



ADAPTING THE MANAGEMENT OF PROTECTED NATURAL AREAS TO CLIMATE CHANGE

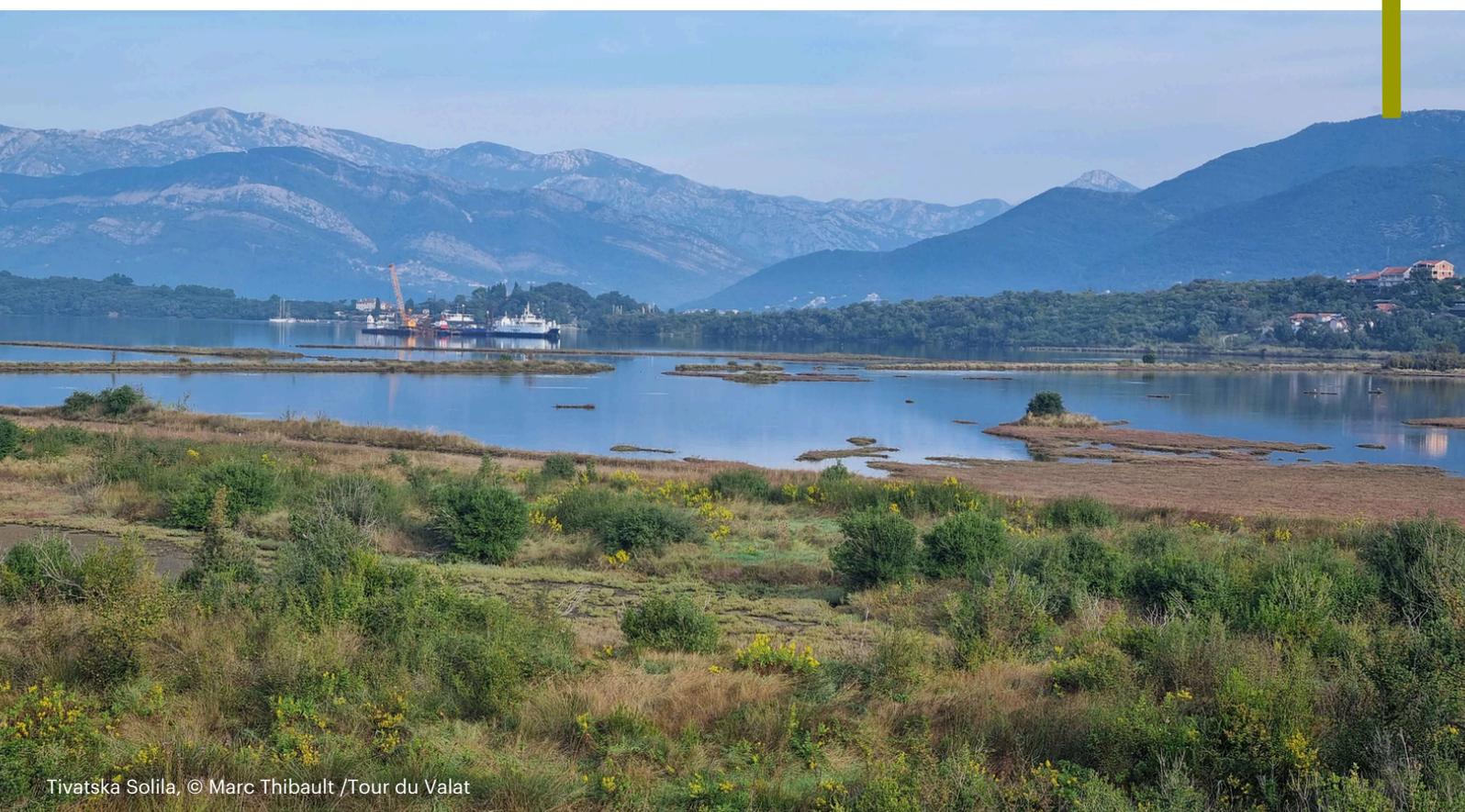
Reflections of the Think & Do Tank of the Mediterranean Biodiversity Consortium

Addressed to:

✓ conservation managers in the Mediterranean

✓ managers of pilot sites in the RESCOM project

2025



Tivatska Solila, © Marc Thibault /Tour du Valat

Note from initial discussions held during a T&DT workshop organised by the Mediterranean Biodiversity Consortium (MBC) in June 2025 in Türkiye, bringing together members of the project steering committee and the organisation Réserves Naturelles de France (RNF), which developed the Natur'Adapt methodology.



FONDS FRANÇAIS POUR
L'ENVIRONNEMENT MONDIAL



1. CONTEXT AND CHALLENGES

Climate change is now a major pressure directly affecting protected natural areas in the Mediterranean, where temperatures are rising 20% faster than the global average. Its effects are already manifesting themselves in various ways:



changes in hydrological cycles and reduced water availability,



coastal erosion,



droughts and heat waves both at sea and on land,



more frequent flooding, with significant consequences for the ecological functioning of habitats and species, as well as for the economic activities that depend on them (particularly agriculture and fishing).



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These upheavals require a new approach to management: beyond the technical and practical adjustments involved in adapting management to climate change, it requires a broader adoption of a new stance based on anticipation and flexibility. It is no longer just a question of conservation, but also of anticipating, regulating, and supporting environmental change by developing appropriate tools, strengthening skills, and consolidating partnerships. This approach is complex because it requires new knowledge, specific tools, and the long-term involvement of local stakeholders.

Although the subject is still emerging, certain methodologies have been developed and tested to support protected area managers in this process of adapting management, particularly in France and across the Mediterranean region¹.

Among these methods, the **Natur'Adapt approach**, developed by **Réserves Naturelles de France**² between 2018 and 2023 as part of a LIFE project and tested at ten pilot sites in France, is based on four pillars:

- prospective analysis,
- vulnerability assessment,
- adaptation planning, and
- capitalization

This method is designed to be operational and accessible, iterative, scalable, and adaptable to a wide variety of contexts. It therefore appears to be an opportunity that could be replicated by adapting it to the specificities of the Mediterranean context.



Camargue National Nature Reserve, @Silke Befeld

With this in mind, the MBC, through the Think & Do Tank, proposes to carry out work aimed at meeting needs and limiting the constraints and obstacles identified in adapting management to climate change, in line with its integration into three key areas:

- i) **knowledge management,**
- ii) **planning for management adaptation, and**
- iii) **governance and communication issues with local stakeholders.**

This note, therefore, presents the first results of the Think & Do Tank, and aims to provide initial insights and concrete recommendations to facilitate managers' commitment to this approach and initiate a gradual evolution of management practices and methods.

[1] These include the [IUCN global guidelines](#) for integrating climate change into protected area management (2016); the [operational guide](#) from the [MPA-Engage project](#) (2022) aimed at strengthening the resilience of marine protected areas to climate change; the [operational guide](#) from the [Natur'Adapt initiative](#) (2023) aimed at helping managers integrate climate change into their management plans.

[2] Association that manages the network of nature reserves in France.

3. THREE IDENTIFIED LEVERS FOR ACTION

Three levers for action have thus been identified, on which to base a solid and realistic adaptation approach. To activate these three levers, various resources are made available by the *Natur'Adapt* method and in addition to the guide.

Links to resources made available by RNF as part of the Natur'Adapt initiative:

-  [The Natur'Adapt guide](#)
-  [Factsheet 1 - Exploration of the 4 components](#)
-  [Factsheet 2 - From information to mobilisation](#)
-  [Factsheet 5 - Analysis of potential effects of climate change \('simple analysis'\)](#)
-  [Factsheet 6 - Analysis of vulnerabilities and opportunities \(detailed analysis'\)](#)
-  [Factsheet 7 - Recommended content for the vulnerability and opportunities assessment](#)
-  [Factsheet 8 - Examples adaptation measures](#)

A. Strengthening knowledge and prospective analysis

Conducting a prospective analysis of your site is an essential first step. This involves carrying out a climate vulnerability assessment to identify the most sensitive components (habitats, species, human activities, etc.), climate trends and potential impacts on these components. It therefore seems necessary to mobilize certain key data: the number of hot days, cumulative rainfall, the number of days of heavy precipitation, the number of dry days, stream flow and droughts, sea-level rise, temperature trends, etc. Various sources exist for this purpose, such as national institutions, universities and research centers, international, national and local monitoring networks and local participatory data.

Various resources are made available by RNF as part of the *Natur'Adapt* initiative, and are referenced in the box above.

Needs and obstacles identified

- Lack of access to and sharing of data, particularly climate data (often dispersed, inaccessible or not shared between the entities concerned)
- Lack of reliable historical data or lack of awareness of their existence
- Lack of connection with research bodies
- Lack of skills among management teams to collect and interpret data, or to carry out prospective analysis.

Proposed areas for action

- Develop and strengthen exchanges between institutions
- Pool common indicators at the Mediterranean scale
- Develop a platform for sharing experiences and expertise

B. Integrating adaptation into planning and management documents

The management plan is the central document that sets priorities and provides a framework for team action. In the face of climate change, it must evolve to take account of the uncertainties associated with the various climate change scenarios, anticipate possible ecosystem transformations, and plan gradual and flexible measures. Discussions showed that a suitable management plan must be realistic and scalable, based on vulnerability scenarios and the knowledge and expertise of local players and stakeholders (scientists, private sector, local communities, etc.).

Various strategies exist to help and guide managers in their climate change adaptation choices. Natur'Adapt proposes a framework inspired by the RAD (Resist - Accept - Direct) strategy developed in the United States.

- **Resist:** act to maintain or restore past ecological conditions (species, habitats), despite climate change.
- **Accept:** recognize that change is underway and let nature evolve spontaneously.
- **Direct:** actively steer change towards more desirable trajectories.

An adaptation strategy may combine different approaches, depending on the environment, species or timeframe. More concretely, the resulting adaptation measures may include, for example, reducing sources of pollution, managing and limiting

certain uses, creating or restoring ecological corridors within the protected area or between protected areas, restoring threatened and fragile habitats, monitoring species and habitats to track their evolution, risk management... **Moreover, this adaptation strategy may also have a direct impact on the organization of management teams' work** (adjustment of working hours, new equipment required, etc.). Depending on the context, these measures may be integrated into different strategies. The RAD (Resist - Accept - Lead) approach encourages thinking in terms of different types of trajectories, evolving with possible bifurcations depending on the observed effects of climate or socio-ecological dynamics.

Setting up a monitoring and evaluation system for the adaptation plan (or adapted management plan) seems essential to ensure that the chosen measures are implemented correctly, and to measure the results. Natur'Adapt offers a monitoring and evaluation system to track the effects of adaptation measures over time and adjust the strategy as needed. This system is based on three types of indicators: **performance indicators** that track the implementation of planned actions, **effectiveness indicators** that measure results against set objectives, and finally, **climate and biodiversity monitoring indicators** to detect changes and reassess the relevance of objectives and measures.

This monitoring is carried out on an ongoing basis over several years, with the possibility of annual revision, as part of a learning management approach that is reactive and adaptive to climatic uncertainties.

Needs and obstacles identified

- Management plans poorly adapted to climate change, and not considering long-term projections
- Lack of knowledge of existing approaches and available tools
- Lack of skills in terms of prospective analysis and planning

Proposed areas for action

- Strengthen the capitalization and dissemination of existing practices, approaches, and experiences
- Create channels for exchanging experience
- Propose a methodological guide adaptable to local realities
- Provide concrete and accessible examples of management plans that take climate change into account.

C. Mobilizing stakeholders and strengthening governance

Adaptation cannot be driven solely by managers. It requires a **participatory approach** and active networking with stakeholders across a wider geographical area. It is essential to define who to involve (local authorities, economic players, NGOs, users, researchers), how to involve them (participatory diagnoses, multi-stakeholder committees, ongoing awareness-raising) and how to build an effective communication plan, **while reconsidering the scope of intervention and therefore the stakeholders to consider** and involve in the protected area adaptation process.

The concept of **interdependence zone** refers to the area beyond the administrative boundaries of the protected area, but which influences (and is influenced by) its ecosystems. The idea is to take a systemic approach to management, including the surrounding environments, activities and stakeholders. In the context of climate change, this approach makes it possible to better take into account ecological flows (water, species, nutrients), strengthen connectivity between protected areas and coordinate actions and synergies with neighbouring territorial approaches.

Needs and obstacles identified

- Little or no dialogue with certain local stakeholders (farmers, fishermen, schools, local NGOs, media ...)
- Lack of understanding of the impacts of climate change on local lifestyles
- Skepticism or resistance to change
- Lack of institutional framework for real, ongoing stakeholder participation

Proposed areas for action

- Set up multi-stakeholder committees, including NGOs, local authorities and local communities
- Develop and share communication tools to raise awareness of climate change

3. PERSPECTIVES

Through the Think & Do Tank, the MBC aims to support the development of climate change–adapted management at the Mediterranean scale, through experimentation, networking, sharing, and the capitalization of expertise, experiences, and resources.

With technical support from RNF, the planned actions include:

- the organization of an online training on Natur’Adapt;
- Facilitating exchange sessions on the challenges, lessons learned, and best practices related to the application of the methodology;
- The concrete experimentation of the approach on a Mediterranean site.

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The Mediterranean Biodiversity Consortium is a coalition of regional environmental organizations — including MedWet, MedPAN, the The Mediterranean Small Islands Initiative (PIM), Tour du Valat, the International Association for Mediterranean Forests (AIFM), and IUCN Med — launched in 2021 in partnership with the Conservatoire du littoral. The Consortium works together to more effectively protect the natural wealth of the Mediterranean Basin across its various ecosystems (sea, islands, forests, wetlands, and marine protected areas).

The Think & Do Tank is an informal platform for reflection and exchange initiated by the Consortium. It aims to generate collective intelligence and foster a shared position on key emerging or dominant concepts related to biodiversity conservation, while also promoting their practical implementation.

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