



SYMBIOSIS  
**BALEAR**

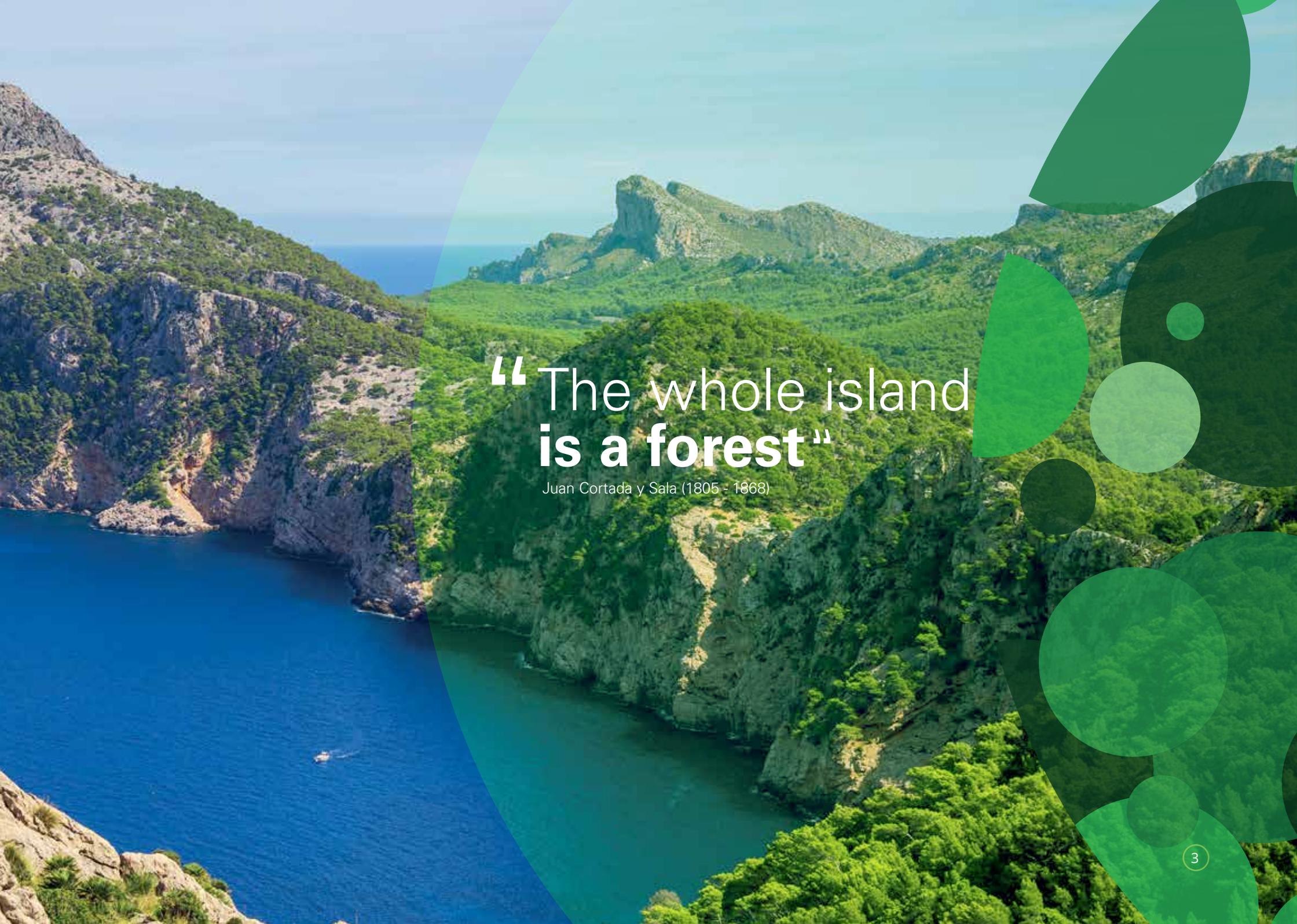


Reducing the impact  
of yachts through  
**regenerative agriculture**

## TABLE OF CONTENTS

- 04 Embrace from Land to Sea
- 05 Eight benefits for the islands
- 06 Offsetting CO<sub>2</sub> by supporting our natural heritage
- 08 The combination of regenerative agriculture with the concept of an food forest gardens
- 10 CO<sub>2</sub> fixation – safe and durable
- 12 Regeneration of ecosystems
- 14 Innovation for enhanced CO<sub>2</sub> fixation
- 16 Project report





“The whole island  
is a forest”

Juan Cortada y Sala (1805 - 1868)



## A HUG FROM LAND AND SEA

**O**n an island, land and sea come together, embracing and complementing each other in a special way. **Symbiosis Balear** is a project in which both worlds merge; a project that seeks to contribute to a more sustainable nautical sector, which promotes social, economic and lasting development that does not damage the current or future environment. The yachting community, by supporting this project, contributes to the regeneration of the ecosystems of the archipelago, and ultimately to its sustainability, while offsetting its carbon footprint.

Our thanks to **Grupo Daphnia**, specialists in environmental management and sustainability, for the consultancy services provided for our **Symbiosis Balear** project.

[www.astillerosdemallorca.com](http://www.astillerosdemallorca.com)  
[www.artifexbalear.org](http://www.artifexbalear.org)  
[www.balearsverd.org](http://www.balearsverd.org)  
[www.grupodaphnia.com](http://www.grupodaphnia.com)

- > Because superyachts have the capacity to lead the transition of recreational boating to a more **sustainable** model.
- > Because it is an innovative sector with cutting-edge yachts, with technologies unheard of in other sectors. A sector that brings wealth and quality employment to the ports it visits and can extend that influence to the **nature** that surrounds those ports.
- > Because we enjoy the sea, we love the nature that gives us so many moments of pleasure and we can **collaborate in regenerating it** by thanking it for its generous gifts.
- > Because we want our commitment to sustainability to be heard loud and clear and our reputation as **lovers of the sea** to precede us in our work on land.
- > Because the locations are in the Balearic Islands, and this brings security and visibility to the **certification we will give you**. You can visit us and see the effects of your support and enjoy the fruits generated.

## 8 BENEFITS FOR THE ISLANDS

**S**ymbiosis Balear supports the **Balears Verd** regenerative agriculture project. We are going to plant more than trees. We will plant food forest gardens in harmony with native nature. Our seed will grow to form a new paradigm of agriculture in the Balearic Islands with eight cross-cutting benefits:

- > Soil regeneration
- > Reforestation
- > CO<sub>2</sub> absorption
- > Food Security
- > Rural Employment
- > Biodiversity Enhancement
- > Eco-Education
- > Promoting the Balearic Islands Brand

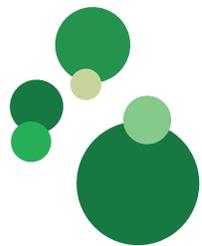


## COMMITTING TO OUR NATURAL HERITAGE WITH CARBON OFFSETTING

**T**he yachting community is making a strong commitment to sustainability. It is paramount that we all reduce our emissions; the shipyards, the yachts, the entire yachting community. But time is short and we can do more by **offsetting the rest of our emissions in CO<sub>2</sub> absorption projects.**

The advance of new technologies such as green fuel engines, fuel cells, efficient route selection, is unstoppable, and yet the experts of the IPPC panel warn us that time is running against us.

So, while we improve the design and operation of yachts, or introduce more sustainable options in our repairs, we can also invest in **our natural heritage by investing in projects that combine wilderness restoration and carbon sequestration.**





Climate change is a global problem, but the effects we experience every day are local. Islands are particularly sensitive environments, and the Balearic Islands, located in the Mediterranean basin, will suffer in a special way from the effects of climate change if we do not limit global warming.

For this reason, **Astilleros de Mallorca** has created the **Symbiosis Balear initiative** and is committed to **Balears Verd**, a local project that offsets the emissions associated with the repair of yachts, improving the islands' capacity to resist climate change. A project that not only fixes CO<sub>2</sub> but is a commitment to a new model of agriculture, more integrated into the natural cycle of the field, with a solid scientific basis and a program of analytical and metrics that contribute to continuous improvement. A model that restores the soil, combats erosion and attracts rainfall. **A model for the regeneration of natural spaces.**



## THE COMBINATION OF REGENERATIVE AGRICULTURE WITH THE FOOD FOREST GARDENS CONCEPT

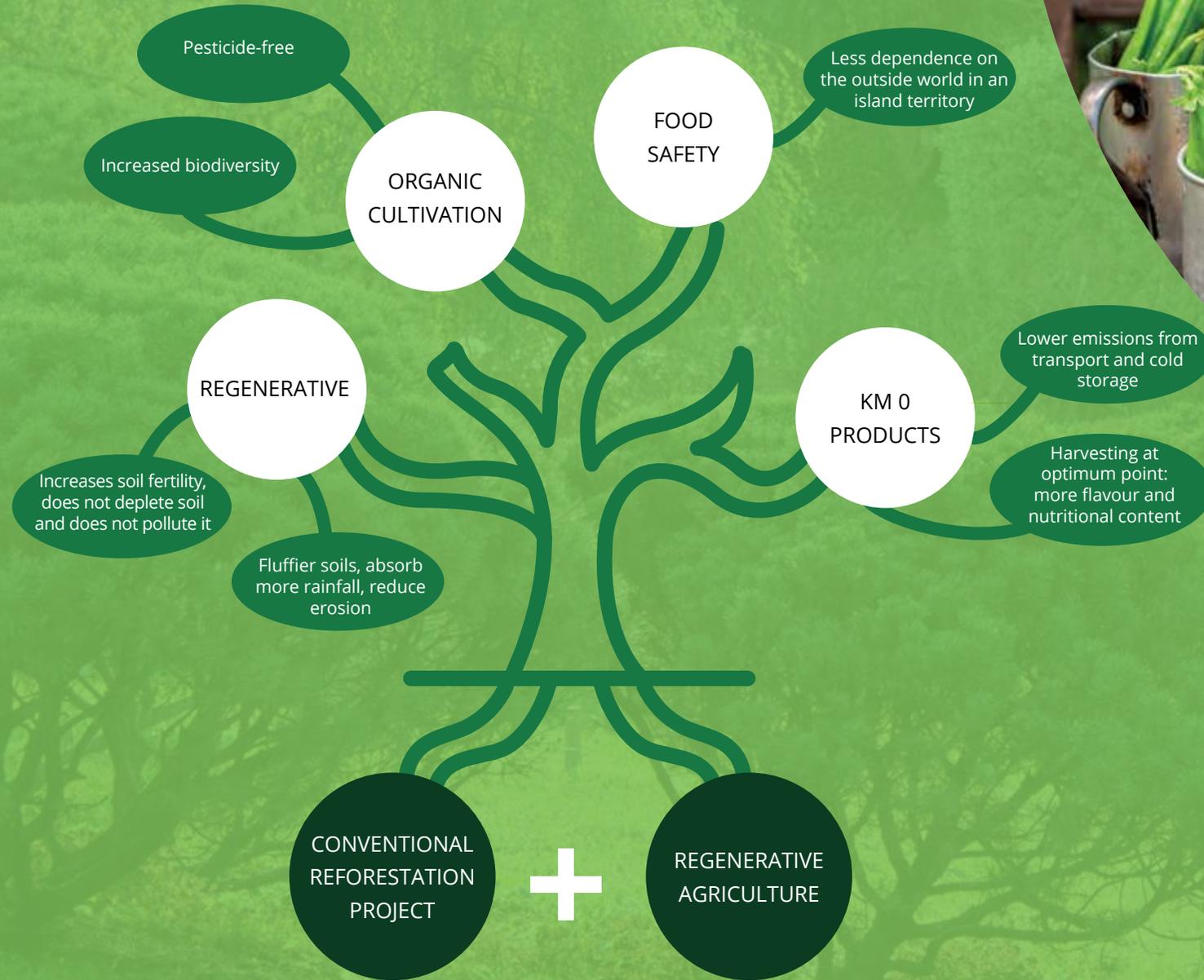
**B**alears Verd is an ecosystem regeneration project based on regenerative agriculture and the creation of food forest gardens. It is not a conventional reforestation project.

**Regenerative agriculture** is an evolution of organic agriculture, **using no pesticides and going even further by regenerating the soil in a way that increases bacterial life, biodiversity and the amount of organic matter, rather than depleting it of nutrients as in conventional agriculture.** Soils are fluffier, with more rainfall being absorbed and less prone to erosion.

It is agriculture that focuses on **recovering the natural fertility of the soil** and its capacity to absorb and retain rainwater. The tree species to be planted are fruit trees whose fruit will be consumed on the island, increasing the amount of **km 0 produce** available to the public. These products are fresher, are harvested at the moment of optimum ripeness and suffer less manipulation, resulting in a higher quality product.

At the same time CO<sub>2</sub> emissions are reduced, transport and the need for refrigeration is minimised. On an island, having a more productive agricultural sector reduces the risk of dependence on the arrival of produce from the mainland.

# FOOD FOREST GARDENS





## CO<sub>2</sub> FIXATION SECURE AND DURABLE

**W**e break the monoculture paradigm favoured by intensive industrial agriculture and **return to a mixed, more natural forest.** In it, different local tree species (olive trees, carob trees) coexist and collaborate. Native species are a natural selection adapted to the local microclimate and are more likely to resist fire than conventional reforestations with pine trees. Combining species and creating a good planting design which also increases fire resistance.

The soil is protected with green cover and mulch, reducing temperature and evaporation. In this way, we make the subsoil fauna more viable. The combination of fruit, medicinal, aromatic, honey and forage species attracts pollinators and repels pests. **The dynamics of complex forests makes the forest as a whole grow healthier, producing more biomass, and therefore fixing more CO<sub>2</sub>.** Competition between trees of the same species decreases as other species are interspersed, with a complementary and optimal use of water. This type of forest is the most resilient, and therefore the most likely to last, ensuring that the CO<sub>2</sub> fixed is maintained over time.

## COMPLEX FORESTS

Natural-like forests with a variety of tree and vegetation species



More adaptable forest stands that are more resilient to droughts



Indigenous species optimal for the environment



Trees grow more; provide more biomass; fix more CO<sub>2</sub>



More resilient forests better adapted to climate change



Combination of species more likely to resist fires



Less competition from nearby trees; each species uses its own resources



Species complement each other to cope with pests naturally



Ground cover that protects the soil and helps to lower soil temperature



Complementary and optimal use of water





## REGENERATION OF ECOSYSTEMS

**Balears Verd** is an ecosystem regeneration project, that goes beyond CO<sub>2</sub> compensation. Because we seek sustainability, we give each tree the space it needs, without overcrowding it. This gives the trees room to grow in all their splendour, whilst we **create biological corridors** to allow fauna to flow and act as firebreakers.

Before planting, **we prepare the land** so that the slopes direct rainwater to the trees, maximizing rainfall. Pruning waste is reused to mulch the soil, returning organic matter to the soil and protecting it from the sun. **We do not plough**, as this process kills the bacterial life in the subsoil and brings it to the surface where the temperature and humidity is radically different. **We make compost** from fallen foliage and weeds (locally generated biomass), using natural techniques that result in a higher concentration of nutrients than in industrial compost (higher carbon-to-nitrogen ratio and fungi-to-bacteria). The **absence of pesticides** gives us healthy soil, without chemicals or nitrates leaching into aquifers and ultimately contaminating the sea. Through the combined effect of no-tillage, mulching, compost and the combination of species, **the soil becomes more fertile, has more organic matter, more micro-organisms and is spongier**. Erosion is reduced, as water is absorbed by the soil instead of running over it. **The forest restores the balance of the CO<sub>2</sub> cycle and is a magnet for rainfall**, generating moisture that benefits the surrounding land and attracts new rainfall.





**INCREASED RAINFALL**  
The forest generates humidity and attracts rainfall



**REDUCTION OF SOIL TEMPERATURE**  
Longer survival near the summer period



**EROSION REDUCTION**  
More water and organic matter is retained



**BIODIVERSITY**  
More micro and macro fauna.  
More fungi and bacteria



**FERTILITY**  
Increase of organic matter

## RECOVERY OF NATURAL SPACES



**ZERO CONTAMINATION**  
Elimination of pesticides and nitrates. Decontamination of aquifers



**WATER OPTIMISATION**  
Spongier soils retain more water; flows are directed to the trees for better utilisation



**BIOLOGICAL CORRIDORS**  
Transit of species between farms, they function as firebreakers

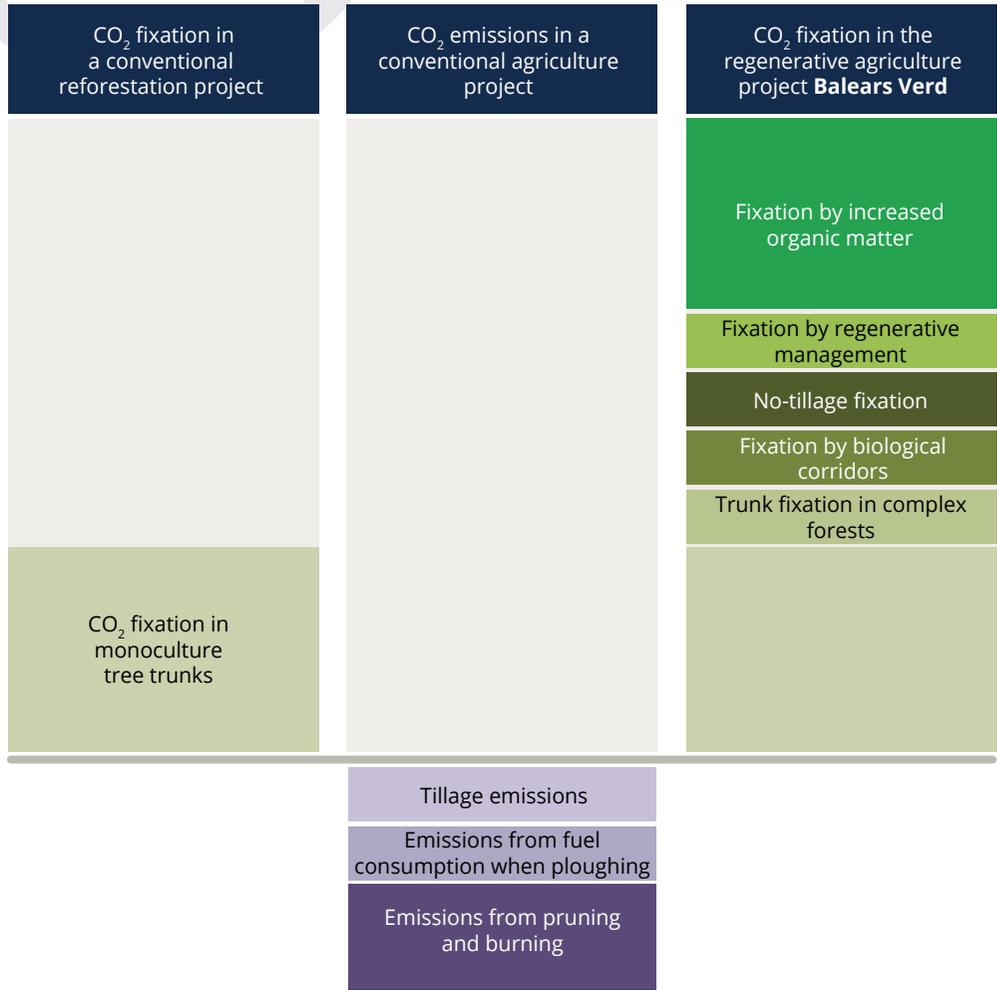
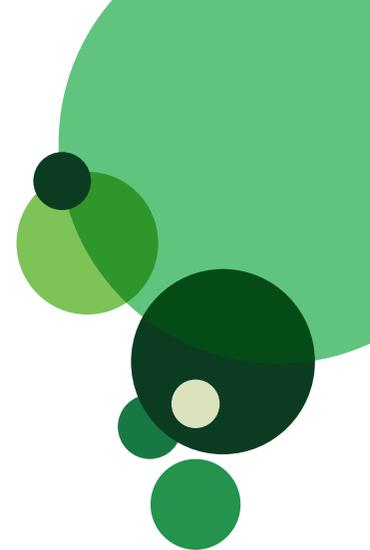


## INNOVATION FOR SUPERIOR CO<sub>2</sub> FIXATION

The project is **highly innovative** in terms of the agricultural techniques applied, but also in the monitoring and measurement systems. We have designed a **methodology** that includes a set of periodic laboratory analysis that will document the increase in the percentage of organic matter: in the soil; tree growth; the ratio of carbon and nitrogen in the soil; the ratio of fungal and bacterial populations; pH and electrical conductivity. They will include microfauna and macrofauna counts, infiltration, runoff/erosion and soil compaction and agglomeration tests. A scientific project **supervised by EQA** as part of its offset project certification scheme.

This project is also innovative because it closes the circle by returning the results to society, with a proposal for a change of model in local agriculture with an eco-educational program and the generation of quality employment in the rural environment.





NET RESULT OF CO<sub>2</sub> EMISSIONS



## PROJECT REPORT

### PROJECT NAME

Absorption Project - GEI BALEARS VERD PILOTOS I-III

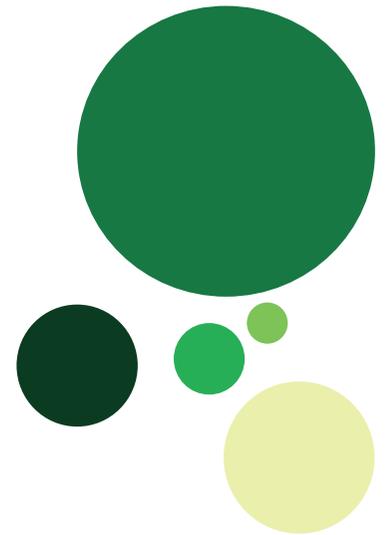
### PROMOTER

Artifex Balear

### RECIPIENT OF ABSORPTION RIGHTS

ASTILLEROS DE MALLORCA S.A.





## LOCATION SITES

<b>Plot</b>	<b>I - Marratxinet</b>	<b>II Algaida - Son Verdera</b>	<b>III - Algaida-Llucmajor - Son Reus</b>
<b>Cadastral</b>	07036A00300282	07004A01200264	07004A01000419
<b>Address</b>	0001 QQ DS Distr-1 Secci-1 695 (A)	Polígono 12, Parcela 264	Polígono 10, Parcela 419
<b>Surface</b>	2.500m <sup>2</sup>	10.000 m <sup>2</sup>	40.000 m <sup>2</sup>
<b>Coordinates</b>	X: 478682, Y: 4388247	X: 488463, Y: 4378208	X: 491326, Y: 4375184



## PROJECT REPORT

### PERIOD OF EXECUTION

Initial Transformation and Stabilisation Phase 2023 - 2026

Maintenance Phase 2027 - 2053

### Stages of the CO<sub>2</sub> Absorption Project

#### Transformation and stabilisation

Phase 1. Water design and excavation

Phase 2. Autumn planting

#### Maintenance

#### Quality Control

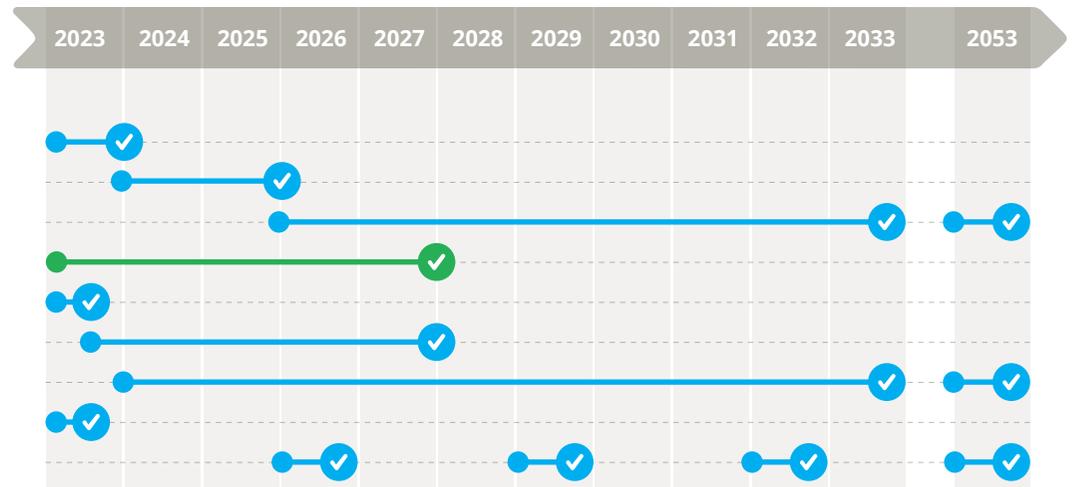
Ex-ante calculation measurements

Follow-up measurements of removals by accredited laboratory

Food Forest Gardens condition and uptake reports

Verification of methodologies by external accredited body

Verification of removals by external accredited body





### PERMANENCY PERIOD

30 years

### ESTIMATED RESULTS

5.731 T CO<sub>2</sub>

### SPECIES

Olea Europea, Ceratonia Siliqua, Quercus Ilex, Prunus dulcis, Ficus carica, Morus nigra, Punica granatum, Celtis australis, Eriobotrya japonica, nesples, Crataegus azarolus, Arbutus unedo, Ziziphus jujuba, Erbus doméstica, Citrus sinensis, Citrus limon



### CERTIFICATIONS

EQA Verification N° 11978



Redefining  
luxury with  
**sustainability**



A LEGACY THAT GOES BEYOND SAILING