysed.

#### Surveys...

- provide quantitative data that can be analysed statistically.
- provide large quantities of data focussed on a specific group and are generally sent to large, randomly selected, samples. Can be performed face to face, by telephone or by post.
- provide standardised, structured and objective data as each survey covers the same topics.
- are called "unstructured" when the person questioned replies in their own words, "structured" when possible answers are given, or "semi-structured" when there is a combination of the two.

#### Interviews...

- are more conversational, giving insight into stakeholders' points of view and providing relatively qualitative data.
- aim to elucidate various opinions and experiences on specific subjects.
- are directed to specific people and may be performed face to face or by telephone (although the latter is inadvisable).
- are called "in depth" when topics are discussed as the questions arise, "semi-structured" when they use a flexible framework and "structured" when they follow a rigid structure.

### Method to perform surveys and interviews

	Surveys		Interviews
•	Identify the aims of the surveys	•	Identify the aims of the interviews
•	Produce the questionnaire and identify the representative sample	•	Produce the interview guidelines and select the sample
•	Test the questionnaire on a small sample of the population Use the questionnaire Statistically analyse the data	•	Start the interview (present the interviewer, state the purpose of the interview, mention the confidentiality agreement, thank those present) Perform the interview using the guidelines
		•	Analyse the results of interviews (sometimes after transcribing them)

## Sheet 8.1. Surveys and interviews

### **Resources required to perform surveys and interviews**

#### Surveys...

#### · Abilities of the staff responsible for the activity

o Production and testing of the questionnaire requires experts on the subject covered. o Ability to write concise, clear, simple questions for ease of understanding.

#### Equipment required

o Office sundries required for writing and printing the questionnaires and for analysing the data produced.

#### Time required

o Use of questionnaires generally requires no more than one hour per person questioned, and varies depending on the volume and type of data wanted and the type of survey.

o Analysis of the surveys and production of robust, statistically-reliable results requires lots of time, i.e. several weeks.

#### Interviews...

#### Abilities of the staff responsible for the activity

o Ability to generate an atmosphere of trust for the interviewee.

- o Good ability to listen and openness to new ideas.
- o Ability to perform relevant and efficient interviews to obtain the desired information.

#### Equipment required

o A recording device is required if the interviews must be recorded, which is usual for in-depth interviews.

Time required

o The interviews usually take between 20 minutes and an hour.

### Sources of useful information about surveys and interviews

FAO, 1990. The Community's toolbox: The idea, methods and tools for participatory assessment, monitoring and evaluation in community forestry. FAO Regional Wood Energy Development Programme in Asia, Bangkok, Thailand: http://www.fao.org/docrep/x5307e/x5307e00.htm

## Sheet 8.2. Focus group

### Description and objectives of focus groups

This is a technique where participants discuss specific questions and topics in depth, with the help of a qualified coordinator. Focus groups often comprise 5 to 15 people, who represent various points of view and stakeholder interests. The tool can be applied with groups of experts who have knowledge of the topic under consideration or with representatives of a specific sector of society, such as the forestry, agricultural or tourism sectors. Discussions are easier when the group is more uniform.

Figure 1. Group discussion of the advantages and disadvantages of the introduction of a new crop in Chiapas, Mexico. Source: Soto, 2013



### Method to organise a focus group

Prior to the discussion	During the discussion
<ul> <li>Decide the purpose of the discussion</li> <li>Decide who should be invited due to their knowledge of the topic</li> <li>Specify the characteristics of the meeting (date, duration, number of groups, etc.)</li> <li>Produce the invitations</li> <li>Choose a technique to use</li> </ul>	<ul> <li>Thank the participants for coming and participating</li> <li>Explain the purpose of the focus group and the aims of the meeting</li> <li>Explain how the meeting will take place and how members can contribute</li> <li>Specify the rules of debate</li> <li>Encourage open participation</li> <li>Set the tone by asking an opening question and ensuring that all opinions on this question are heard</li> <li>Ask other questions generally</li> <li>When all questions have been asked, ask if anyone has further comments</li> <li>Explain to the group the next steps which will occur</li> <li>Thank the group for coming and actively participating</li> </ul>

## Sheet 8.2. Focus group

### Resources required for leading a focus group

#### Abilities of the staff responsible for the activity

o A coordinator able to stimulate and moderate the debate and ensure compliance with speaking times, who is preferably independent and neutral with respect to the topic.

o Someone to take notes on the significant questions and answers, and on factors that could help in understanding the information.

#### Equipment required

o Facilities that enable convenient, welcoming meetings.o Incentives for participants, such as a breakfast.o Audio recording devices.

#### Time required

o The discussions should take an hour or two.

### Sources of useful information about focus group

Elliott J, Heesterbeek S, Lukensmeyer CJ and Slocum N. 2005 Participatory Methods Toolkit. A practitioner's manual. Slocum Nikki, Participatory Methods Toolkit: A Practioner's Manual, 2nd edition, in collaboration with ViWTA and King Baudoin Foundation, Brussels, 210 p. (Available in English and French) : http://www.cris.unu.edu/sbook.175.0.html?cHa sh=4fd03ade56&tx\_ttnews[tt\_news]=467

The Community Toolbox. 2013. Chapter 3. Assessing Community Needs and Resources. Section 6. Conducting focus groups. http://ctb.ku.edu/en/tablecontents/sub\_section\_main\_1018.aspx

## Sheet 9. Reminder for the participatory management of Mediterranean territories

#### FOR THE TERRITORIAL DIAGNOSIS...

- Delineate the territory's approximate boundaries and also identify its periphery and the zones that influence it
- Identify the area's resources
- Identify strengths, weaknesses, opportunities and threats regarding sustainable development
- Identify the local issues

#### WHEN IDENTIFYING STAKEHOLDERS...

- Assess the abilities, legitimacy, current role and potential role of stakeholders
- Analyse the relationships between stakeholders

- FOR GOVERNANCE DIAGNOSTICS...
- Identify the governance structures and the institutional and statutory framework
- Identify existing participatory initiatives and those which could be used as a basis
- Identify active and recognised bodies
- Identify the framework tools for the participation
- Identify local power dynamics on specific topics

#### WHEN PLANNING THE PARTICIPATION...

- Determine which stakeholders should participate in the process
- · Identify each stakeholder's objectives in the participation
- Identify the phases in which they will participate, and how and why they will participate
- Draw up a funding plan for the participation
- Identify the tools to use to ensure effective stakeholder participation

#### TO ENSURE COORDINATION...

 Identify the structure responsible for coordinating the steps; it must be dynamic, effective and inclusive

#### TO IMPLEMENT THE ACTIONS...

 Identify stakeholders able to perform the actions, and the financial, technical and human resources required

#### TO DEFINE THE STRATEGY AND ACTION PLANS...

- Identify strategies and objectives that are suitable for local development
- Draw up concrete and realistic action plan

#### MONITOR AND ASSESS THE ACTIONS...

To quantify the effectiveness and impact of the activities and participation, and apply corrective measures if necessary

#### **INVOLVE UNIVERSITIES AND R&D CENTRES...**

- So that decisions have a sound, robust and objective scientific basis
- To participate in monitoring and assessmen
- To produce innovation

#### PARTICIPATE IN NETWORKS AND FORUMS...

 To share and make use of experiences, results, know-how, methodologies and tools, bring together initiatives, create links and collaboratively manage the areas

#### THROUGHOUT THE PROCESS, RAISE STAKEHOLDER AWARENESS...

- On the importance of rational management of local natural resources, and on the consequences of climate and socioeconomic change
- To avoid the initiative being too narrowly focussed and not well received by civil society

# **A**Plan Bleu

### Plan Bleu: let the Mediterranean be an area of cooperation for sustainable development

The objective of the Plan Bleu/RAC is to contribute to raising awareness of Mediterranean stakeholders and decision makers concerning environment and sustainable development issues in the region, by providing future scenarios to assist in decision-making. In this respect and through its dual functions as an observatory of the environment and sustainable development and a centre for systemic and prospective analysis, the PB/RAC's mission is to provide the Contracting Parties with assessments of the state of the environment and development of the Mediterranean and a solid basis of environmental and sustainable development data, statistics, and indicators to support their action and decision making process.

Decision IG. 19/5 of the l 6th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Marrakesh, 2009)

Plan Bleu pour l'environnement et le développement en Méditerranée 15, rue Beethoven, Sophie Antipolis, 06560 Valbonne +33 (0)492 387 130 - www.planbleu.org