VERTIGOLAB ECONOMIE & ENVIRONNEMENT

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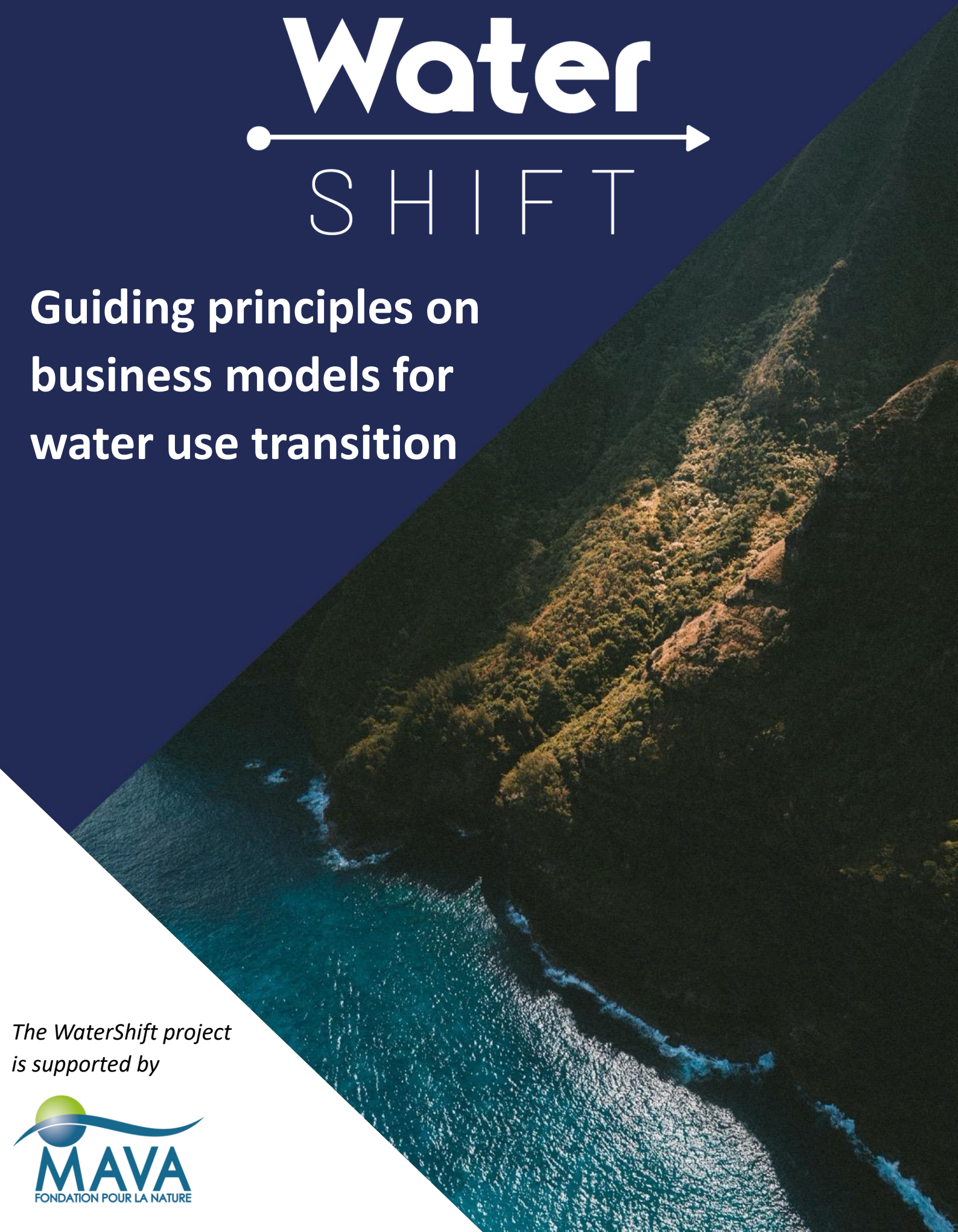
Water SHIFT

Guiding principles on business models for water use transition



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MAVA FONDATION POUR LA NATURE

This guide is part of the **WaterShift Project**, which aims to support the transformation of the economic models of sectors that have an impact on biodiversity and water resources in the Mediterranean.

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The MAVA Foundation finance and support partners and projects aiming to conserve biodiversity for the benefit of human and nature.

Vertigo Lab is a research and consulting firm in environmental economics that support companies and territories in transforming their economic models and strategies to accelerate the ecological transition.

BirdLife International is a non-governmental association that covers all continents, landscapes and seascapes to protect nature and birds particularly.

The International Union for Conservation of Nature is the world's leading authority on the state of the nature and conservation measures. This is a union of governments and civil society members.

THIS GUIDE IS INTENDED FOR

ECONOMIC STAKEHOLDERS

Farmers

Hotel and golf managers

Salinas managers

Presentation of sustainable practices to be implemented (adapted to economic and environmental issues)

CONSERVATION STAKEHOLDERS

Investors in impact financing

Companies, associations, NGO

Presentation of sustainable practices to support and address sustainability issues in the Mediterranean

TERRITORIAL STAKEHOLDERS INTERESTED IN SUSTAINABLE WATER MANAGEMENT

Water management companies

Public authorities

Presentation of collective sustainable water management practices to support and be implemented on a territorial scale

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A STEP-BY-STEP GUIDE

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1 WHY SHOULD YOU USE THIS GUIDE?

The Mediterranean region is at stake by 2050

WHAT ARE THE INVOLVED ENVIRONMENTAL RISKS?

The Mediterranean basin is currently one of the **most threatened economic regions in the world because of its exposure to environmental consequences' due to climate change. Both climate and non-climate risks are involved:**

Climate-related risks	Non Climate-related risks
	
▪ **Temperature rising.** By 2040, mean temperature will be at least 2.2°C over pre-industrial levels ▪ **Rainfall decreasing.** The estimated decrease is about 4% for each additional 1°C ▪ **Sea level rise.** It is estimated around 90cm and will directly impact agricultural land	▪ **Air and water pollution :** saltwater intrusion in aquifers, pesticides from agricultural runoff and industrial waste ▪ **Urbanization and land degradation** which reduce agricultural land ▪ **Overfishing and invasive species.** It threaten marine and freshwater biodiversity

Want to know more about water management in the Mediterranean?
→ Take a look at the "Framing study on business models for water use transition"

Current and future events threaten **the water cycle disruption that raise food security and sanitary issues.**

HOW IS WATER MANAGEMENT CORRELATED WITH THESE ENVIRONMENTAL RISKS?

- **Water availability decline**

The paradox: while only covering 2.6% of the freshwater resources, Mediterranean countries represent 7.4% of the world's population. Up to 50% decrease in freshwater resources available due to climate change is projected over the region by 2100.

The result: in the South and East of the basin, over 180 million people (i.e. 40% of Mediterranean population) have already suffered from water scarcity. This trend is increasing throughout the basin. Several countries are consuming more water than what is available in their territories.

- **Water quality degradation**

The paradox: Mediterranean economic development has been concentrated on coastal areas whereas the water quality is the poorest (both surface and groundwater sources).

The result: almost 50% of rivers do not reach the ecological status required by the Water Framework Directive mainly due to contamination in recharge areas, mismanagement during irrigation practices and over-exploitation of coastal aquifers.

- **Biodiversity loss**

The paradox: the Mediterranean is world known for its biodiversity hotspots, even as they are currently overexploited for energy and agriculture production**.**

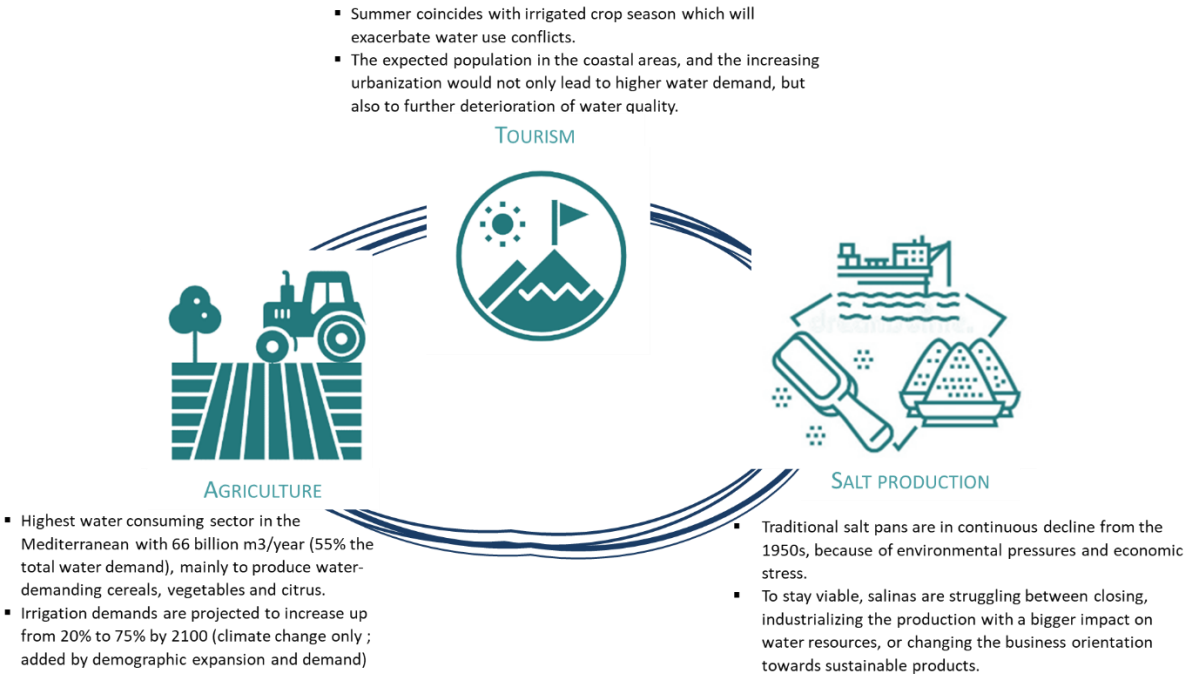
The results: predictions conclude that by 2100, 50% of the biodiversity areas will be burnt and 40% of endemic fish species could be extinct.

You are a stakeholder involved in one of the three most impactful economic sectors of the Mediterranean.

The Mediterranean economic development relies directly on water. All the water-related risks detailed above are highly dependent on the water management of specific impactful sectors.

Thus, it is essential to support the 3 most water-impactful sectors' transformation towards more sustainable businesses.

WHAT ARE THE THREE MOST WATER-IMPACTFUL SECTORS IN THE MEDITERRANEAN?



Want to know more about water management in the Mediterranean?
→ Take a look at the Plan Bleu; Mediterranean Experts on Climate and Environmental Change (MedECC)

You want to improve your water management as a Mediterranean stakeholder

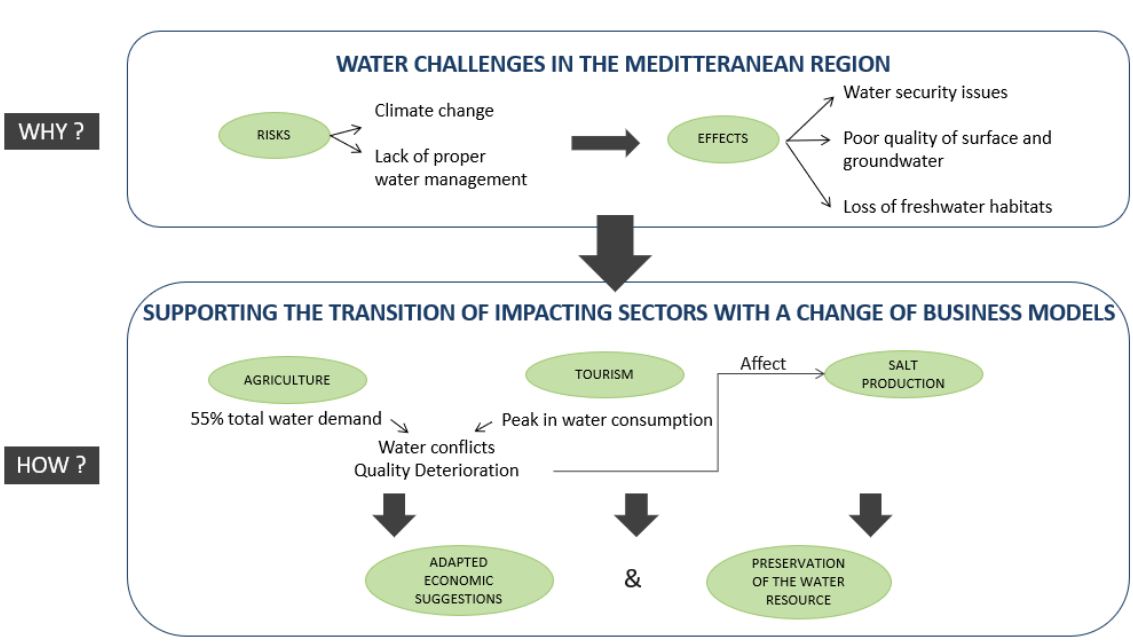
FROM IMPACTING PRACTICES TOWARDS SUSTAINABLE BUSINESS MODELS

Impacting practices are strongly correlated with business models and economic choices of companies. The impact of our targeted sectors on water resources and biodiversity is mainly caused by their practices. A presentation of alternative practices only is not enough to allow their implementation and effectively reduce the impact of sectors on water resources. Therefore, adapted economic suggestions are essential to trigger a change in practices.

Major business models that have an important impact on water management remain based on productivity objectives. Despite an increasingly important shift to alternative models (organic farming, responsible tourism, preservation of traditional salt pans), major economic constraints faced by these sectors can limit their ability to invest in new solutions.

THE WATERSHIFT PROJECT SUPPORTS IMPACTFUL STAKEHOLDERS TOWARDS MORE SUSTAINABLE BUSINESS MODELS AND PRACTICES

Even if the practices of the impactful sectors are related to unsustainable growth, we are convinced that they are the main levers to preserve water resources! The partnership has identified more than 30 good and sustainable practices on water resource, and how they need to fit to each company's business model to make them sustainable.

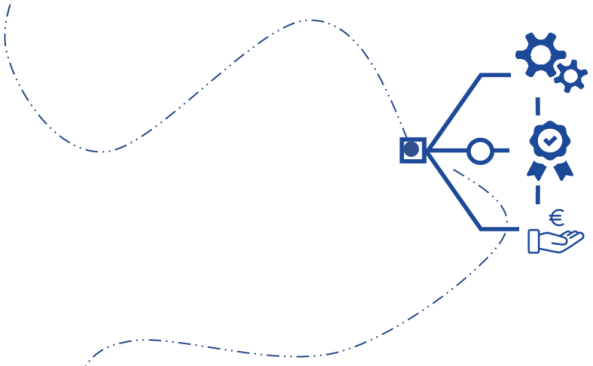


2 WHAT DOES THIS GUIDE PROVIDE?

The main objective of this guidebook is to **directly assist the transition of economic actors**, by identifying **sustainable business models based on pioneering actions and inspiring water saving practices**.

Adapted tools according to your level of interest towards water challenges in the Mediterranean

A insight of the **business model approach** to combine water challenges with economic realities.
The Watershift project considers the business models of companies to assess their needs and economic issues related to water. This approach aims at targeting adapted solutions that allow companies to remain sustainable.



A decision tree to facilitate the identification of the most appropriate solution according to business model changes and priority needs of stakeholder. Different levels of commitment for business model transition are presented.

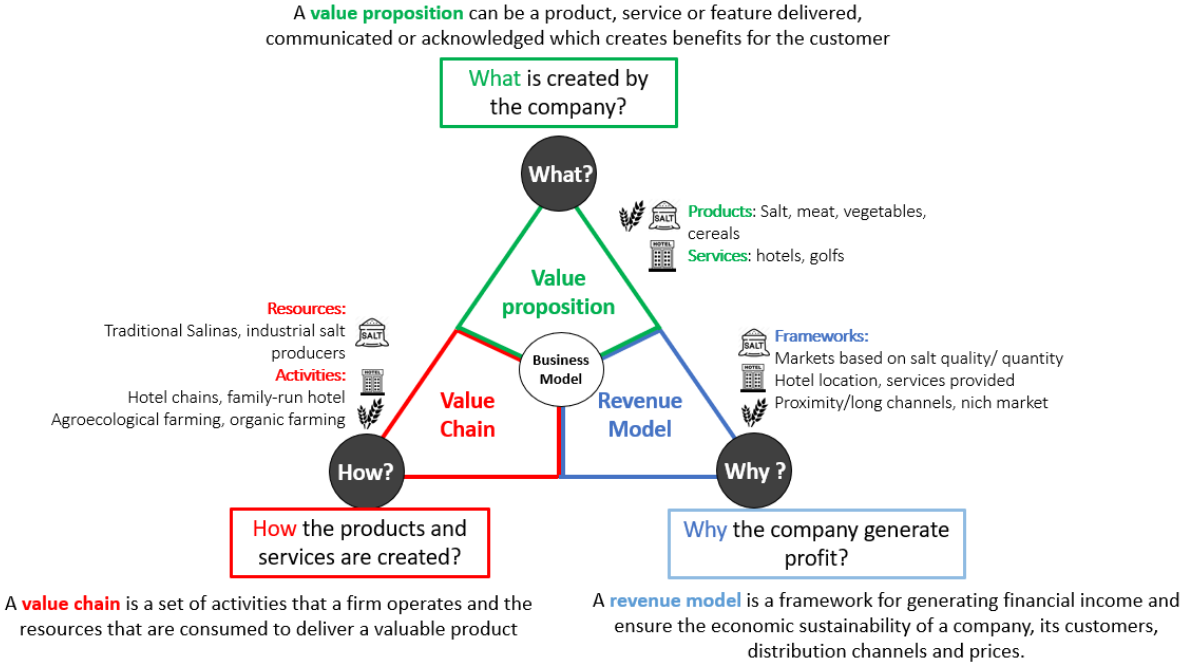
Good practices sheets
The agroenvironmental, social and economic advantages of each solution are then detailed in good practice sheets. They are stand-alone documents that are separated from this guide.

With an innovative approach, the WaterShift project develops and deploys ready-to-use tools to support both strategic and operational transformation of companies willing to engage towards more water-efficient practices.

3 WHAT IS THE BUSINESS MODEL APPROACH OF THIS GUIDE AND HOW TO USE IT?

A business model describes the principles by which a company **creates and captures economic value**. It identifies the value one organisation can deliver, which kind of profit the business aims at making, and how the business concretely sustains itself. It also details the activities and needed resources to operate.

IN CONCRETE TERMS, A BUSINESS MODEL CAN REPRESENT A COMPANY IN A SYNTHETIC SCHEME



Objectives of the Business Model approach are threefold

Enable a long-term transition of companies by presenting systemic solutions that consider the whole companies' viability.

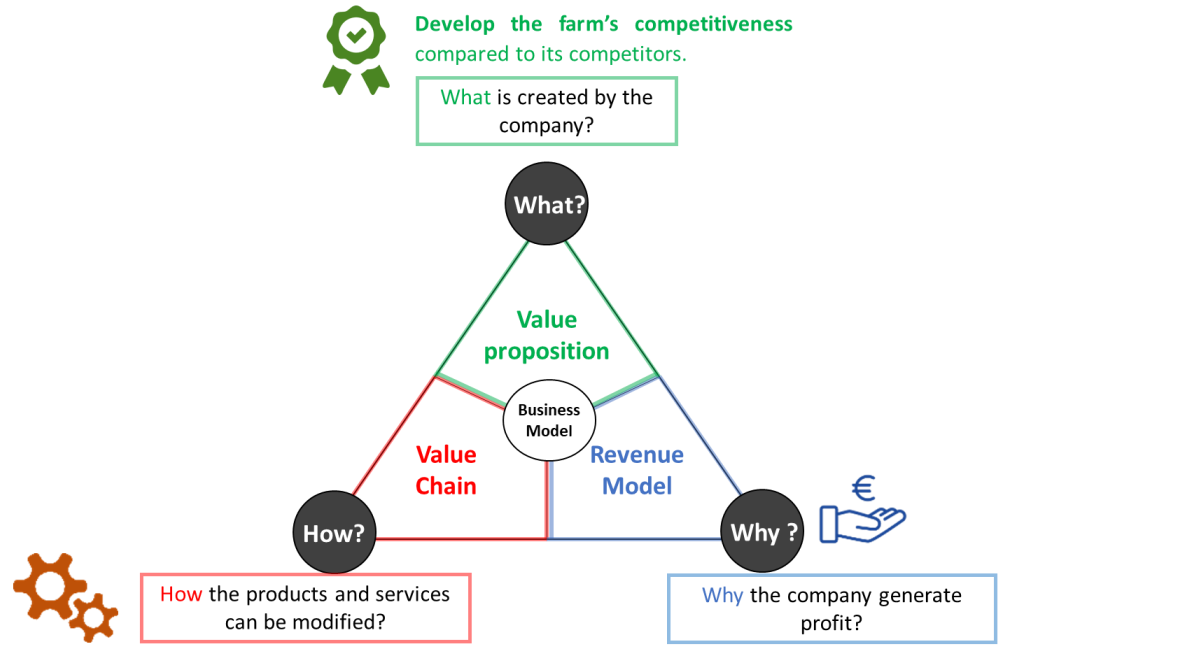
Ensure solutions' acceptability from companies: start by the economic challenges they face and propose sustainable solutions adapted to their context.

Allow a personalized choice of solution adapted to the diversity of business models and needs for each company.

ILLUSTRATION: CATEGORIES OF BUSINESS MODEL CHANGES FOR THE AGRICULTURE SECTOR

The eight good farming practices can bring more or less significant changes on farming companies' business model, when implementing them. The chosen approach is to **support the company in leading to the most adaptable and relevant practices to limit the impact on water, while remaining viable.**

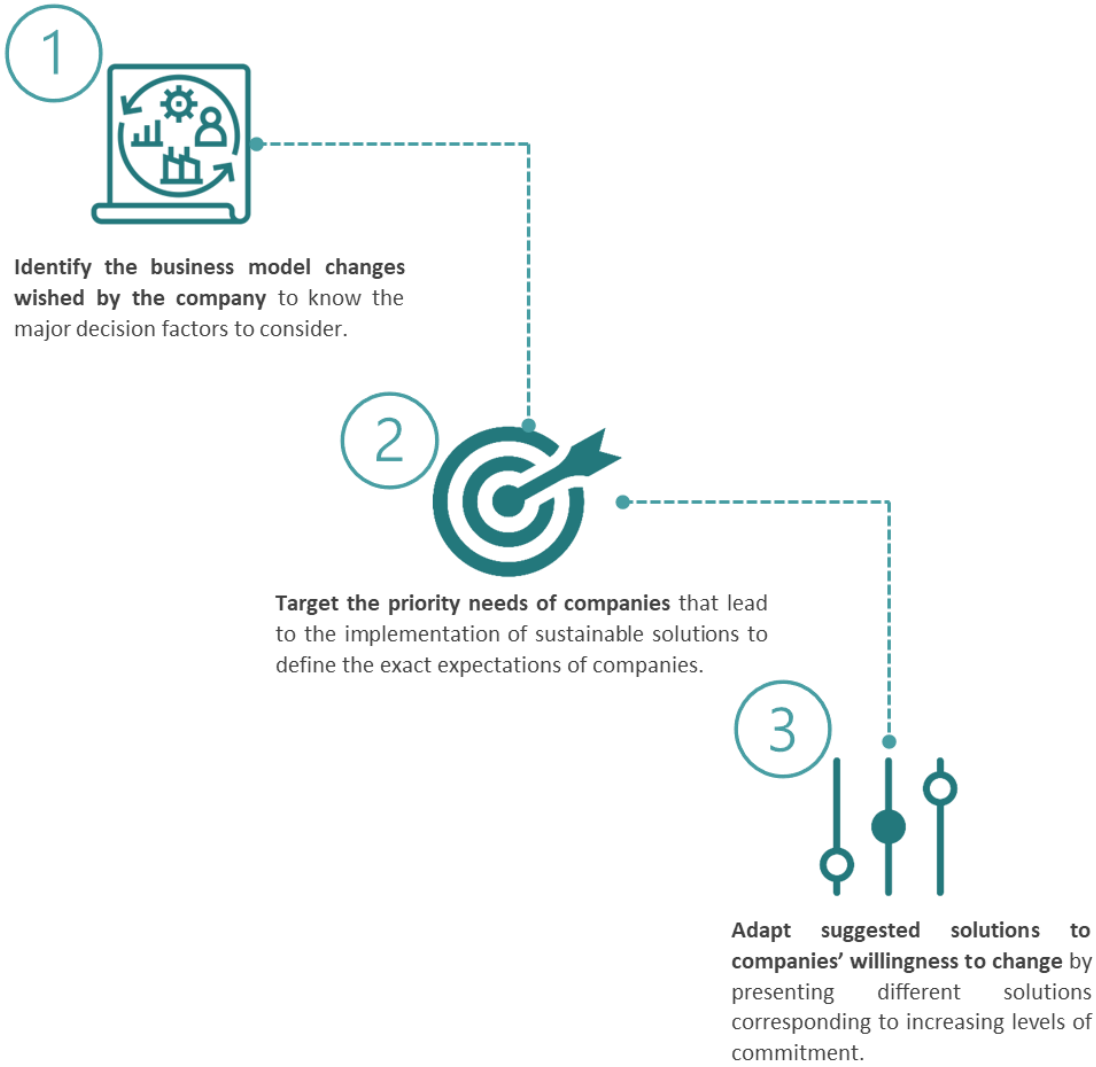
For agriculture, we identified 3 main business model's changes due to good practices implementation:



Even if they are all necessary for the economic development of companies, these three categories of economic challenges are sector-distinct and present very different levels of importance depending on the company.

A three-step approach to guide economic actors towards less impactful practices and business models for water management

The general frame when engaging into the implementation of good practices will be split into 3 main steps

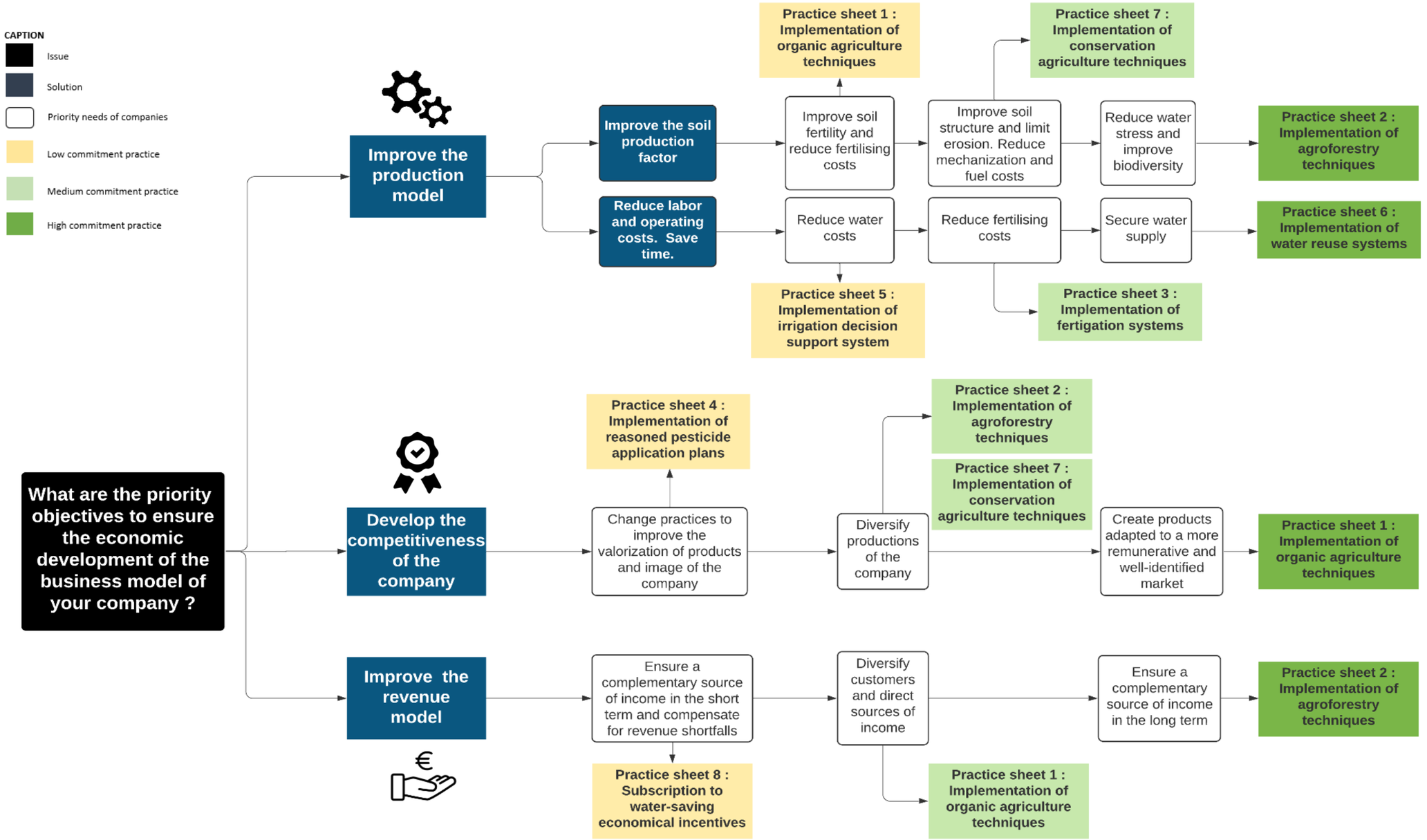


Sustainable practices' implementation depends on both company's needs and willingness to change.

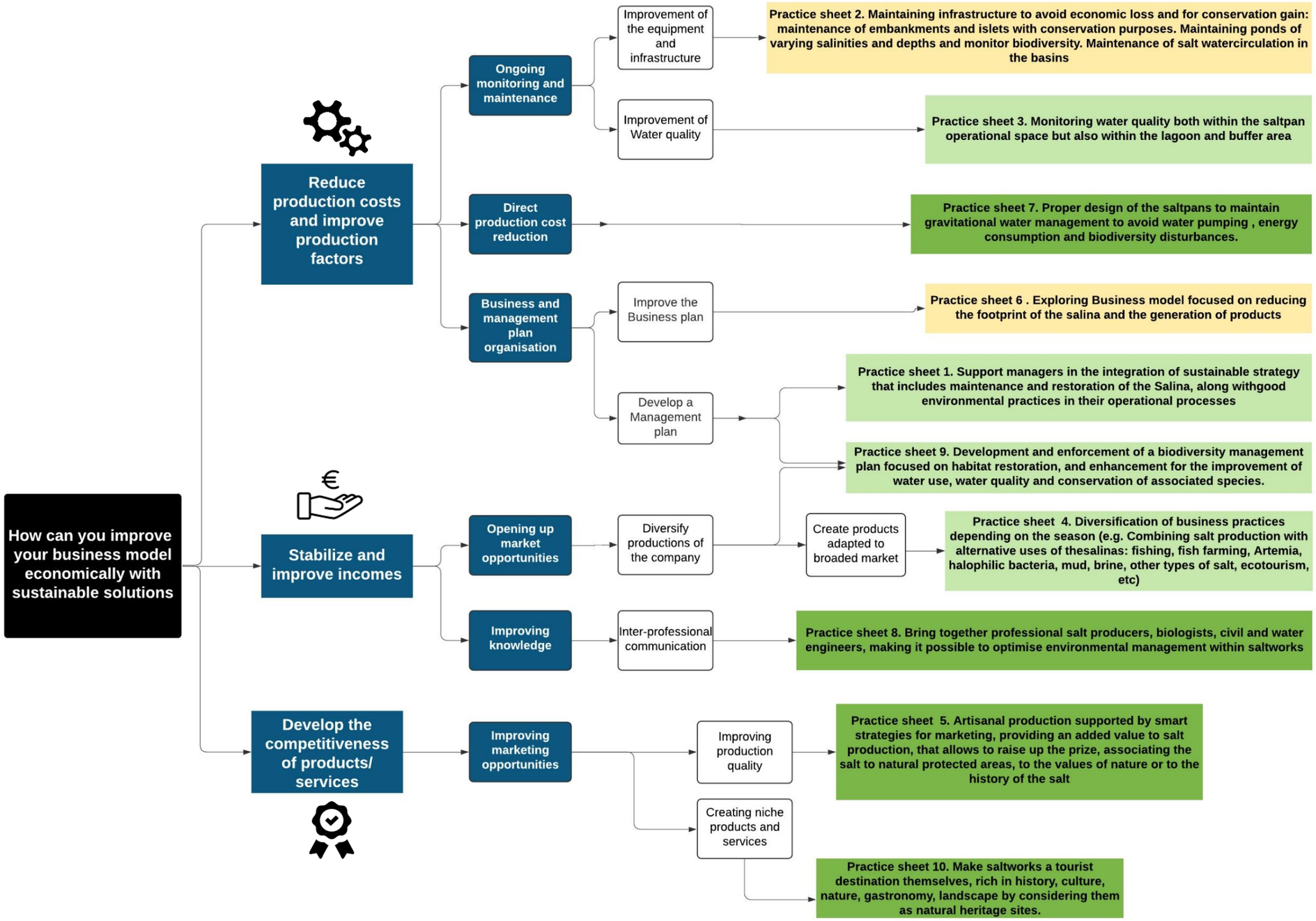
Two companies with similar economic needs may have different options according to their willingness to change. Once the company has identified its priority needs, different levels of commitment can be considered: from a slight adjustment of the company's operations to a total change of its production model.

4 HOW TO FIND THE RIGHT SOLUTION FOR YOU?

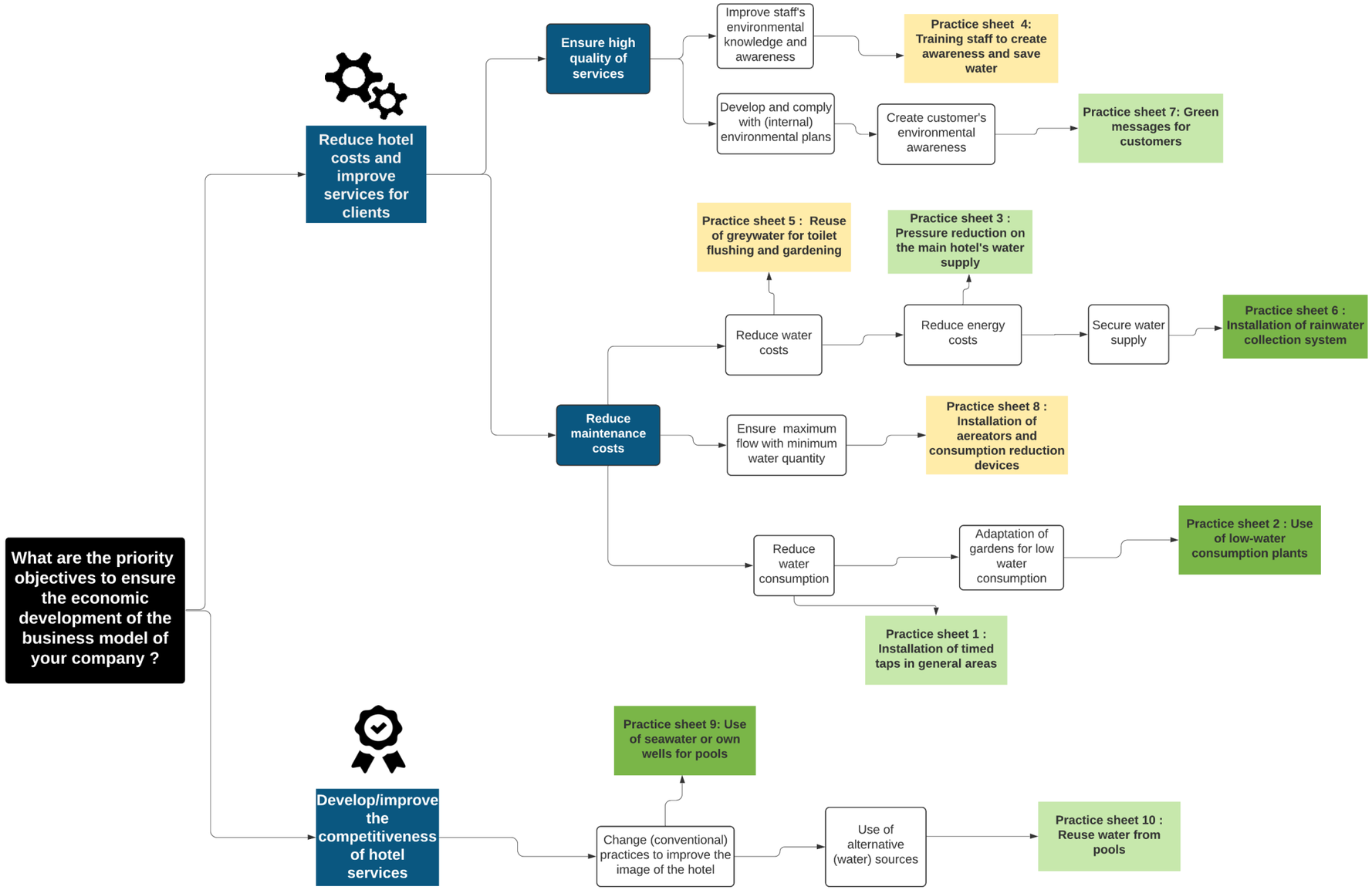
For agriculture stakeholders



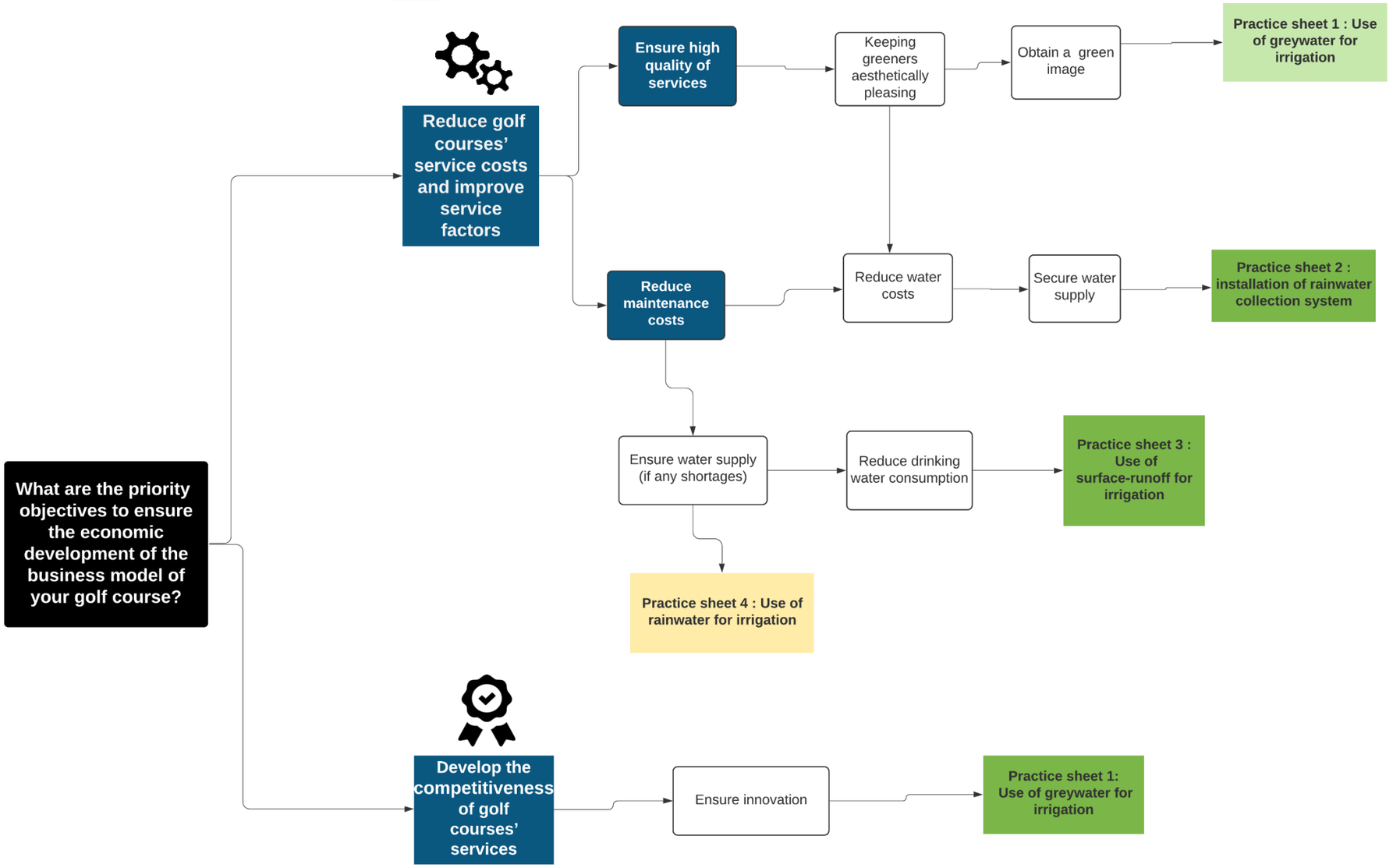
For salt production stakeholders



For tourism stakeholders (hotels)



For tourism stakeholders (golf courses)

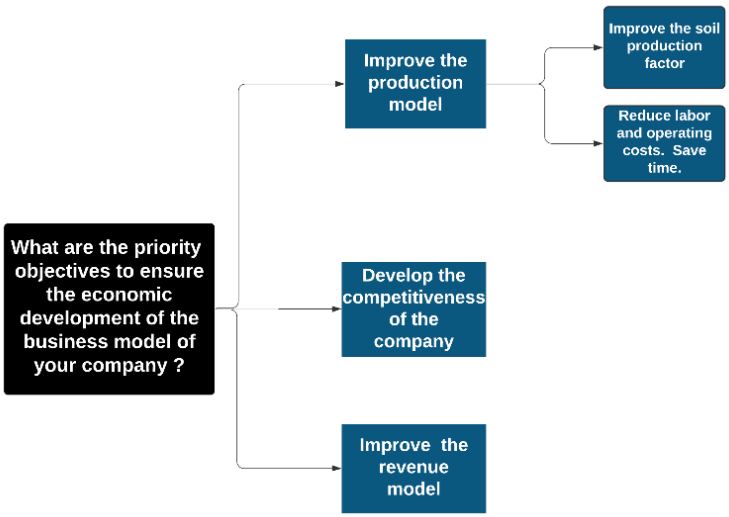


How to read the decision tree?

Decision trees are made to make the connection between the economic challenges faced by companies and sustainable solutions that we propose. They facilitate the identification of the most relevant practice for each company regarding the three-step approach presented below:

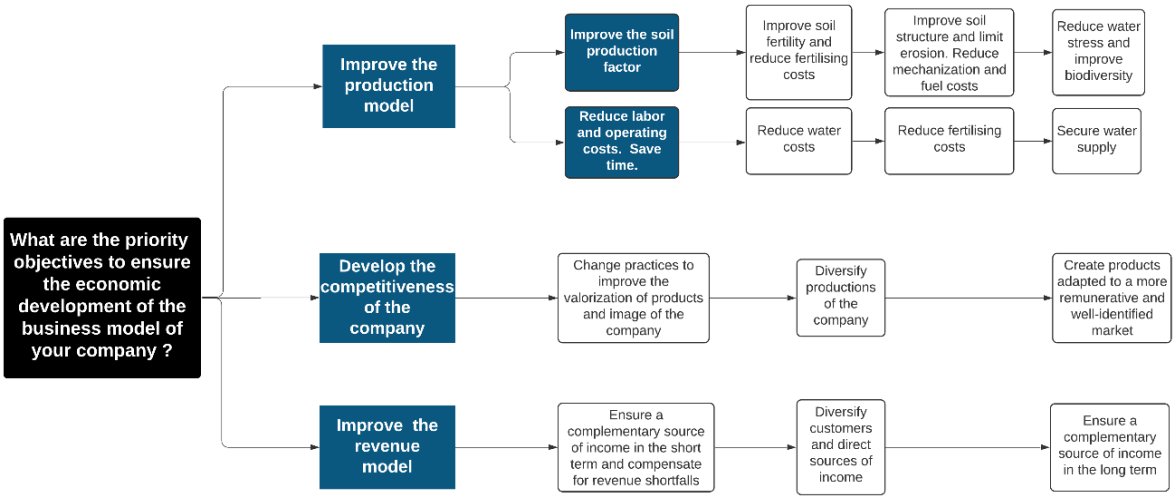
1 IDENTIFY THE BUSINESS MODEL CHANGES WISHED BY THE COMPANY TO KNOW THE MAJOR DECISION FACTORS TO CONSIDER

The first node of decision trees represents **the main categories of business model changes per sector**, based on our business model approach.



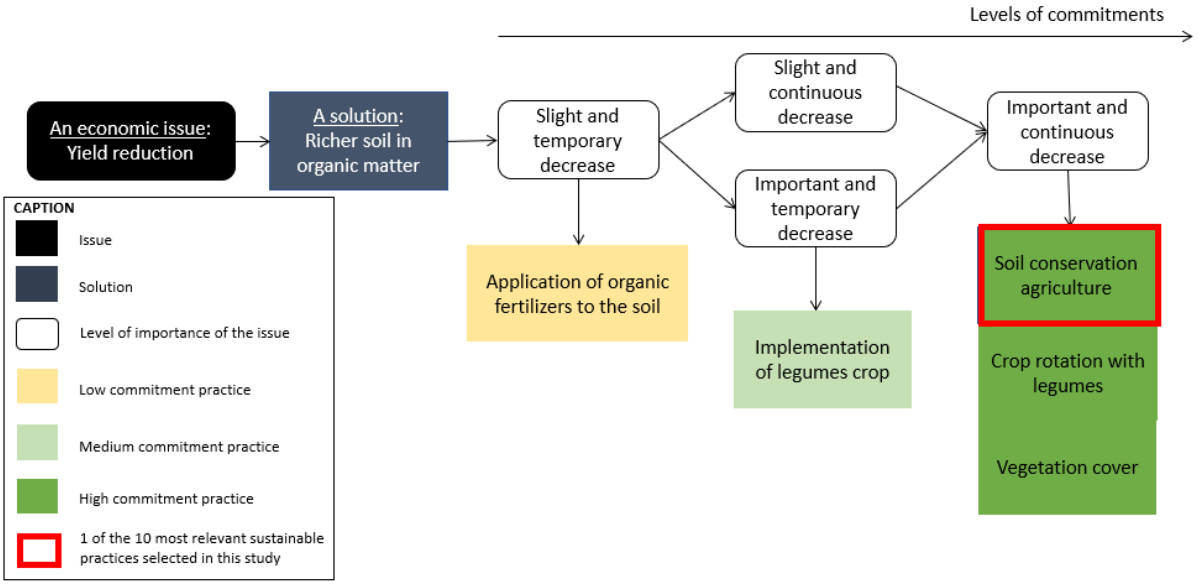
2 TARGET THE PRIORITY NEEDS OF COMPANIES THAT LEAD TO THE IMPLEMENTATION OF SUSTAINABLE SOLUTIONS TO DEFINE THE EXACT EXPECTATIONS OF COMPANIES

For each of the 3 business model changes, priority needs of companies related to these changes are then detailed. **Each sustainable solution is placed in the decision tree according to the set of priority needs it addresses.**



3 ADAPT SUGGESTED SOLUTIONS TO COMPANIES' WILLINGNESS TO CHANGE BY PRESENTING DIFFERENT SOLUTIONS CORRESPONDING TO INCREASING LEVELS OF COMMITMENT

The business model approach allows to consider both the needs of company that can facilitate the implementation of new practices and different levels of willingness to change. **The expected level of commitment of the company corresponds to the level of advancement of the solution in the decision tree.** It leads to successive "commitment steps", the lower levels being at the left of the tree and the higher at the right.



Finally, once the right solution has been identified from the decision tree, **each solution is detailed in good practice sheets** to assist companies in its implementation: benefits, points of attention, feedbacks in Mediterranean, etc.

5 HOW TO IMPLEMENT THE RIGHT SOLUTION?

A good practice sheet is proposed for sustainable solutions or case studies depending on the sector.
Each good practice sheet gathers:

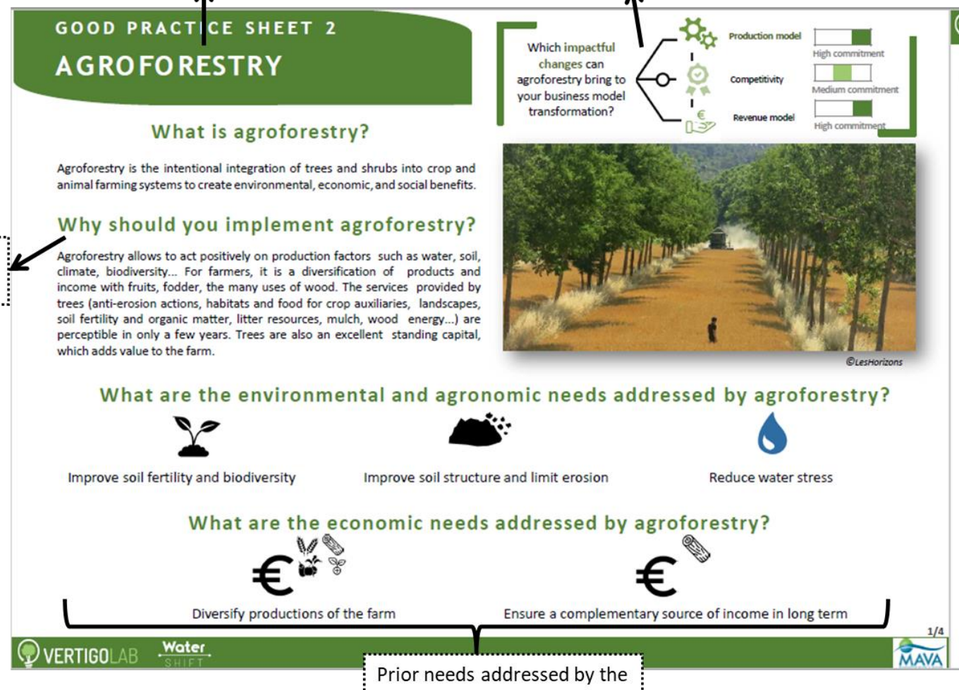
- The main advantages of the solution, as well as the priority needs it addresses at an environmental, social and economic level.
- The key figures and indicators related to the impacts to bring quantitative data and scientific research.
- The triggers that lead to the implementation of the solution as well as the benefits that economic stakeholders can obtain from it. Recommendations and major points of attention in the implementation of each solution are also detailed and based on feedbacks.
- Some suggestions of documents, projects, networks, and funding sources to deepen the good practice knowledge at a Mediterranean scale are detailed in each good practice sheet.

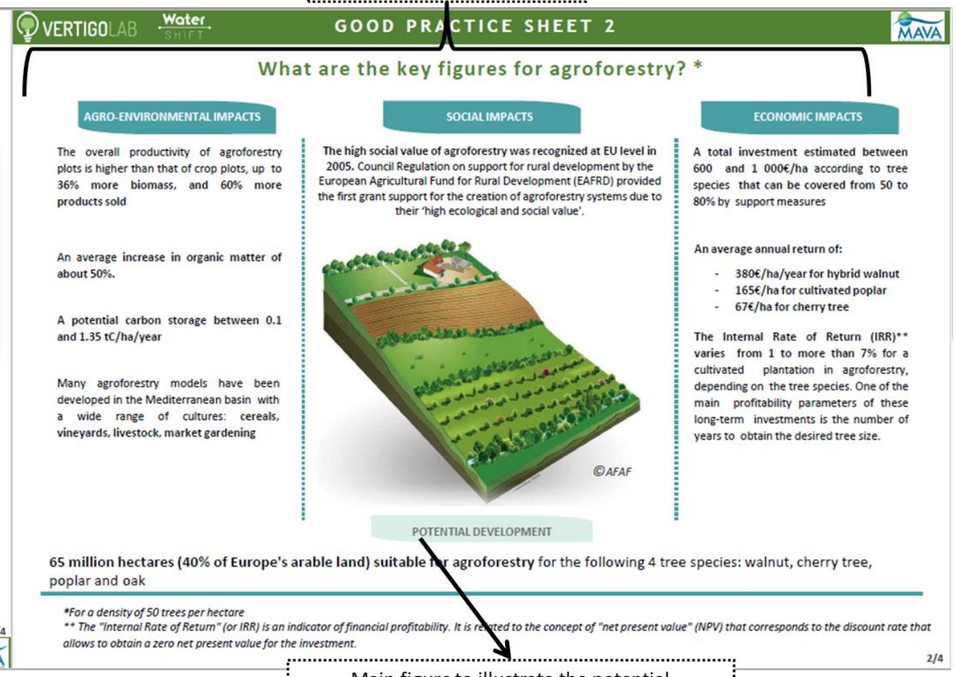
Practice title and number

Decision tree reminder for the good practice

Quantitative impacts of the good practice for sustainable development

Main advantages of the solution





Prior needs addressed by the good practice

Main figure to illustrate the potential development of the good practice

Main farm issues addressed by the good practice

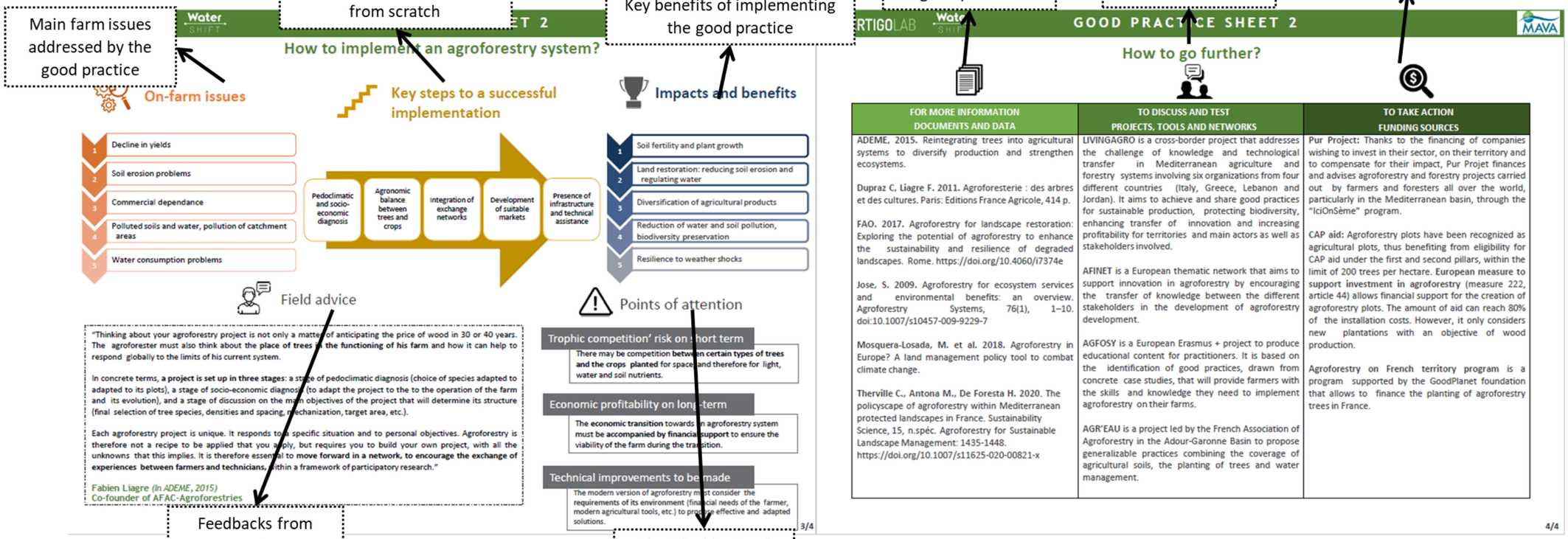
Up to 5 key steps to implement the good practice from scratch

Key benefits of implementing the good practice

Complementary documentation if you want to deepen the theory of the good practice

On-going projects that focus on the good practice. To be joined at any-moment

Existing funding sources that can bring financial support to your ready-to-implement project



Feedbacks from pioneers' actors

Identified limits of the good practice

Good practice sheets will be presented in separate, sector-specific workbooks to develop documents adapted to the sectors' needs.

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