

Global Biodiversity Guidelines:

The framework for Pernod Ricard to take a leadership position in the drink's industry, strengthening our commitment to nurturing, preserving and helping biodiversity thrive.

01

CONTEXT



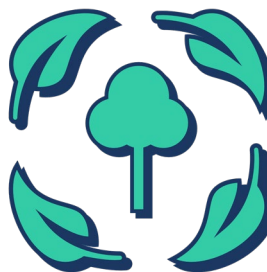
Pernod Ricard

What is BIODIVERSITY



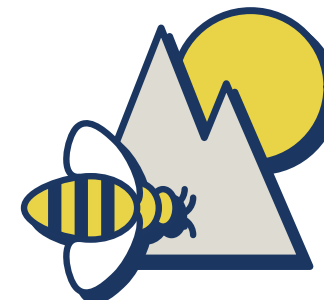
BIODIVERSITY

The variability among all forms of life (vegetal, animal, microorganisms), living either in terrestrial, marine or other aquatic ecosystems. This includes the diversity within species, between species and of ecosystems.



ECOSYSTEM

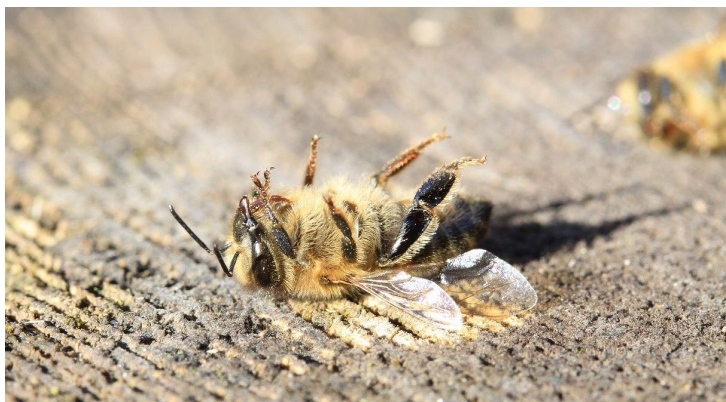
A dynamic set of living organisms that interact with each other and with the environment (soil, climate, water, light) in which they live. The balance of the ecosystem is based on the interdependence between species.



LANDSCAPE

An area of land that contains a mosaic of ecosystems, including human-dominated ones as well as wild ones.

What is the current status of biodiversity in the world



“ Nature is declining globally at a rate unprecedented in human history – and the rate of species extinction is accelerating, already causing serious effects on human populations worldwide ”

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

→ Mass extinction and signs of collapse

- **6th mass extinction** of biodiversity due to production and consumption patterns
- **1 million species are at risk** of extinction (IPBES 2019)
- Around **80% of flying insects** have disappeared in Europe for 30 years (PLoS One study, Germany 2017)
- **60% of the population of vertebrate species** have declined since 1970 (IPBES 2019)

→ **This could cause a global collapse of ecosystems, affecting both wildlife and agricultural ecosystems alike**

What is being done globally to address the biodiversity crisis

→ The international community has been creating various conventions* aiming at protecting specific ecosystems, landscapes and/or groups of species in addition to developing global biodiversity targets such as:

- The United Nations Sustainable Development Goals (SDGs) – numbers 14 and 15 address biodiversity on land and at sea
- Aichi Targets of the Convention on Biological Diversity (CBD)

→ Pernod Ricard commitments directly support these global targets as we focus on conservation projects that:

- “protect, restore or promote the sustainable use of terrestrial ecosystems” (SDG 15)
- “reduce the direct pressures on biodiversity and promote sustainable use” (Strategic goal B of Aichi Targets)
- and/or “improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity” (Strategic goal C of Aichi Targets).



Convention on
Biological Diversity



*For more details, see appendix 3

Why is biodiversity important for Pernod Ricard

→ All our products come from nature, through raw materials that are highly dependent on natural processes:

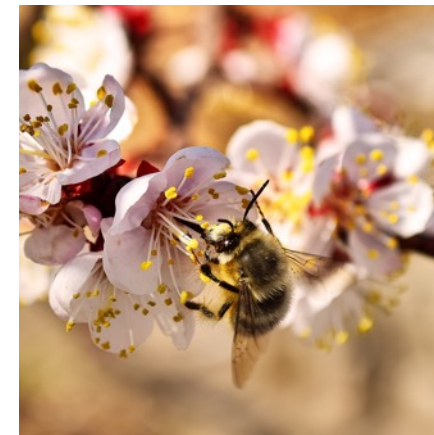
- Insects ensure the pollination of crops – including those essential to our business
- Balanced ecosystems contribute to the reduction of pest and diseases on crops
- The flavors and botanicals we use to produce our products all originated from wild plants found in nature

→ Botanical diversity is an untapped opportunity for innovation

- Ricard for example would never have existed were it not for anise plants!

→ The quality of landscapes gives more value to our brands

- Brand assets, imagery used in advertisements, brand identity and consumer loyalty

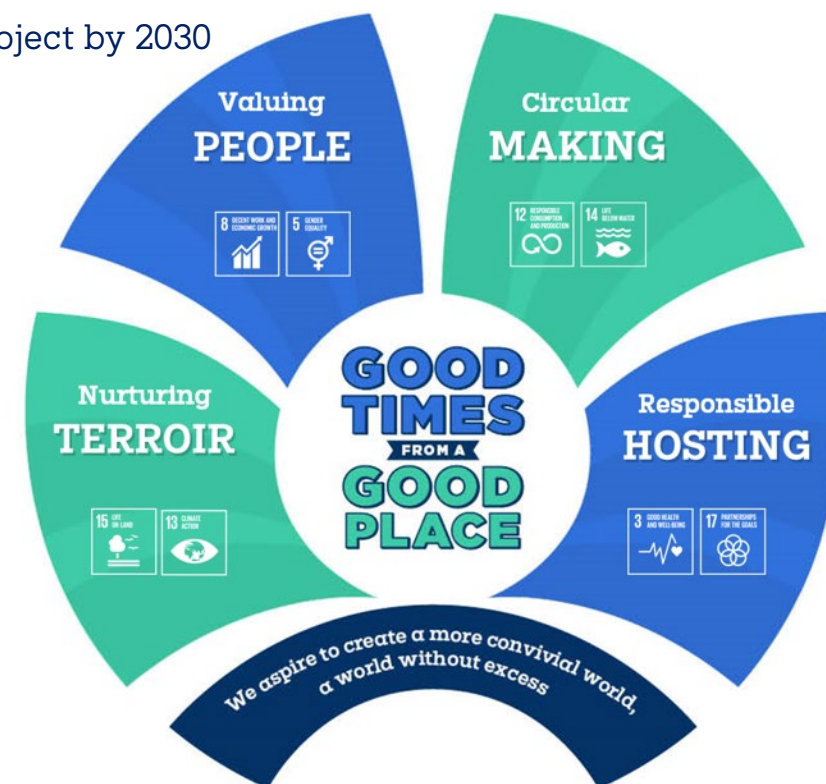
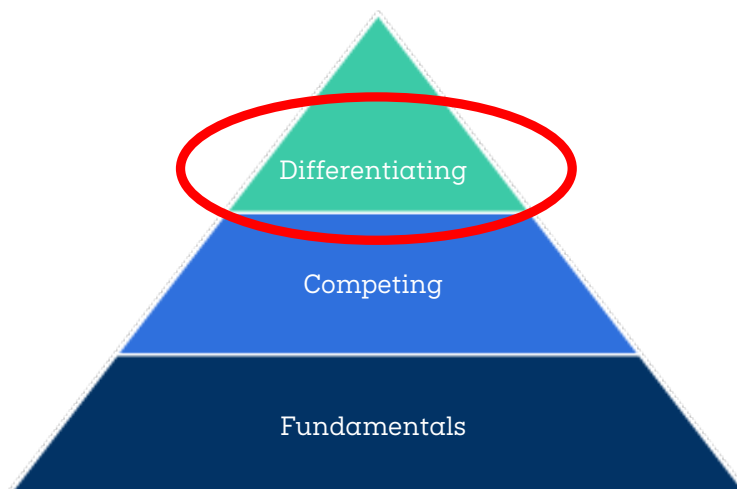


Through the Paul Ricard Oceanographic Institute, the Group is committed to protecting oceans, and has access to scientific expertise in this area.
<https://www.institut-paul-ricard.org/en/>

Pernod Ricard's commitment to biodiversity

We will nurture every terroir and its biodiversity and respond to the challenges of climate, to ensure quality ingredients now and for generations to come.

- 100% of Group affiliates are required to engage in a strategic biodiversity project by 2030
- **Deadlines:**
 - ⇒ FY20: define Group biodiversity guidelines
 - ⇒ FY21 – FY22: selection of biodiversity projects by all affiliates



02

CRITERIA FOR SELECTING BIODIVERSITY CONSERVATION PROJECTS



Pernod Ricard

Adopt a systemic and holistic approach *impacting various aspects of biodiversity*

- ✓ Actions should address issues at the landscape and ecosystem level...



BBOP principle #3 explains this approach :

Programmes should be "designed and implemented in a **landscape context** to achieve the expected **measurable conservation outcomes** taking into account available information **on the full range** of biological, social and cultural values of biodiversity and supporting an ecosystem approach".



- ✓ ...rather than at the species level

- Avoid single species protection, unless it is a predator with a clear relationship with a brand (ex: snow leopard in Altaï).
- Avoid projects addressing cultivated crop varieties (ex: vine selection) - these can be implemented as projects to contribute to sustainable agriculture (action TER-04 of S&R Roadmap).

Selection process for biodiversity ecosystem conservation projects

The loss or degradation of natural ecosystems (and habitats) driven by agricultural expansion is one of the main causes of biodiversity loss

Objectives to protect and restore ecosystems:

- Restore degraded or polluted ecosystems
- Create wildlife sanctuaries
- Develop or introduce endemic species to rebuild robust ecosystems
- Protect patrimonial species and fight against the loss of diversity
- Develop awareness and capability to protect existing ecosystems

Scientific robustness:

- Projects informed by science and/or supported by NGO conservation organisations
- If no data is currently available, projects can focus on biodiversity knowledge/scientific research, providing they also have “in the field” work aiming at the protection or restoration of the ecosystem (ex: research on natural pollination in fennel)
- Collaborative partnerships must be able to quantify and provide verification of the delivery of results

Criteria for biodiversity project selection

✓ Relevance

- Projects linked with our supply chains, our brands, our community
- Projects related to our environmental impacts (proportionality at scale with affiliate size and reach)

✓ Collaboration & local expansion

- Explore existing multi-stakeholder partnership
- Wide stakeholder engagement to expand the project beyond our sphere of influence

✓ Long-term commitment

- Projects with impacts for at least as long as the project/partnership in place, ideally indefinitely
- Not a one-shot project
- Ideally a 10-year project (minimum 5) to have a lasting positive impact



How to measure positive impact: General indicators

Two essential indicators to monitor the deployment of the guidelines:

- 1. Number of initiatives implemented by all Group entities**
- 2. Type, size and location of all habitat areas protected or restored**

Other, more specific indicators could be:

- Number and type of species reintroduced or reappeared
- Number and type of species of trees planted
- Evolution of water quality in the area
- Any other environmental measures such as microbial soil samples



..... Selection criteria & measurement: Overview

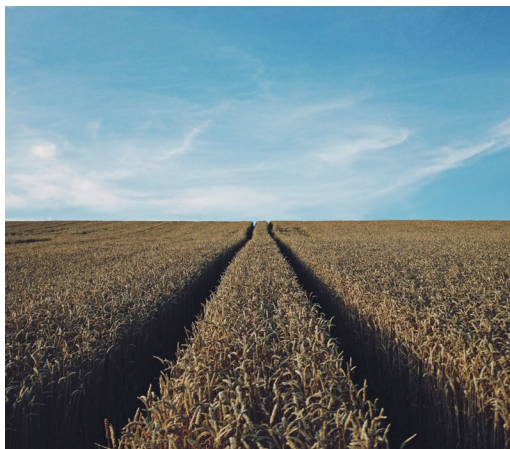
Projects must be chosen/based on:

- ✓ Scientific robustness
- ✓ The protection or restoration of ecosystems to drive impact on various aspects of biodiversity
- ✓ Actions that address issues at the landscape and ecosystem level rather than the species level
- ✓ Relevance
- ✓ Long-term commitment
- ✓ Collaboration & local expansion

Projects must monitor:

1. Number of initiatives implemented by all Group entities
2. Type, size and location of all habitat areas protected or restored

Examples of biodiversity topics that could be addressed



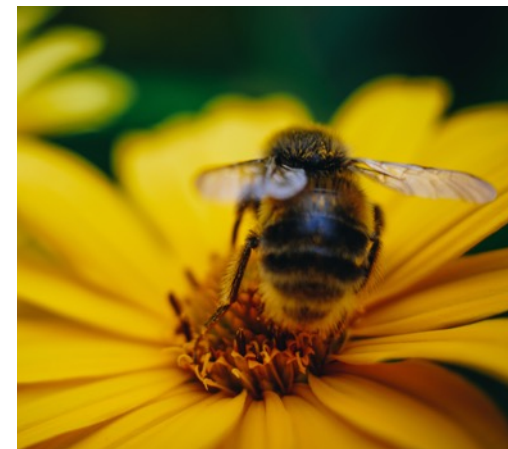
→ Restoring biodiversity in agricultural landscapes

- Green corridors, edges, woods, rivers



→ Protecting/restoring wetlands

- Rich & endangered fauna/flora - high carbon level in soil
- Mangroves, swamps
- Riparian margins to streams to lakes, estuaries



→ Protecting insects and pollinators

- They play a key role in ecosystem services
- Seriously threatened

→ Protecting/restoring forests

- Deforestation is a major contributor to CO2 emissions
- Forest are high diversity ecosystems

03

SELECTION GUIDELINES



Pernod Ricard

Pernod Ricard entities

A. Classic Brand Cos

- TAC / CBL / IDL / MMPJ / PRW / HCI

B. Market Cos with a local Brand Co role

- Manufacturing or copacking activities
- Example: PR USA, PR Canada, PR Mexico, PR Brasil, PR Argentina, Pernod Ricard France, PR Espana, PR Italia, YBC, Jan Becher, Wyborowa, PR Finland, PR Deutschland, PR Rouss (Altai)

C. Market Cos

- Only distribution role, no Brand Co role, even locally
- Examples: PR Belgium, PR Japan, PR Colombia...

D. Other entities

- Example: PR HQ

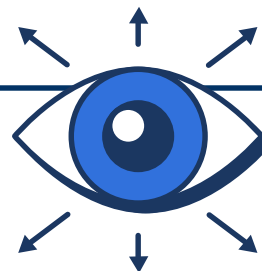
Pernod Ricard entities

A. Guidelines for classic Brand Cos

- ➔ **Link the initiative to your supply chain ('Terroir') of a key or emblematic ingredient. If not directly linked to the ingredient, it should at least be implemented in the same landscape where the ingredient is being produced.**
- ➔ **Also consider major biodiversity opportunities located in the community where our operations sites operate**
 - **Examples:**
 - Protection of the alpine areas where wild yellow gentiane is harvested
 - Restoration of coastal ecosystems, sea shores and mangroves for coconut
 - Restoration of the Jacobs' Creek river and the creation of a green belt around the river among the vineyards
 - Conservation support of the NZ Falcon in Marlborough linked to Brancott wine



An example of biodiversity projects focused on a terroir



Ricard is committed for the biodiversity
ALREADY A YEAR OF EXPERIMENTATIONS

What are we talking about ? ...

About a 3 years scientific PhD started in November of 2018 by our PhD student Lucie Schurr. This study has 3 research aims:

- 1- The identification and the structuration study of the flowering insects communities in the plateau de Valensole/fennel flowering massive crops.
- 2- The determination of the fennel reproductive system. Then the analysis of the insect abundance and diversity effect on the fruit and seed set, and also on the yield in anthesis.
- 3- The fennel massive flowering crops in the Plateau de Valensole, which resources for the insects ?

THE ANETHOL
The anethol ($C_{10}H_{18}O$) is the molecule responsible of the aniseed flavor of the fennel. We found this molecule in diverse plants in the fennel where it is mostly present in the fruits and seeds. In this study, the anethol is quantified in the fruits from the different experimentations.

THE PURPOSE
The purpose was to quantify the reciprocal benefits of the fennel crop pollination by insects in the Plateau de Valensole, both for farmers and biodiversity.



Test 3 : Estimate the resource available to insects from fennel crops

We estimate the duration of the different fennel umbel flowering stages and the number of fennel flowers per hectare. Nectar and pollen samplings were made to estimate the resource quantity produce per fennel flower. We compared the nectar quantity and the sugar rate of nectar between the fennel and the major crop of the plateau de Valensole: the lavandula.

Beekeeping implication?
A partnership is established with the Association for the beekeeping development in Provence (ADAPI) to quantified the use of this resource by the honeybees and study the impact of fennel crops on the colonies' development.

To do this, experimentations were set up to compare a close fennel crop apiary and a far away fennel crop apiary for two features:

- colonies "health" criteria monitoring
- harvest, and analyze of the quantity and origin (fennel or not) of brought by bees pollen, putting pollen traps in the entrance of hive


Pernod Ricard New Zealand



This wetland restauration project was initiated in 2006 by Pernod Ricard's Vineyard Manager and Landscape Gardener to re-establish New Zeland native plant and fresh water ecology systems for native fresh water species.

Pernod Ricard entities

B. Guidelines for Market Cos with a local Brand Co role

→ **The project should ideally be linked with the supply chain of an ingredient of a local brand**

- See rules applying to classic Brand Cos
- Example: protecting local forest ecosystems in villages growing agave in Mexico (*)

→ **If this is not possible, it should be connected to the brand image**

- Example: protection of the snow leopard in Altaï for PR Rouss

→ **If none of these options are possible, consult with HQ**

(): idea for example purposes only*

Pernod Ricard entities

C. Guidelines for pure Market Cos

→ **Smaller markets should coordinate at the regional level in order to have a significant impact through the consolidation of resources**

- Example: identify one unique project for African affiliates
- The same applies to pure MCs in Latin America and Europe, South East Asia

→ **Large markets should identify a specific projects, ideally located in the country, or join a regional project if relevant**

→ **Project type selection**

- Due to the absence of a physical terroir (no supply chain), the project should target a given ecosystem particularly important from an environmental standpoint
- We identify mangroves as an ecosystem of major interest: this could be a collective cause for Africa, Latin America, Asia (see Appendix)
- Do reach out to local experts or universities to understand the pressing issues in your areas and find out where they need help



Steps to follow to build a project

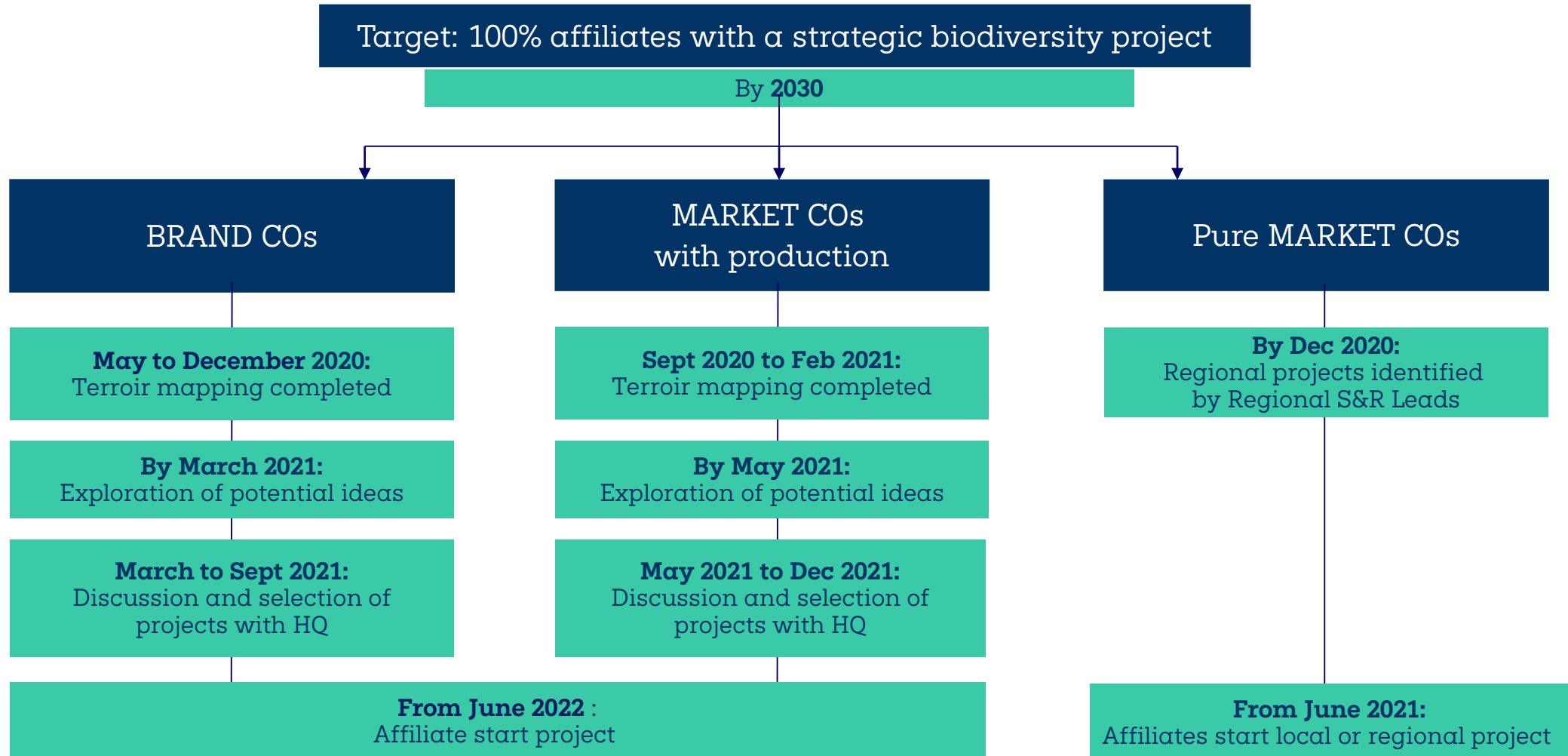
- 1** Evaluate where your impacts or opportunities are (*)
- 2** Select a project and demonstrate why it is important in terms of biodiversity outcomes (fill out survey/send to HQ for discussion)
- 3** Identify a recognized scientific partner
 - Biodiversity expert, NGO, University, etc...
- 4** Design the project
 - Governance structure
 - Action plan
 - Methods and metrics for reporting on outcomes and impacts
 - Budget
- 5** Submit your ideas to HQ for validation
- 6** Implement
- 7** Analyze
- 8** Share

**Using terroir mapping toolbox*

Steps to follow for project selection



Timeline



04

APPENDIX



Pernod Ricard

Appendix 1:

The importance of Mangroves

→ Blue carbon

- Oceans are the largest carbon sink on earth. Dissolved organic matter in the oceans represents 700 Gt of CO₂, more than the 500 to 600 Gt fixed in forests. Out of all the biological carbon captured in the world, over half is captured by marine living organisms hence why it is referred to as blue carbon. Mangroves and marine meadows are particularly efficient in capturing carbon through photosynthesis and hold it in their sediments for years.
- Coastal ecosystems play a critical role in the reproduction of all marine species, plants and animals (fish, molluscs, corals, plankton, etc), sustaining both terrestrial and marine life.
- They are under severe threat due to human pressure (agricultural, industry, urbanisation): **up to 7% of these ecosystems are destroyed annually!**



Appendix 2:

Why pollinators are a meaningful cause

→ What are pollinators?

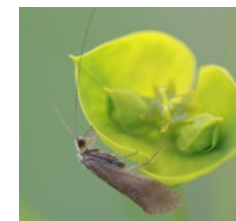
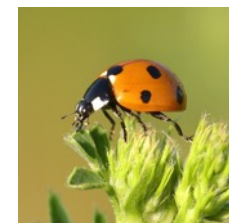
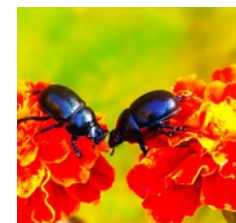
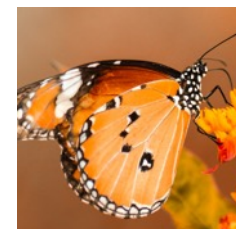
- Highly diverse group consisting of hundreds of species, not only bees
- Mainly butterflies, moths, bees and beetles

→ They are in rapid decline

- **80% of the biomass of insects has disappeared in the last 25-30 years!**
- Mainly because of habitat destruction, intensive agriculture, use of insecticides and climate change

→ They are vital to the health of ecosystems

- 87% of all flowering plant species are pollinated by insects
- 35% of global food crops are partially pollinated by insects
- Insects also provide other vital services such as biological waste disposal
- The decline of insects contribute to the decline of birds eating them



Appendix 3:

Policy response to the biodiversity crisis

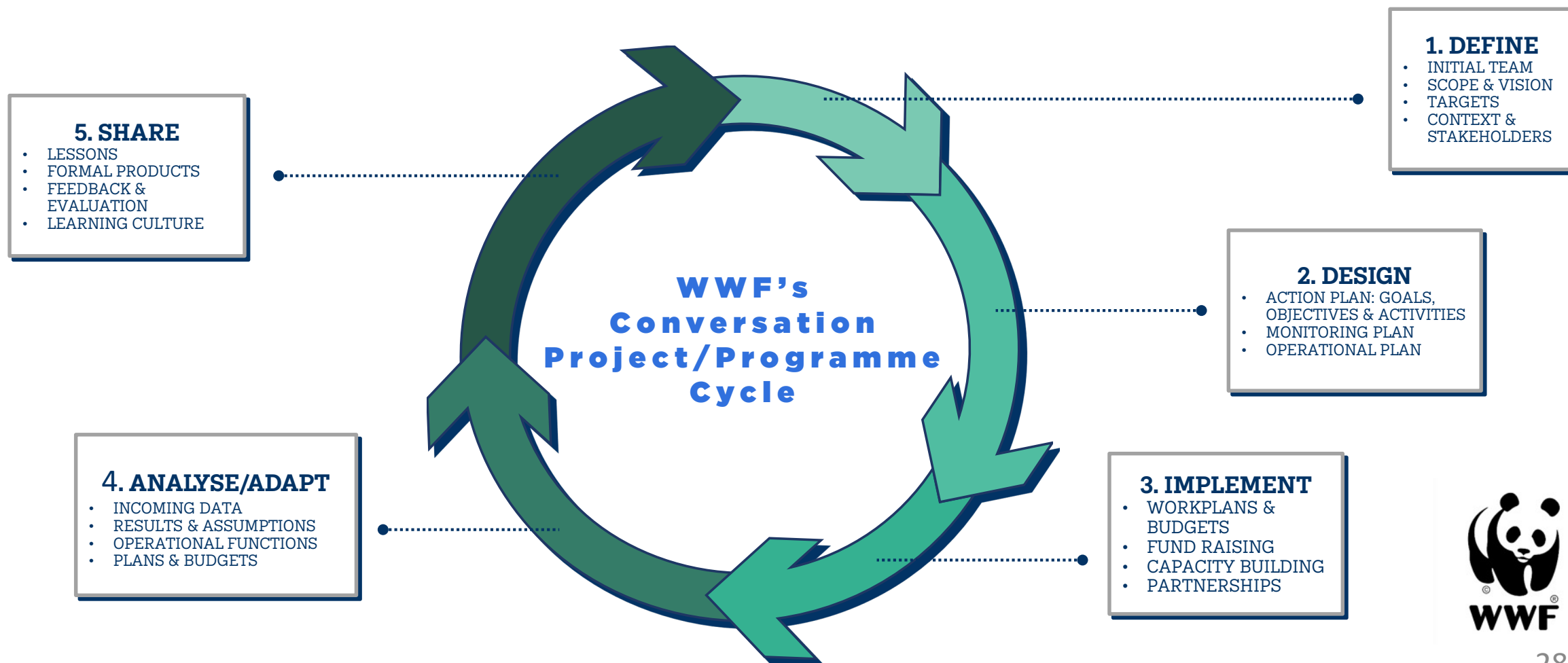
- The Convention on Biological Diversity (CBD), 1992 (including the twenty Aichi Targets, 2011 (due to be achieved by 2020);
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973;
- The United Nations Convention for the Law of the Sea (UNCLOS), 1982;
- The Convention on Migratory Species (CMS), 1979;
- The Ramsar Convention on Wetlands of International Importance, 1971;
- The United Nations Sustainable Development Goals (SDG 14 and 15), 2015.

There are also several private-sector initiatives:
(reach out to HQ if you need more info)

- **Act4Nature** – companies committed to biodiversity
- **Business for Nature** – a global coalition bringing together influential organizations and forward-thinking businesses
- **One Planet Business for Biodiversity** - an international cross-sectorial, action-oriented business coalition on biodiversity with a specific focus on agriculture



Appendix 4: The World Wildlife Fund method



Appendix 5: Useful resources

- Costanza, R., de Groot, R., Sutton, P., van der Ploeg, S., Anderson, S.J., Kubiszewski, I., Farber, S. & Turner, R.K. (2014) Changes in the global value of ecosystem services. *Global Environmental Change* 26: 152–158.
- Mace, G.M., Barrett, M., Burgess, N.D., Cornell, S.E., Freeman, R., Grooten, M. & Purvis, A. (2018) Aiming higher to bend the curve of biodiversity loss. *Nature Sustainability* 1: 448–451.
- IPBES (2019) Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science- Policy Platform on Biodiversity and Ecosystem Services. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.
- WWF (2018) Living Planet Report 2018: Aiming Higher. WWF, Gland, Switzerland.
- Seymour, F. & Busch, J. (2016) Why forests? Why now? the science, economics, and politics of tropical forests and climate change. Center for Global Development, Washington DC.

