

# Our planet's facing an ecological emergency. Everybody knows that.





### Water

70% of fresh water on earth is used (inefficiently) by the agricultural sector to produce food, apparel, chemicals, energy and more.

In drylands areas, years with extreme low rainfall have seen an increase of up to 45% in violent conflict (IPBES).

### Biodiversity

>75% of global food crop types rely on animal pollination (~\$577 billion)

Due to loss of biodiversity, pollinators are threatened with extinction.

### Carbon

Sea levels are rising at the fastest rate in 3,000 years, an average 3mm per year due to temperature rise. Indonesia will move its capital as its current one is sinking.

Growth in greenhouse gas emissions was highest in 2018 since 2011 (PBL).



### Regenerative agriculture

An answer to global issues



CO<sub>2</sub> emissions



Flooding & Erosion



**Nutrition** 



**Global warming** 



Health



Fresh water





Feeding the world



### Soil Heroes. One family. One mission.

Restoring soil for a better world: increasing the quality of life on earth for the long term through regenerative farming.



### **Soil Heroes Foundation mission**

Catalyse the transition to regenerative farming



#### **Soil Heroes mission**

Making nature everyone's business

See it to believe it (PROOF)

Know what to do (KNOWLEDGE)

Part of a bigger whole (CONNECT)

Quantified, verified & visible impact (IMPACT)

Directly connecting demand & supply (TRANSPARENCY)

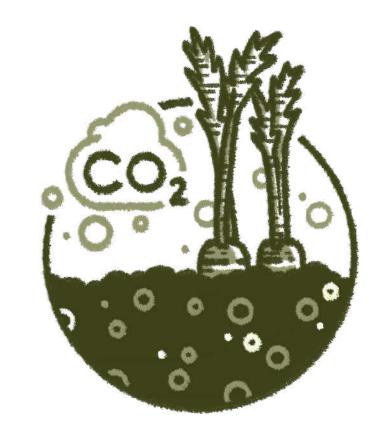
Value creation-connect & reward (ADDED VALUE)



# Regenerative agriculture: a short definition

- A way of using the land that works with nature rather than against it, harnessing the chemical and biological power of nature itself.
- A set of farming principles that **heals soils**, nurtures biodiversity, improves water holding capacity and provides many other ecosystem services.
- Aims to capture carbon in soil and above ground biomass, reversing current global trends of atmospheric accumulation.
- Offers improved yields, resilience to climate instability, and better health and vitality for farming and ranching communities.
- Draws from decades of scientific and applied research by the global communities of organic farming, agroecology, holistic management, and agroforestry.

Regenerative agriculture has the potential to turn our food and agriculture system into a system that improves soil health instead of degrading it. It delivers vital ecosystem services while producing high-quality food and raw materials for key industries such as pharmaceuticals, textile, construction and cosmetics.







Water being stored in soils and with improved quality



Biodiversity levels being increased



Nutrient density improvement in foods

# Even though the benefits of regenerative agriculture are undisputed, farmers remain stuck in the current system because they are:

- Bearing the risk of droughts and floods with just 8% average gross margin
- Selling to retailers who pay by weight and not nutritional value or flavor
- Relying on resilient seeds creating mono crops instead of diversity
- Lacking successors with children seeing no future in farming
- Depending on subsidies and trapped into delivering quantities, not quality
- Required to use more costly artificial inputs that degrade the soils
- Held in the status quo by a societal focus on « sustainability » rather than « regeneration »





the transition to regenerative agriculture. Empowering farmers and reducing the barriers to adopt nature inclusive practices.'

- See it to believe it (PROOF)

Foundation

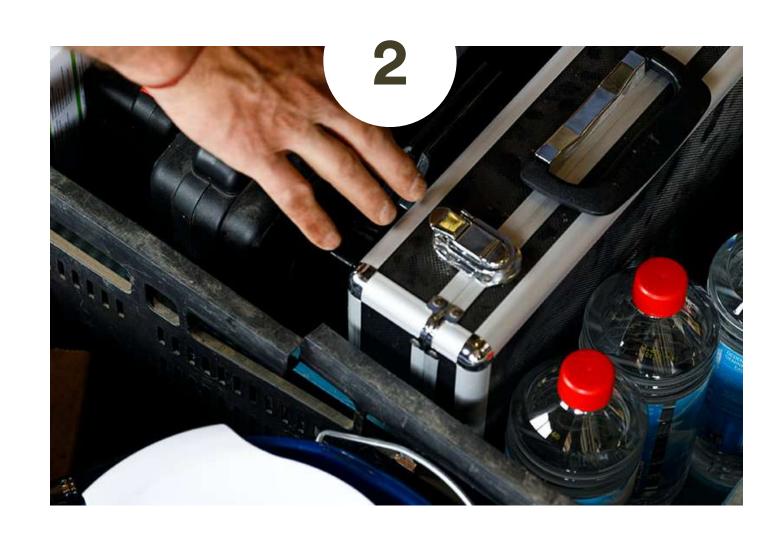
- Know what to do (KNOWLEDGE)
- Part of a bigger whole (CONNECT)





"The Foundation has three main areas of focus to persuade farmers to transition to regenerative farming and make it the new standard worldwide."







### **PROOF**

We make the impact of regenerative farming measurable and visible. We verify the results with international experts and make our findings available publicly.

'see it to believe it'

### **KNOWLEDGE**

Based on our experience, we create knowledge and tools to make it easier for others to start or continue their transition to regenerative farming.

'know what to do'

### CONNECT

We bring together many relevant stakeholders (farmers, scientific institutes, governments, investors, entrepreneurs...) and we create empowering communication spaces.

'part of a bigger whole'

### **CURRENT PROJECTS**

### Water Retention proof of practice

Quantifying soil water retention capacity improvement resulting from applying regenerative farming practices on 75 hectares of farmland.

Start date: September 2020

**Budget**: €1,895,620

**Funded by:** EU POP 3 (€697,500), collaborative partners (€845,000)

Co-financing need: €353,120

#### **Collaborative partners:**

- The Klompe Farm, a third-generation Dutch family farm located just south of Rotterdam, on the island the Hoeksche Waard (province Zuid-Holland). This is where the experiment takes place.
- The University of Wageningen; which is responsible for collecting and analysing data and validating the results.
- The Waterboard Hollandse Delta, which is responsible for water management in the area of the project.



### **CURRENT PROJECTS**

### Landscape elements & biodiversity proof of practice

Integrating flower edges/grass-herb edges around the arable plots to increase the insect- and bees' populations which contribute to natural pest control of lice in crops and pollination + brewing our own biofertilizer.

Start date: 2019

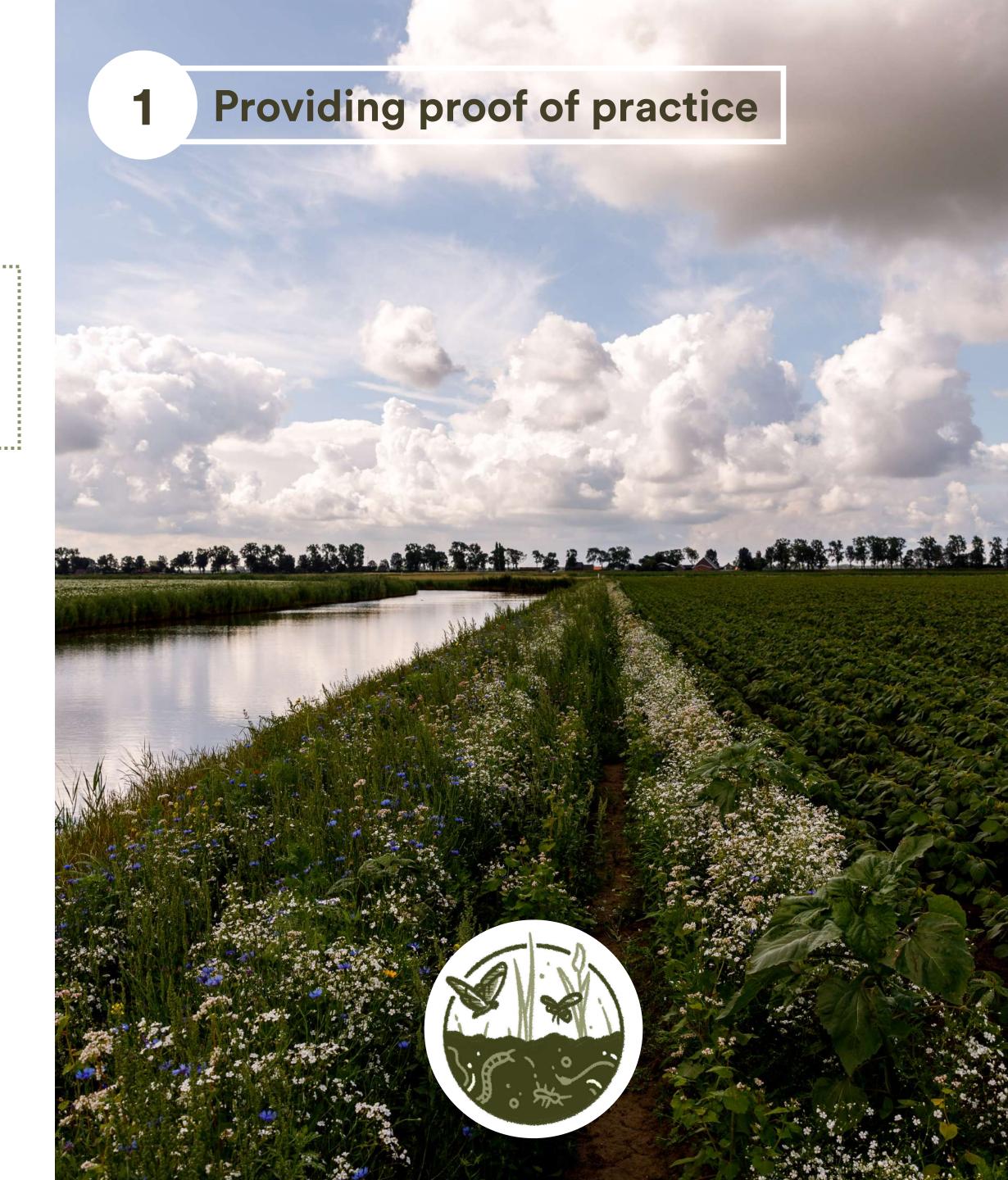
**Budget**: €8,000 + €10,000

Funded by: Patagonia (1% for the Planet grants)

Co-financing need: €0

### Collaborative partners:

- The Klompe Farm, a third-generation Dutch family farm located just south of Rotterdam, on the island the Hoeksche Waard (province Zuid-Holland). This is where the experiment takes place.
- The University of Amsterdam is investigating which flower/grass-herb edges mix works best for functional biodiversity enhancement.



### **CURRENT PROJECTS**

### Regenerative farming toolbox

Developing a toolbox for farmers who want to start or continue their transition to regenerative farming. The toolbox will include a guidebook on how to apply the 20 core principles of regenerative farming. As a first step, we will share the guidebook with several partner farms across Europe to gather their feedbacks.

Start date: November 2020

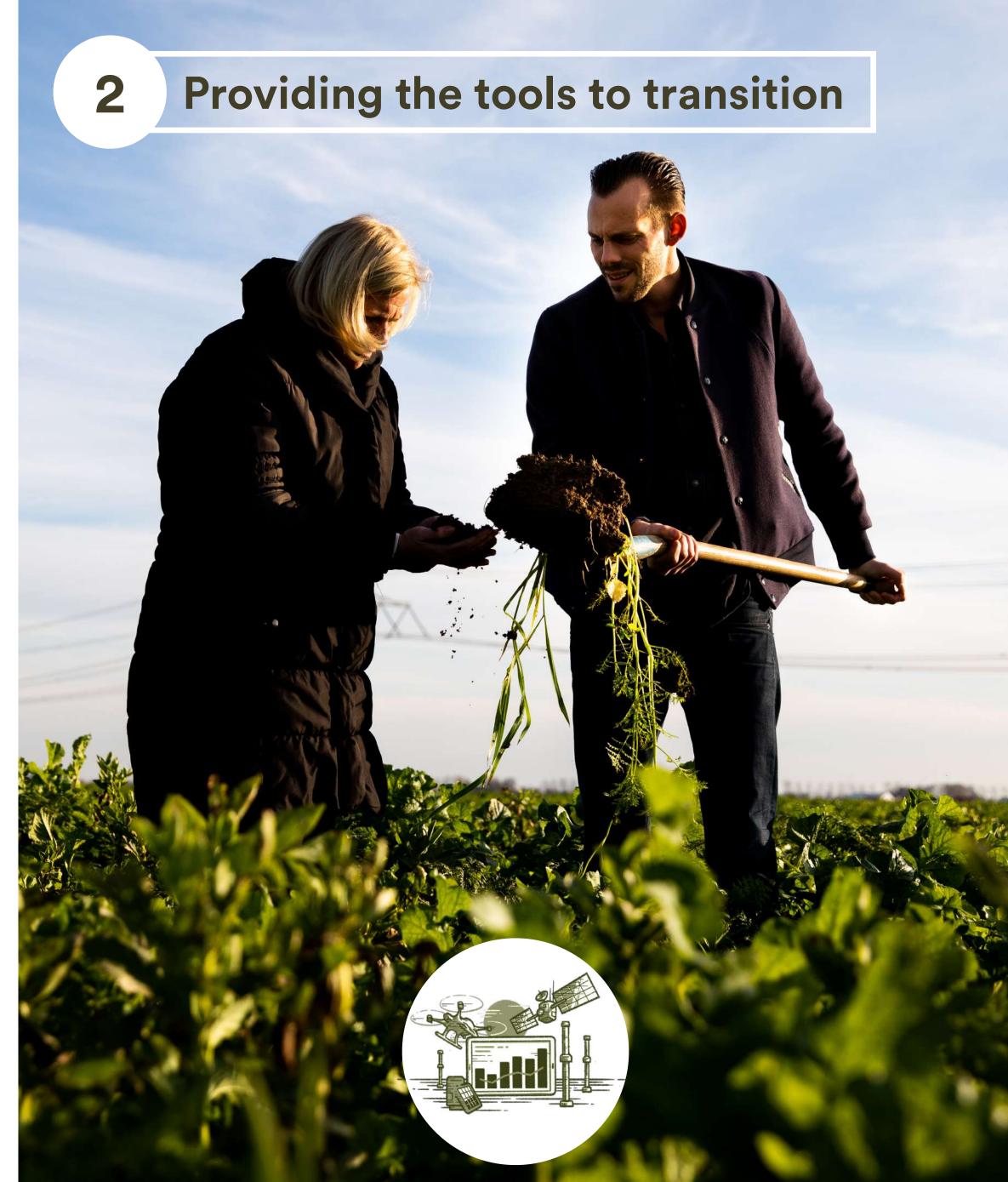
**Budget:** €120,000

Funded by: Municipality Hoeksche Waard (subsidy)

Co-financing need: €0

#### **Collaborative partners:**

• The Klompe Farm, a third-generation Dutch family farm located just south of Rotterdam, on the island the Hoeksche Waard (province Zuid-Holland). The guidebook will be created based on the experience gathered by the Klompe Farm.



# Join us and our partners in changing the world through regenerative farming!



Ryan Gellert (CEO, Patagonia)

'Patagonia supports operators throughout the supply chain, who are catalyzing and can significantly uptake regenerative organic farming'

Patagonia fully supports the efforts of Soil Heroes, a strong partner for all allies striving to secure regenerative organic agriculture as the new 'normal' way of business for farming worldwide.

patagonia





### Jeroen Klompe

(Farmer & Entrepreneur at Klompe Landbouw)

"Our farm will test, implement and showcase the potential of regenerative agriculture whilst focussing on collecting the evidence, develop the tools and share with the farming community

Ever since Jeroen took over the family farm the focus has been on healthy soils. As we believe healthy soils are the basis for healthy produce, healthy people and eventually a healthy planet.



### Water Retention Proof of Practice Budget overview & co-financing need



Total cost of experience field	Capital contributed by collaborating partners	EU-POP 3 subsidy*	Co-financing need			
1895620 €	845000 €	697500 €	353120 €			
	Material 9 arable plots Data + knowledge Klompe Farm Knowledge University of Wageningen Knowledge SHF Data + knowledge Waterboard WSHD					
100 %	45 %	38 %	17 %			

<sup>\*</sup>The Soil Heroes Foundation received an EU-POP 3 subsidy in 2020 for the implementation of the water retention proof of practice.

## Budget overview Funding need for organisational capacity



	2020				Total 2021			Total		20	22	22			2023			Total		
	Q1	Q2	Q3	Q4	2020	Q1	Q2	Q3	Q4	2021	Q1	Q2	Q3	Q4	2022	Q1	Q2	Q3	Q4	2023
Start-up costs	€ 6500	<u> </u>		İ	€ 6500					€ -			į		€ -					€
Accountant				€ 2500	€ 2500				€ 3000	€ 3000				€ 3000	€ 3000				€ 3000	€ 3000
Insurance				€ 300	€ 300				€ 300	€ 300				€ 300	€ 300				€ 300	€ 300
Board meetings				€ 500	€ 500		€ 500		€ 1000	€ 1500		€ 1000		€ 1000	€ 2000		€ 1000		€ 1000	€ 2000
Event					€ -			€ 2500	€ 2500	€ 5000		€ 5000		€ 5000	€ 10 000		€ 5000		€ 5000	€ 10 000
Bank costs		€ 125		€ 125	€ 250		€ 125		€ 125	€ 250		€ 250		€ 250	€ 500		€ 250		€ 250	€ 500
Office	€ 600	€ 1200	€ 1200	<u> </u>	€ 4200	€ 1200		€ 1200	€ 1200	€ 4800	€ 1200		€ 1200	€ 1200	€ 4800	€ 1200	€ 1200	€ 1200		€ 4800
farketing and Communication				€ 5000	€ 5000	€ 2500		€ 2500		€ 10 000	š		٠	€ 4000	€ 16000	€ 4000	€ 4000	€ 4000		€ 16000
Operation costs		÷		€ 1000	€ 1000	€ 1000		€ 1000		€ 4000	€ 2500		<b></b>		€ 10 000	€ 2500		€ 2500		€ 10 000
Representation costs					€ -	€ 250		€ 250	€ 250	€ 1000	€ 500		\$		€ 2000	·		€ 500		€ 2000
Travel expenses		•		€ 350	€ 350	€ 350	€ 350	€ 350	€ 350	€ 1400	€ 750	€ 750	€ 750	€ 750		€ 750	€ 750	€ 750	€ 750	
Education programme		•											· · · · · · · · · · · · · · · · · · ·		€			•		€
Soil Heroes Award		•											<u></u>	€ 4500					€ 4500	€ 4500
aper/Video/Online magazine								€ 6500		€ 6500			€ 5000		€ 10 000		€ 5000	<b></b>		€ 10 000
Experience centre								€ 8500		€ 15000	&	€ 12500	<b></b>	i	€ 50000	€ 20 000		٥		€ 80000
Employee			€ 8500	€ 8500	€ 17000	€ 8500	€ 8500	€ 8500	€ 8500	€ 34000	€ 12500	€ 12500	€ 12500	€ 12500	€ 50 000	€ 20 000	€ 20 000	€ 20 000	€ 20 000	€ 80 000
Thesis															€ -					€
Continue																				
Contingency costs		<u>.</u>		<u>.</u>	-					-	L		<u>.</u>		-	<u> </u>				•
Par Overton	£ 7400	£ 1705	£ 0.700	£ 10.475	£ 77.600	£ 17.000	£ 10.40E	£ 71.700	£ 20 225	£ 06.750	£ 77.050	£ 45000	£ 70.050	£ 40,000	£ 167100	£ 40050	£ 60,000	£ 57.050	£ 67.000	€ 223100
Per Quarter	€ /100	€ 1325	€ 9700	€ 194/5	€ 37 600	€ 13 800	€ 18425	€ 31300	€ 29 225	€ 86 / 80	€ 33950	€ 45200	€ 38950	€ 48000	€ 103100	€ 48950	€ 60 200	€ 53950	€ 63000	€ 22310

The Soil Heroes Foundation will need €86,750 of funding for organisational capacity in 2021.





### SOIL HEROES FOUNDATION EXECUTIVE TEAM



Mellany Klompe
Executive Director



**Emma Crasnier Executive Assistant** 



Gina Pattisson
Partnerships Director

SOIL HEROES FOUNDATION MANAGEMENT BOARD



Wilkin Kroon
Entrepreneur
Impact investor



Frederic Hoffmann
Food & Agriculture deal sourcing
Board Member of MAVA Foundation



Alexandra Korijn
Co-Founder of New AJE Capital
Board Member of Toniic



Fernando Russo Impact investor

SOIL HEROES FOUNDATION
SUPERVISORY BOARD



Henri van Eeghen
President & CEO Synergos



Riella Hollander
Director Food & Agriculture
Triodos Investment Management



Ryan Gellert
CEO
Patagonia



### Our funding partners are helping us to restore nature by transforming farming: proof of practice



Biodiversity restored
3,000 square metres of flower edges on
Klompe Landbouw, helping to increase
insects and important pollinators such as
wild bees



Nutrients restored and natural pests controlled through companion cropping

Sowing for example 'Tropaelum majus' alongside potatoes, nitrogen is fixed into the soil, providing natural nutrients to the crops.

It also provides natural pest control such as preventing snails



Scientific research ongoing by Wageningen and Amsterdam Universities on Klompe Landbouw

From how to increase water holding capacity to improving yields through natural pollinators...











### Collaborative partners







The University of Wageningen is an widely recognized for its expertise in collecting and analyzing soil data and modeling soil quality improvement.



The Waterboard Hollandse Delta is responsible for water management in the area of the proof of practice project.

### Water Retention Proof of Practice

### **Executive Summary**

<u>Purpose</u>: Quantifying soil quality improvement resulting from applying regenerative agriculture practices on 75 hectares of farmland.

Where: Klompe Farm, a third-generation Dutch family farm located just south of Rotterdam, on the island the Hoeksche Waard (province Zuid-Holland).

<u>How</u>: 75 hectares will be farmed regeneratively, 35 hectares will be farmed conventionally to serve as a point of reference. The University of Wageningen will be responsible for collecting and analysing data and validating the results.

<u>Focus</u>: quantifying variations in soil's water retention capacity. The reasons for this choice are the following:

- The most beneficial ecosystem service for farmers: as they face increased variations in weather patterns (very long and wet winters, very long dry and hot summers), water retention is the variable that increases the most the resilience of soil to these extreme weather events.
- The improvement of water retention is **relatively easy to measure**. Also, it is the variable that shows quickest and most visible improvement.
- Water retention capacity is the ecosystem service that has the greatest value worldwide, meaning it is not dependent on geographical characteristics.



### **Water Retention Proof of Practice**

### Timeline for execution

2019 2020 2021

Implement the selected regenerative practices on the defined area: compare different practices in terms of cost, time, impact on farm management plan...

Experiment with different data collection protocols (how can we easily and at a low-cost monitor data on the farm?)

Develop a data collection protocol for farmers to execute themselves

Experiment and define the set of data needed for TO and Tn

Execute analysis, combining satellite and digital data for farm management data



Provide quantified results for the water retention capacity improvement observed on the plots (T0+ Tn)

### **Knowledge-sharing & Community building**

### Timeline for execution

Internship soil biology Wageningen University on the Experience Farm (education making chroma, mother culture, biofertilizer...)

### January

### February

7 Feb: Patagonia event on regen ag19 Feb: interview regen ag Phd University

Utrecht

21 Feb: field visit + instruction mother culture/biofertilizer Showley Estate (UK)

#### March

26 March: QA Herenboeren (digital meeting)

### April

15 April: EU Policy paper new CAP23 April: EU policy paper new CAP29 April: QA Food Transition (digital

meeting)

### May

6 May: EU Policy paper new CAP12 May: EU Policy paper new CAP25-29 May: daily Masterclass- webinarsFunction Agro Biodiversity (FAB)

Wageningen University

### June

14 June: presentation to farmers regen ag

21 June: presentation to NGO, governmental parties about regen ag 27 June: visit experience farm by La Faliz

### July

16 July: attending webinar on biofertilizer

(Aus)

**22 July**: film crew Patagonia on the experience farm (about regen ag NWE)

25 July: field visit La Faliz

### August

6 Aug: webinar Patagonia20 Aug: webinar Patagonia

### September

Registration on EIP platform

23 sept: QA EIT-Food

24 sept: NL Policy paper new CAP
29 sept: Webinar field margins (RIVM,
University Amsterdam, municipality HW)
30 sept: QA regen ag (soil association UK)

### October

### November

Registration on PAW platform

9 nov : NL policy paper new CAP

18 nov : NL policy paper new CAP

24 nov: RISE-foundation25 nov: NL policy paper

#### December

2 dec : interview Phd Biodiversity University

Amsterdam