

# International “4 per 1000” Initiative and CA4SH

**GLOBAL SOIL  
PARTNERSHIP**  
11<sup>th</sup> Plenary Assembly  
12-14 July 2023





*DRAFT proposal for governments to issue a*

**SOIL HEALTH RESOLUTION OF SOIL CHAMPIONS AT COP27 and COP28**

**A commitment to enable and scale healthy soil practices to both adapt to and mitigate climate change**

To achieve the goals of the Paris Agreement, the [Sustainable Development Goals](#), restoration targets, and food and nutrition security goals, we need comprehensive action. In the past, energy-based solutions were the sole focus of climate policies. However, nature-based solutions can make an essential contribution to combating climate change. Specifically, carbon solutions that use and increase the absorption capacity of natural carbon sinks, most notably soil, offer advantages and co-benefits.

The projected mitigation potential in agriculture via improved crop and livestock management is **1.8-5.5 Gigaton CO<sub>2</sub>(eq) per year in 2030**. This is comparable to the mitigation potential of wind energy. Yet, carbon sequestration in agriculture is still limited. If we manage soil well, it can be an important ally in our fight against climate change.

We lose **24 billion tons** of topsoil every year. This is due to unsustainable land and soil management practices that accelerate degradation through erosion, salinization, compaction, acidification, loss of organic carbon and biodiversity, and chemical pollution accumulation. By scaling sustainable and regenerative farming and grazing practices, and supporting farmers, pastoralists and land managers on the ground who implement them, global agriculture can shift from being the world's largest driver of soil degradation to its greatest restorer.

Now is the time for multi-stakeholder action to build an enabling environment at multiple levels for supporting, financing, scaling and monitoring healthy soil ecosystems. The Soil Health Resolution is a step toward achieving this.

# Why a Soil Health Resolution at COP 28 of UNFCCC?



# AGENDA

**“Setting the scene of the importance of Soil Health”**

**by Prof. Rattan LAL (Ohio State University) (video)**

## PANELISTS

- **Dr. Leigh Ann WINOWIECKI (Cifor-ICRAF) – CA4SH on the Soil Health Resolution project to be supported at COP 28 of UNFCCC in Dubai (video)**
- **Mr. Oliver OLIVEROS (Coalition on Agroecology) on the importance of Agroecology as vector of action to fight climate change**
- **Mrs. Diane MASURE (APAD – GCAN) from a Farmers organization on concrete example of what it is possible to do in the fields**
- **Dr. Arwyn JONES (EU Soil Observatory – EC-JRC) on European perspective of land degradation and soil health**
- **Dr. Job KIHARA (Soils Team Leaders of Alliance Bioversity International-CLAT) on Soil Health from scientific perspectives (video)**

**Questions and Answers**

**Wrap-up**





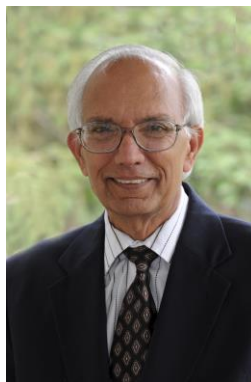
# “Setting the scene of the importance of Soil Health”

by

**Prof. Rattan LAL**  
**(Ohio State University)**

(video)





## VIDEO of Prof. LAL





**“Soil Health Resolution project to be supported at  
COP 28 of UNFCCC in Dubai”**

by

**Dr. Leigh Ann WINOWIECKI  
(Cifor-ICRAF) - CA4SH**

(video)





GSP Plenary Assembly – Soil Partner



# Building a Coalition of Action 4 Soil Health (CA4SH)

Leigh Winowiecki  
CIFOR-ICRAF, CA4SH





# GOALS AND OBJECTIVES







# Overall Goal of the Coalition of Action 4 Soil Health (CA4SH)

To improve soil health globally by addressing critical implementation, monitoring, policy, and investment barriers that constrain farmers from scaling healthy soil practices.



## The four targets of the Coalition include:

- 1 **Integrate soil health considerations in policy** across the development, environment, agriculture and climate change domains.
- 2 **Expand research in development** on soil health practices and monitoring.
- 3 Significantly **increase** the number of hectares of **land under healthy soil practices**.
- 4 Significantly **increase investments in soil health**, by a margin of 5-10 fold above current financing commitments.





# CA4SH brings several new dimensions to the efforts to enhance soil health across landscapes:

unifier

soil as a

private investment in soil as a capital asset

Alignment of multiple public and private stakeholders to address the soil health investment gap and incentivize and reward farmers implement actions to enhance health.





# Who is CA4SH?

## Coalition members and stakeholders



Members States



Private sector



Research



Civil society



Farmers organizations



Multilateral organizations and Foundations



NGOs

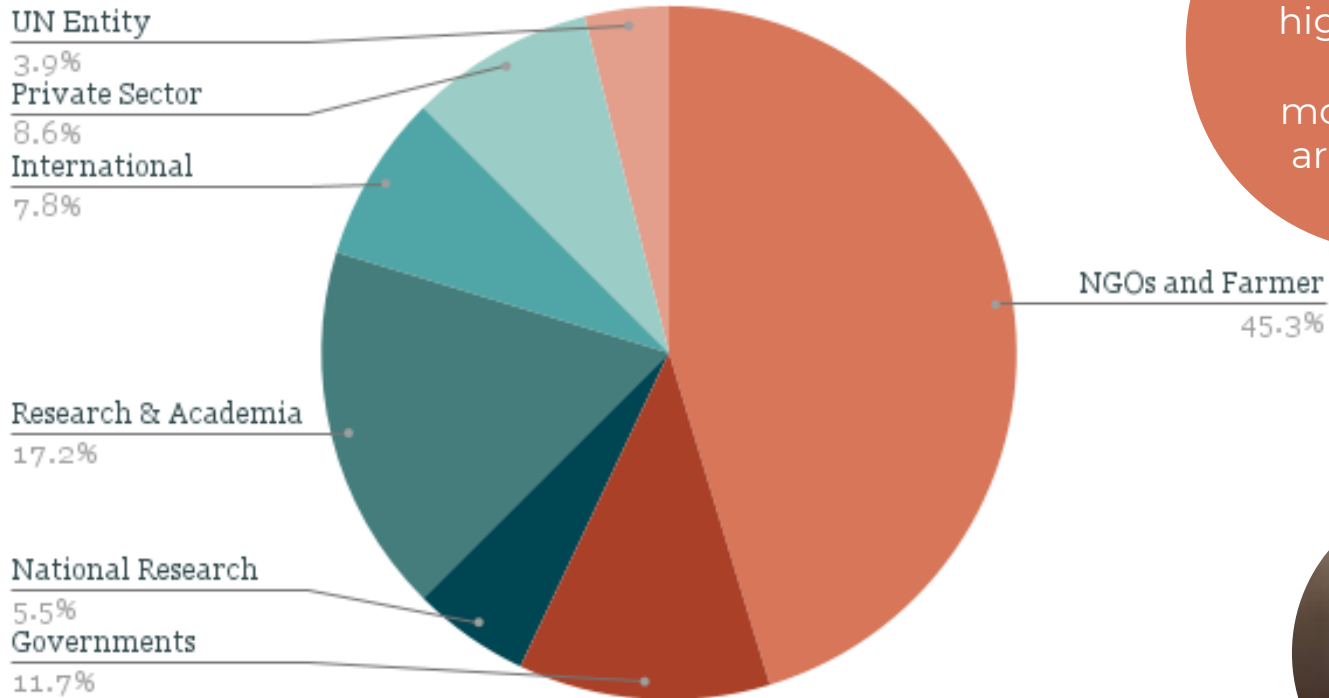
**CA4SH is open to all interested stakeholders who are committed to restoring soil health.**





# CA4SH MEMBERS - June 2023

### CA4SH Partners (133)



CA4SH is growing daily-highlighting the momentum around soil health!





# RAISING AWARENESS AND RESOURCES ON OUR WEBSITE





# Flagship initiatives to highlight



Andhra Pradesh Community-managed Natural Farming Programme



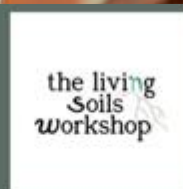
Cycle to Farms



Drylands Transform



Soil and the UN SDGs: Educational Videos from the British Society of Soil Science



Living Soils Workshop



U.S. Regenerative Cotton Fund



Living Soils



Soil Protection and Rehabilitation of Degraded Soils in Western Kenya (ProSoil)



Carbon Farming



Trees for Farmers



Support in agroforestry and livestock for agricultural households in Kailo Territory at the Batake Plateau in the Democratic Republic of Congo



Land Soil Crop Hubs



Regreening Africa



Scaling farmer centred



<https://www.coalitionforsoilhealth.org/flagship-initiatives>

**SEND US YOUR NEWS!**  
CA4SH Coordination Team  
[coordination@coalitionforsoilhealth.org](mailto:coordination@coalitionforsoilhealth.org)  
Communications CA4SH  
[communications@coalitionforsoilhealth.org](mailto:communications@coalitionforsoilhealth.org)





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# ENSURING POLICY IMPACT







## Key Soil Policy Mechanisms



### Australian National Soil Strategy

The National Soil Strategy was released in May 2021, becoming Australia's first national policy for soil. The Strategy lays out a roadmap for how Australia will value, manage and improve its soil over the next 20 years.

[Learn more](#)

### European Union Soil strategy for 2030

The EU soil strategy for 2030 sets a vision, framework, and objectives to achieve healthy soils by 2050, with concrete actions by 2030. It also announces a new Soil Health Law by 2023, to ensure a level playing field and a high level of environmental and health protection.



[Learn more](#)

# CA4SH Policy

Showcasing partners roadmap to implement and develop soil health policy:

<https://www.coalitionforsoilhealth.org/policy-1>





# Policy Impact - CA4SH co-produced six policy briefs identifying opportunities to incorporate soil health and soil carbon into NDCs



**POLICY BRIEF**  
DECEMBER 2022 SERIES 05

**Including soil organic carbon into nationally determined contributions: Insights from Senegal**

Adeyemi Chabi, Djalal Ademola Arinloye, Tor-Gunnar Vagen, Ermias Aynekulu and Leigh Ann Winowiecki

**Soil Health**

Healthy soils are the foundation of sustainable and regenerative food systems and provide several vital ecosystem services. Sequestering carbon in agricultural soils, for example, can have mutual benefits for climate change mitigation and adaptation, food and nutrition security, biodiversity, and water resilience.



**Integrating soil organic carbon into Nationally Determined Contributions**



<https://aicra.cgiar.org/news/integrating-soil-organic-carbon-nationally-determined-contributions>



## Soil Health Resolution

01

**RECOGNIZE** that soils are the basis of life and soil health<sup>2</sup> is the foundation of sustainable and regenerative food systems and food and nutrition security, and for improving livelihoods and supporting

**AFFIRM**

**STRESS**

**CONSIDER**

**REAFFIRM**

[Accessible here](#)





# Soil Health Resolution Roadmap



## Critical goal to integrate soil health into policy



[www.coalitionforsoilhealth.org/soil-resolution](http://www.coalitionforsoilhealth.org/soil-resolution)

### Regional Level

**National Level**  
Recommendations for national policies, including Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs)

**United Nations Convention on Biological Diversity**  
Link soil health with land restoration, drought resilience and land degradation

**Global Biodiversity Framework**

**United Nations Framework Convention on Climate Change**   
• Formal recognition in the COP 28 text  
• Adaptation working group  
• Sharm-el-Sheik joint work on Implementation of action on Agriculture and Food Security

**30 November - 12 December 2023**  
COP28  
 **5 Dec 2023**  
• World Soil Day, Food Systems Pavilion  
• Resolution Delegates dinner

**23 - 30 June 2023, Dakar**  
African Union Fertilizer and Soil Health Summit

**12-14 July 2023**  
Global Soil Partnership Annual Plenary

**24-26 July 2023, Rome**  
UNFSS Stocktaking Moment

**United Nations Framework Convention on Climate Change**  
**5 - 15 June 2023**  
Bonn Climate Change Conference SB 58  
• CA4SH Luncheon  
• CA4SH Side event

**15-16 May 2023**  
Netherlands country specific workshop

**May 2023 (TBC)**  
CA4SH Policy Round table

**10 May 2023**  
Aim 4 Climate Summit

**November 2022**  
COP27





## Engagement around the Soil Health Resolution

- Awareness raising at key events including COP27
- Sub-group to take the resolution forward
- Resolution Brochure for circulation
- Translated into Arabic, French, Spanish, Hindi, Chinese
- Reaching out to members states to endorse the resolution and integrate into national policy frameworks
- Ambassadors to the FAO (EU, France, Argentina, New Zealand, UK, Spain, Ethiopia, Hungary, Canada, Mexico, USA, China, India, Netherlands)

Download our flyer



### What is the Soil Health Resolution?

The **Soil Health Resolution** is a set of commitments to enable and scale healthy soil practices to mitigate and adapt to climate change, restore biodiversity, improve water resilience, enhance food and nutrition security, and protect natural and cultural heritage.



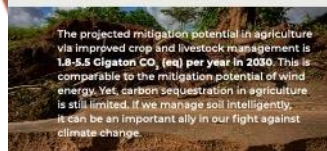
### The Soil Health Resolution calls on government leaders to:

- 1 RECOGNIZE** that soils are the basis of life and that soil health<sup>1</sup> is the foundation of sustainable and regenerative food systems;
- 2 AFFIRM** that agricultural systems are part of the climate solution and that sustainable land management practices enhance productivity, resilience and biodiversity;
- 3 STRESS** the importance of aligning UN conventions and providing legal instruments to synergize organisational efforts and accelerate the action on the ground;
- 4 CONSIDER** the critical role played by increased soil health to achieve the objectives of the UN Decade of Ecosystem Restoration, among other declarations;
- 5 REAFFIRM** the need for further international action and cooperation to revert current soil degradation processes.



### Why do we need it?

To achieve the goals of the Paris Agreement, the **Sustainable Development Goals**, and restoration targets, we need comprehensive action. For a long time, energy-based solutions were the sole focus of climate policies. However, carbon solutions that use and increase the absorption capacity of natural carbon sinks offer advantages and co-benefits. Nature-based solutions can make an essential contribution to combating climate change.



The projected mitigation potential in agriculture via improved crop and livestock management is **1.8-5.5 Giga-ton CO<sub>2</sub> (eq) per year in 2030**. This is comparable to the mitigation potential of wind energy. Yet, carbon sequestration in agriculture is still limited. If we manage soil intelligently, it can be an important ally in our fight against climate change.

We lose **24 billion tons** of topsoil every year. This is due to unsustainable land and soil management practices that accelerate degradation through erosion, salinization, compaction, acidification, loss of organic carbon and biodiversity, and chemical pollution accumulation. By scaling sustainable and regenerative farming and grazing practices, and supporting farmers, pastoralists and land managers on the ground who implement them, global agriculture can shift from being the world's largest driver of soil degradation to its greatest restorer.

### How can you support it?

- ✓ Raise awareness about the need for a Soil Health Resolution
- ✓ Read and share the draft resolution with member states for their feedback and comments to garner support for an official process at the UNFCCC COP28
- ✓ Now is the time for multi-stakeholder action to build an enabling environment at multiple levels for supporting, financing, scaling and monitoring healthy soil ecosystems. The Soil Health Resolution is a step toward achieving this.



<sup>1</sup>Soil health is "the ability of the soil to sustain the productivity, diversity, and environmental services of terrestrial ecosystems."



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# KEY THEMATIC ISSUES



# Establishing Working Groups



**Policy**



**Soil health monitoring**



**Implementation**



**Finance**- including financial incentives to farmers



**Research** - filling knowledge gaps



**Engagement** - connecting stakeholders

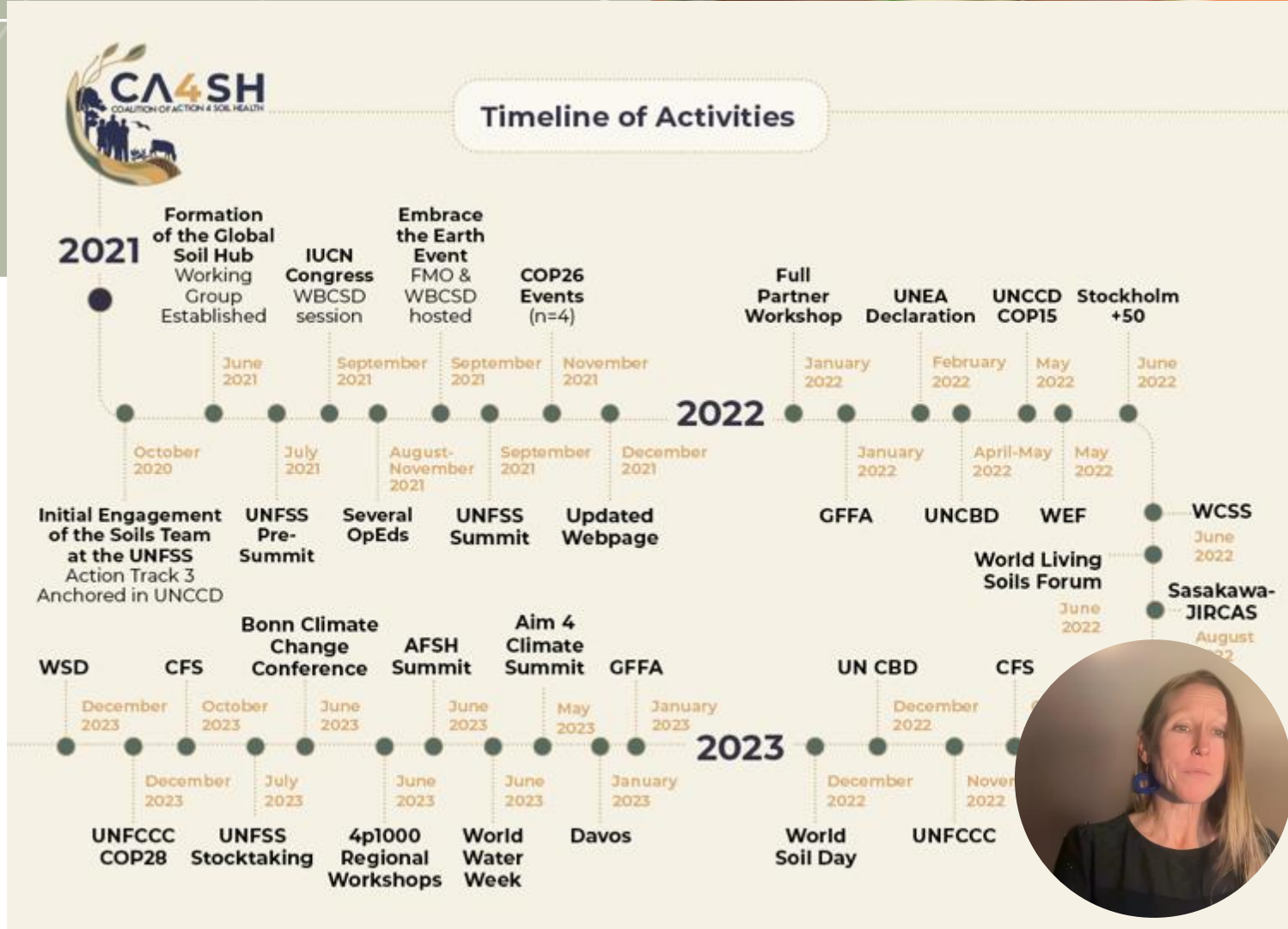




# GSP Plenary Assembly – Soil Partner’s

# Our journey so far

## 2021-2023





## Core work of the Coalition:

**Engagement** at events to raise awareness.



Identify opportunities to bring forward the **Soil Health Resolution**

**Implementation** on the ground-fundraising.



Expand production and input use  
el Sheikh  
I





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# Thank you!

Follow on Twitter

@ca4sh\_global

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# “Importance of Agroecology as vector of action to fight climate change”

by

**Mr. Oliver OLIVEROS**  
**(Coalition on Agroecology)**





Addressing climate change:

## ***Transforming food systems through agroecology***

Oliver OLIVEROS

Coordinator, Agroecology Coalition

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[www.agroecology-coalition.org](http://www.agroecology-coalition.org)

coalition.org



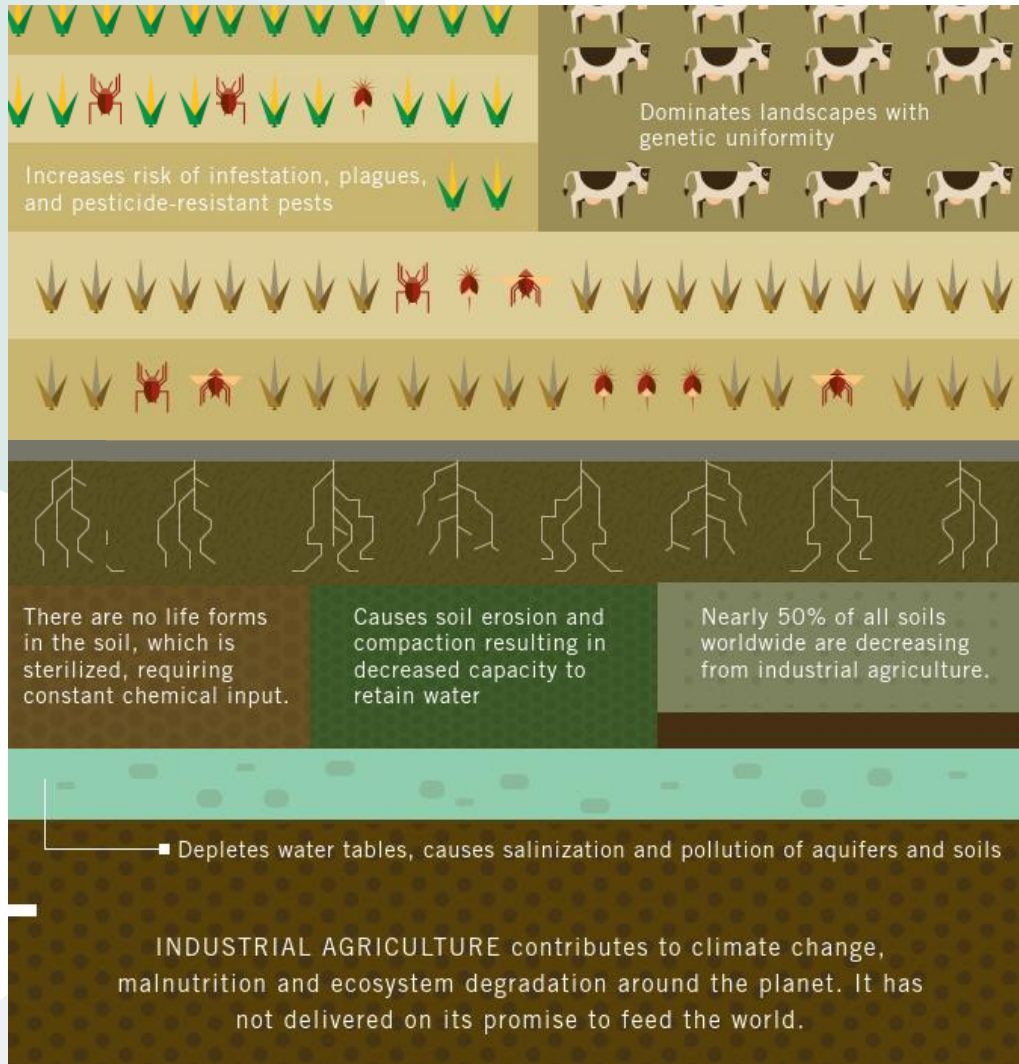


## Current food systems are not sustainable

- Produce about 1/3 of greenhouse gases
- Are responsible for 80% of biodiversity losses
- Pollute the soil, air and water
- Are vulnerable to climate change
- Do not address the triple burden of malnutrition
- Maintain social inequity and the loss of cultural values

→ **Directly associated with current food systems based on industrial agriculture**





Source: The Christensen Fund

## Impacts on soil health

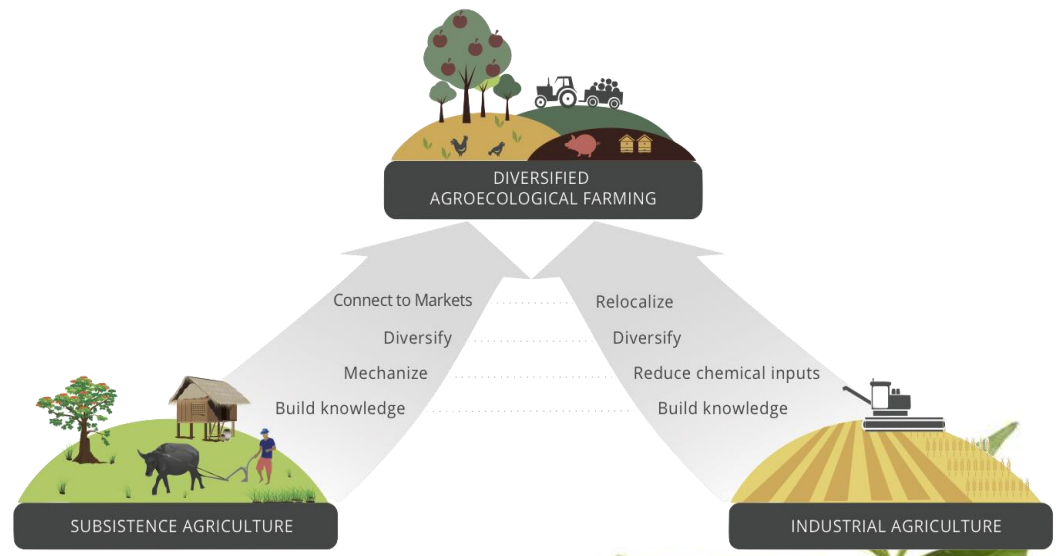
- Soil fertility depletion
- Soil carbon loss
- Greenhouse gas emissions
- Irrigation water scarcity
- Water pollution
- ....





# We need transformational change

- IPES-Food From uniformity to diversity 2016
- IPBES report on land degradation 2018
- TEEB for Agriculture and Food 2018
- IPBES report on Biodiversity 2019
- HLPE report on Agroecology 2019
- IDDRI report on Agroecology 2019
- IPCC report on CC & land 2019
- GSDR 2019
- Global comm. adaptation 2019
- GBO-5 2020
- HLPE 2020 report
- EC Mission on soil health and food 2021
- IPCC report 2022
- CBD Target 10



All mention agroecology





## A different paradigm: Diversified agroecological system

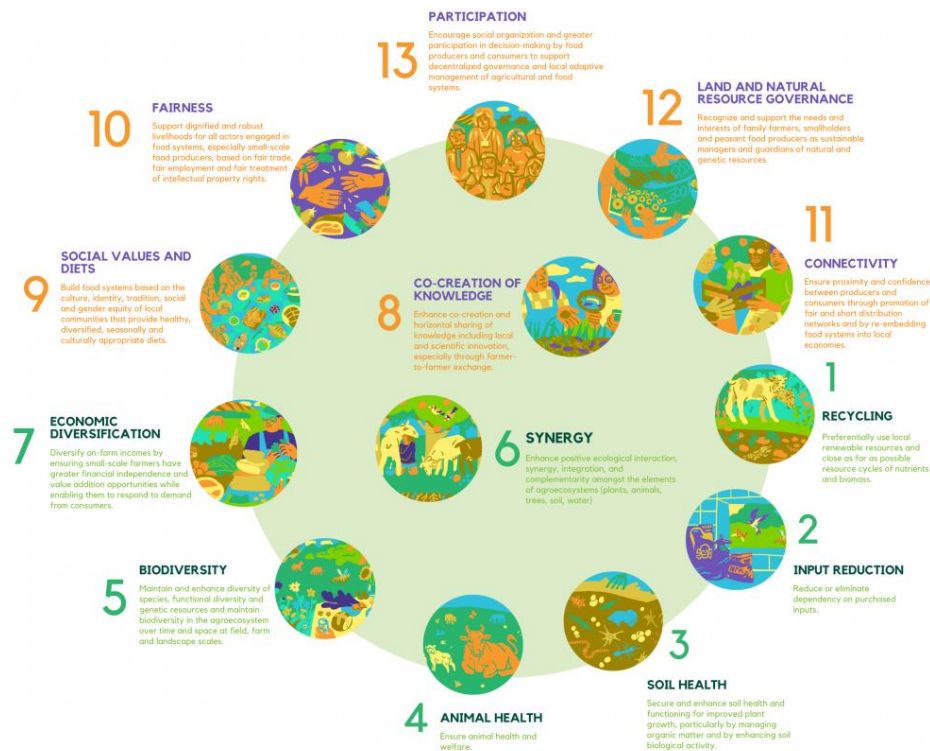


To address  
different  
objectives  
simultaneously

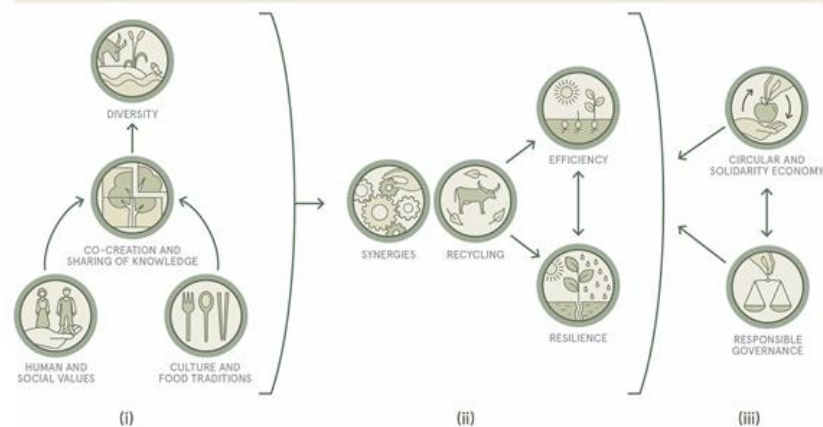
- Economic
- Environmental
- Climate M & A
- Health
- Social
- Cultural







AGROECOLOGICAL TRANSITION TOWARDS SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS



10 Elements of Agroecology



13 Principles of Agroecology





Treats soil as the building block and reflection of community/ecological health

Organic soils retain more moisture and naturally improve crops' drought resistance

A single square yard of living soil contains 500 to 200,000 individual arthropods, which aerate and give nutrients to the soil ecosystem.

Helps balance aquifer withdrawals and recharge

AGROECOLOGICAL STRATEGIES can better feed the world, fight climate change and poverty, and protect soil and water while maintaining healthy, livable communities and local economies.

## Soil is central in agroecology

- Reversing soil degradation
- Restoring soils and ecosystem stability
- ....

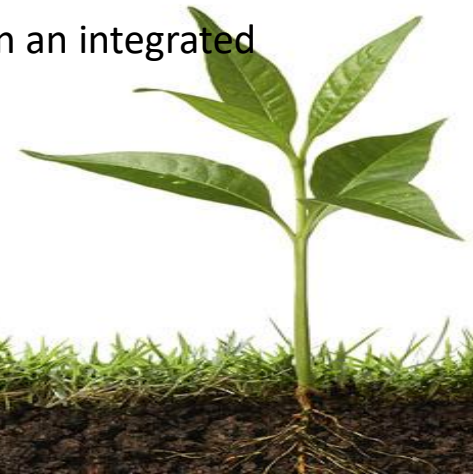
Source: The Christensen Fund





## Agroecology: A different paradigm

- Not just a set of agricultural practices
- Addresses the entire food system (production to consumption)
- Takes the best of all innovations that are compatible with the 13 principles of agroecology, combined with traditional and farmer knowledge
- Changing social relations, empowering farmers, adding value locally and privileging short value chains that link consumers and producers
- Holistic, integrated approach to reach economic, environmental, climate, health, social and cultural objectives
- Aims to achieve the sustainable development goals in an integrated manner.

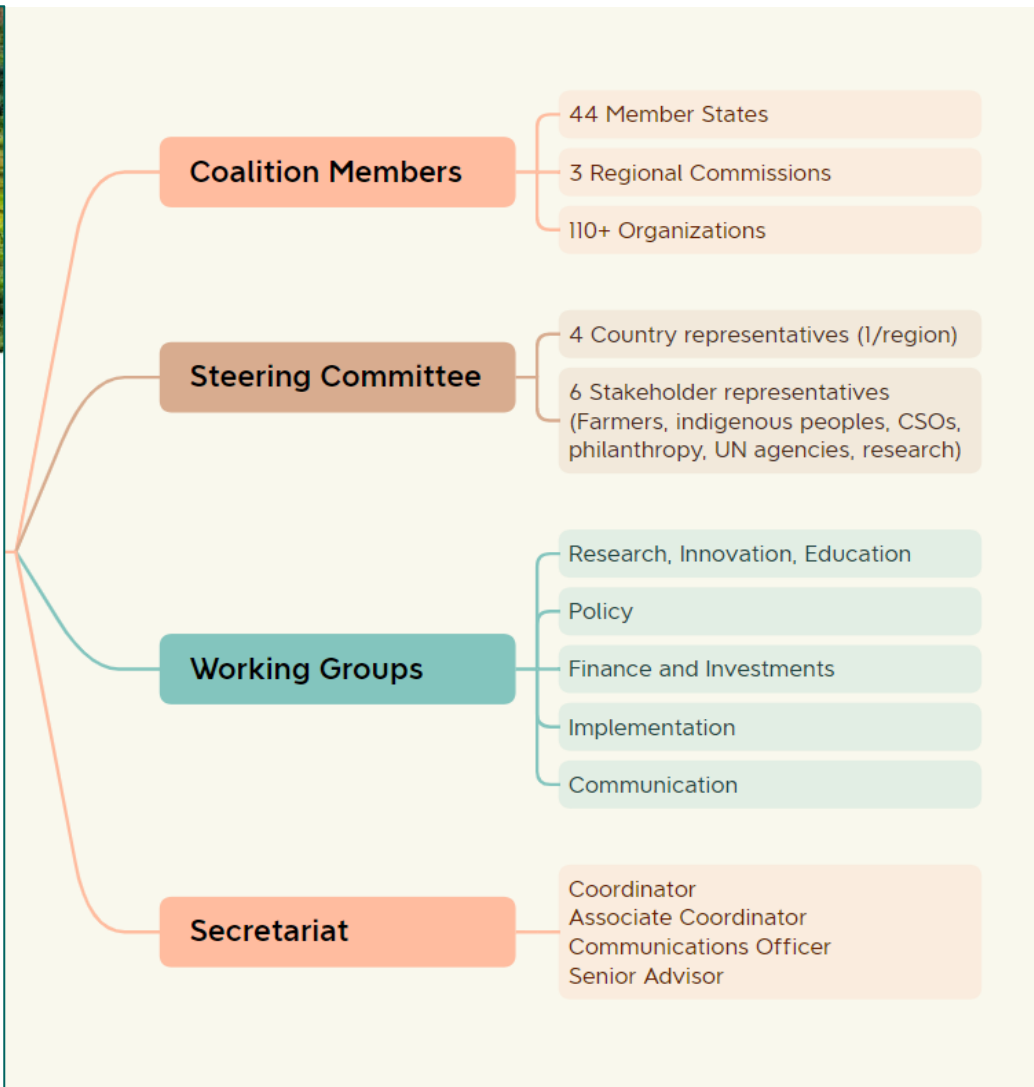




47 member countries and more than 100 organizations, including farmers organizations, research institutions, indigenous peoples organizations, UN agencies, private foundations, civil society groups and others

## STRIVING FOR FOOD SYSTEMS TRANSFORMATION THROUGH AGROECOLOGY:

-  FACILITATING CO-CREATION AND EXCHANGE OF KNOWLEDGE
-  PROMOTING INCREASED INVESTMENT IN AGROECOLOGY
-  SEEKING POLITICAL ENGAGEMENT AND COMMITMENT TO AGROECOLOGY





## Some key activities

Support implementation of country pathways for FS transformation through agroecology

Facilitating co-creation and exchange of knowledge

Through Biovision Fdn, 3 interactive dialogues on Agroecology and territorial approaches; biodiversity conservation beyond farm; and agri-input scarcity

Engaging with the research community (TPP Agroecology, CGIAR AE Initiative, etc.); TAPE Initiative, etc.

Promoting need for increased investments in agroecology

Development of methodological framework to assess a projects', programmes' and project portfolios' "agroecologicalness" using the HLPE's 13 principles of agroecology

Conversations with donor community

Participation/involvement in convenings

Seeking political engagement and increased commitment to agroecological transformation

Working with Friends of Agroecology

Interaction with RBAs and other UN agencies

Participation in UNFSS STM process

SSJW Climate action and agriculture



# Coalition Membership

As of July 2023

45 countries

3 regional commissions

120+ organizations

including

- Farmers' organizations;
- Research organizations
- Indigenous peoples' organizations
- UN agencies
- Philanthropic organizations
- Civil society organizations





# GSP Plenary Assembly – Soil Partner’s Day – 13th July 2023



**THANK YOU** for your attention



secretariat@agroecology-coalition.org  
www.agroecology-coalition.org





**“Farmers organization and concrete example of what it is possible to do in the fields”**

by

**Mrs. Diane MASURE  
(APAD – GCAN)**







**APAD's Carbon project:  
a farmers collective  
success to duplicate towards  
other farmers associations over  
the world**

**Diane Masure  
Farmer**

Vice president APAD, France  
Member of the GCAN  
Farmer representative at the 4p1000



# My farm, la grange au bois, Polisy, France

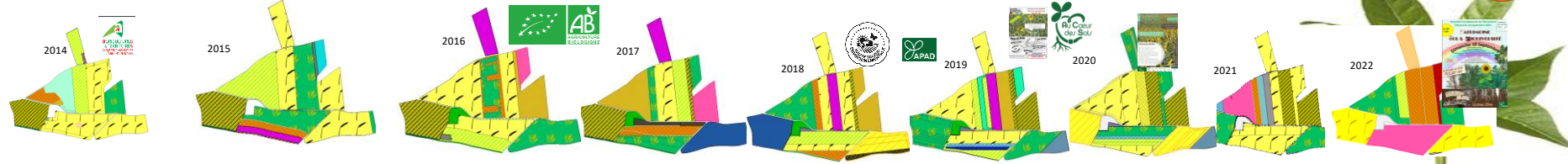


Engineer in agronomy took over the family farm in 2012 → immediately started Conservation Agriculture: an agronomic evidence

115 ha Farm in the south of Champagne in France : cereal crops, legumes (lentils, peas) hemp, seeds

Stony clay-limestone soil 25 to 40p1000 /year

Labels: AB, HVE, Au Coeur des Sols open days and communication



## CA: Conservation Agriculture: 3 pillars



### 1 No tillage – Direct seed

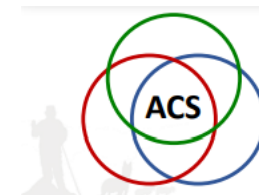
Soil aeration is achieved through soil structure and undisturbed soil life

Conservation Agriculture:  
defined by FAO  
3 linked principles  
in synergy and indissociable



### 2 Permanent soil cover

Crop residues, plant cover, emphasize photosynthesis



Iterative system,  
virtuous spiral based on results



### 3 Plant diversity

In the rotation of main culture and in the cover crops  
Using plants with important biomass (more C from the atmosphere)  
Using legumes that fix nitrogen from atmosphere  
Using plants for their services



## Conservation Agriculture and benefits

- **Produce**

For the consumer: quality, healthy, local products  
 For the farmer: equivalent productivity,  
 Stable yields despite climatic hazards (*Kassam & al 2012*)  
 or even de-capping of yields  
 60% less diesel consumption and inputs (*SoCo 09*)  
 Improved profitability (*Markes & Bash 2002*)



- **Increase soil organic matter :**

Combat erosion (*Montgomery 2007, IPCC 2007*)  
 Protect water catchments,  
 Restore soil self-fertility,  
 Be more resilient to climate, more water in soils (*Mupangwa & al 2007*)  
 and less evapotranspiration (*Dahiya & al, 2007*)  
 Reduce carbon emissions (*Powson & al 2016, Virto & al 2012*)



- **Promote biodiversity in space and time,**

Minimizing pathogen pressure, (*Bash & al 2015*),  
 Favoring beneficial insects  
 Enabling natural soil purification,



- **Saving time on the farm 1 to 4 h/ha (ECAAF 2014)**

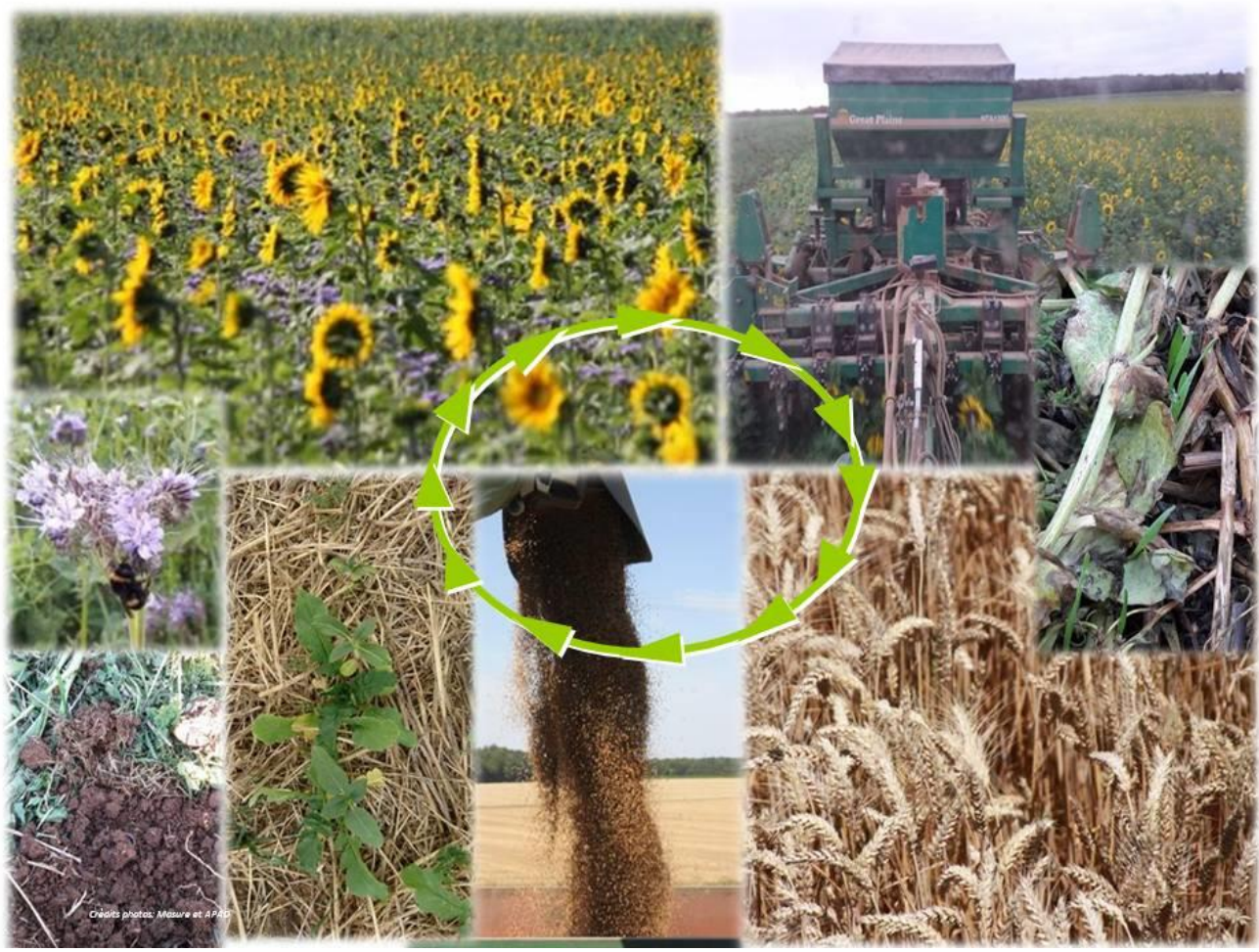
- **Greater independence and sense of one's profession as a farmer**

Credit photo: Masure





## A virtuous cycle, on my farm



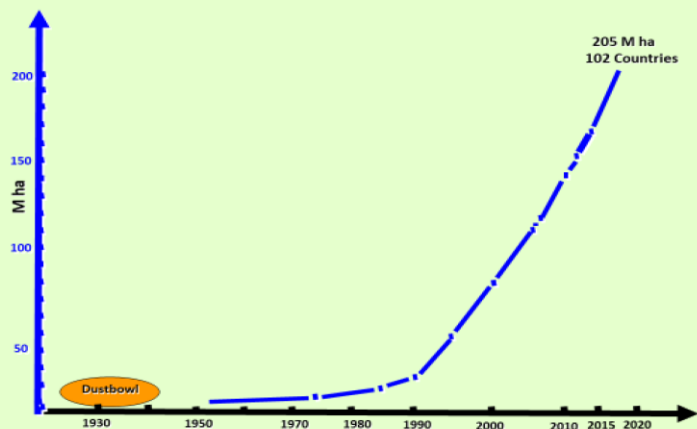
Credits photos: Mézière et al. APAS





## All farmers Can CA!

Historical chart of CA uptake at the global level.



### percent CA Cropland area in the region 2018 2019

Australia and New Zealand	74.1
S and C America	68.7
North America	33.6
Europe	5.2
Russia and Ukraine	4.5
Asia	3.6
Africa	1.1
<b>Total</b>	<b>14.7</b>



 agronomy

 MDPI

Review  
**Successful Experiences and Lessons from Conservation Agriculture Worldwide**

Amir Kassam <sup>1,\*</sup>, Theodor Friedrich <sup>2,\*</sup> and Rolf Derpsch <sup>3</sup>

**Worldwide No-Till Acres Increase 93% in 10 Years**

## GCAN Global CA farmers Network Represents the voice of CA farmers worldwide

- created in 2015, during, the COP21
- participated as funding members in the creation and launch of the 4per1000 Initiative.
- signed and published the « Manifesto for Soils and Climate » representing 15 farmers’ organizations worldwide
- active in all Climate COPs, partner of the GSP, 4per1000 and other initiatives.



## APAD : French Association for the Promotion of Sustainable Agriculture

A network of 14 farmers’ associations in France: 1000 farmers

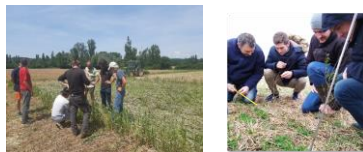
Our mission : promote and valorize Conservation Agriculture

Our strategy : 4 pillars of actions for concrete global projects

### DEVELOP

A farmers network in the whole country.

Collective approach, training



### IMPROVE

the CA technical practices in farms

Locally : working group & projects with all actors in different territories



### PROMOTE

CA benefits to a large audience

International and local shows, Conference, workshop, Educational projects, meet policy makers for sensibilisation on CA benefits...



### VALORIZE

economical, environmental and social services of CA

**CA farmer private label**





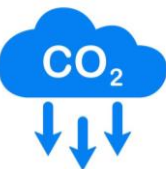
## Why CA and Carbon?



**CONSERVATION AGRICULTURE  
A VIRTUOUS SPIRAL**

### GHG emission avoided

- Less 60% fuel costs by no-till
- Cover with legumes: biological stock of Nitrogen available

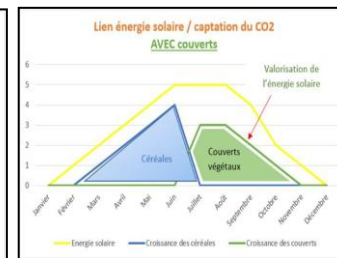
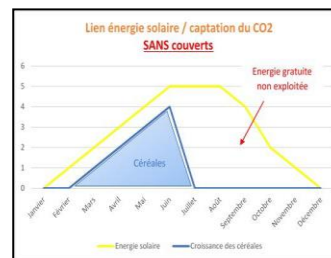


### GHG sequestration:

Soil cannot store more carbon than can be produced by the biomass it receives.

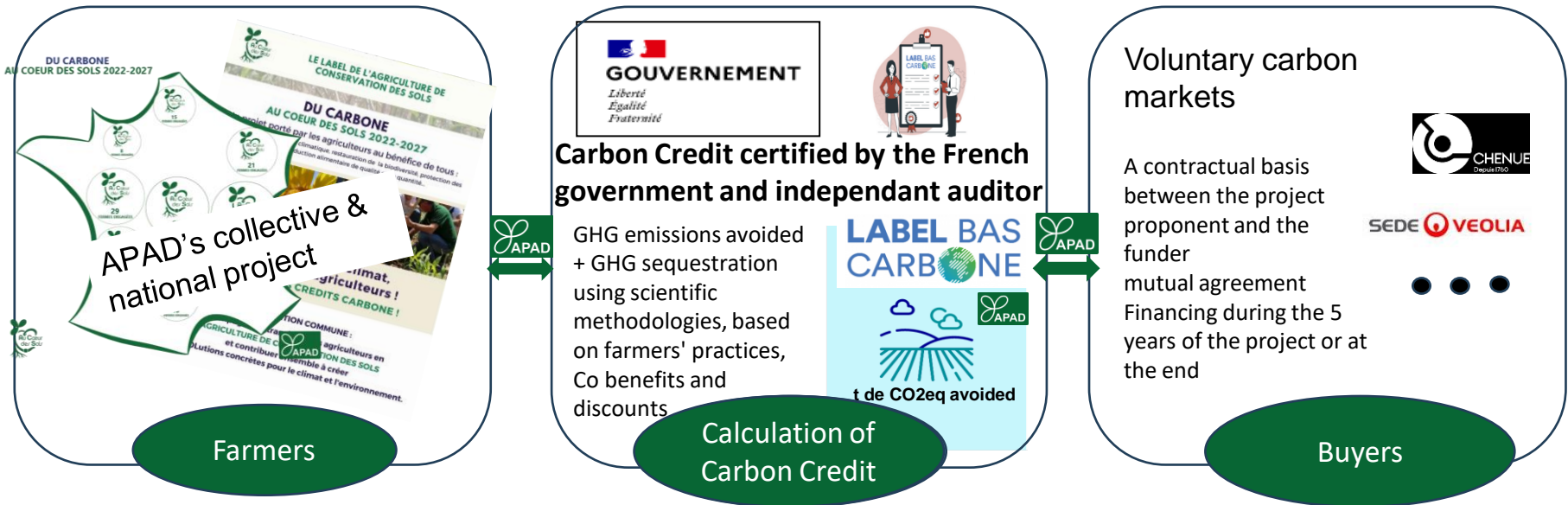
Captation of Carbone:

- Yields are similar as other practices
  - Residues return to soil
  - Permanent soil organic cover : Photosynthesis, more C
- Less mineralisation: no till  
Less erosion: no till + permanent soil organic cover



# APAD’s project: “Du Carbone Au Coeur des Sols”

## APAD, association of farmers, actor at every step



215 farms in CA  
38 370 ha

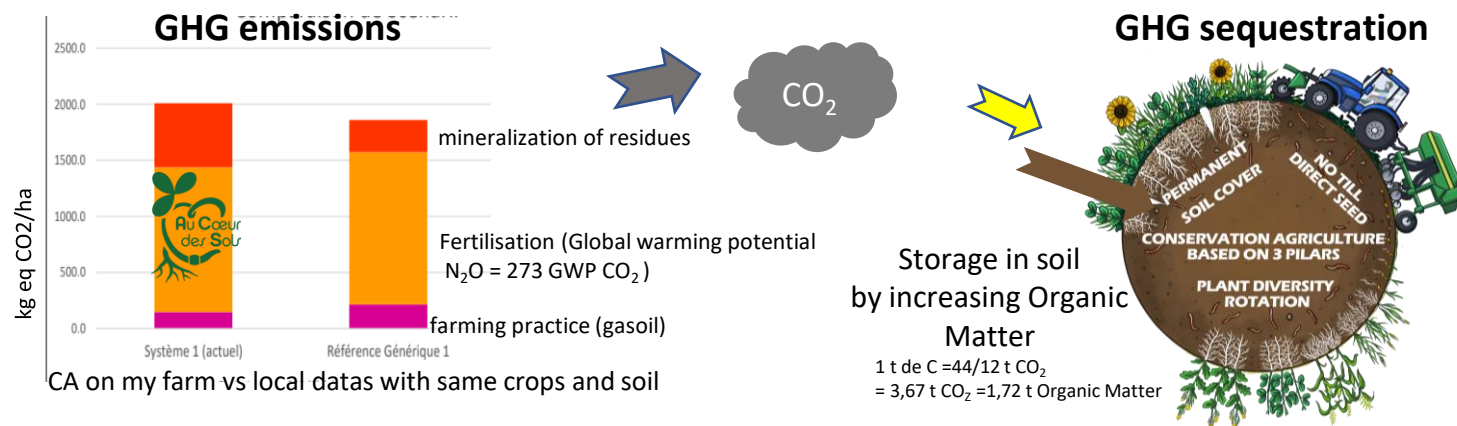
Estimation of 307 521 certified credits carbon generated for 5 years

A floor price for farmers of €50/ CC in 2022\*

APAD's project is the most important Fields Crops collective project engaged in Low Carbon Label in France and manage from producer to buyer by farmers and for farmers.



## First results from the farms of APAD’s project



 <b>Field Crops Low Carbon Label</b>	<b>GHG emissions</b> <i>(calculated by Label bas carbone grande culture French government)</i>	<b>GHG sequestration</b> <i>(calculated by SIMEOS AMG agrotransfert INRAe)</i>	<b>Balance on the Farms</b>
<b>Average of the 215 APAD’s Farm</b>	<b>2t2 CO<sub>2</sub> eq/ ha/ year</b>	<b>4t CO<sub>2</sub> eq/ ha/ year</b>	<b>1,8t CO<sub>2</sub> eq/ ha/ year</b> <b>Positive C Balance on 75% of the APAD’s farms</b>
Local references with same productions and soils	50% of the CA farms have less emissions than referensis	93% of the CA farms store more than referensis	<b>Generation of 1,6 Carbon credit /ha/an estimated for the APAD’s farms</b>



## Conclusion: A benchmark for the farming community...

- CA enables neutral production by storing carbon in the soil
- A working business model to upscale climate mitigation by paying farmers to implement real resilient farm practices (CA)
- Climate change is the opportunity to talk positively about CA
- Farmers need to lead carbon farming and manage market rule to ensure that the added value accrues to their farms.
- Carbon sequestration by CA is just the tip of the iceberg when compared with all the other benefits of CA: production, water, biodiversity, resilience
- Policies, research and industry must recognize and promote CA





GSP Plenary Assembly – Soil Partner’s Day – 13th July 2023



Thank you for enabling our farmers  
to save our planet





# “European perspective of land degradation and soil health”

by

**Dr. Arwyn JONES**  
**(EU Soil Observatory – EC-JRC)**



# Land degradation in Europe: implications for SOC

Arwyn Jones & Calogero Schillaci

European Commission

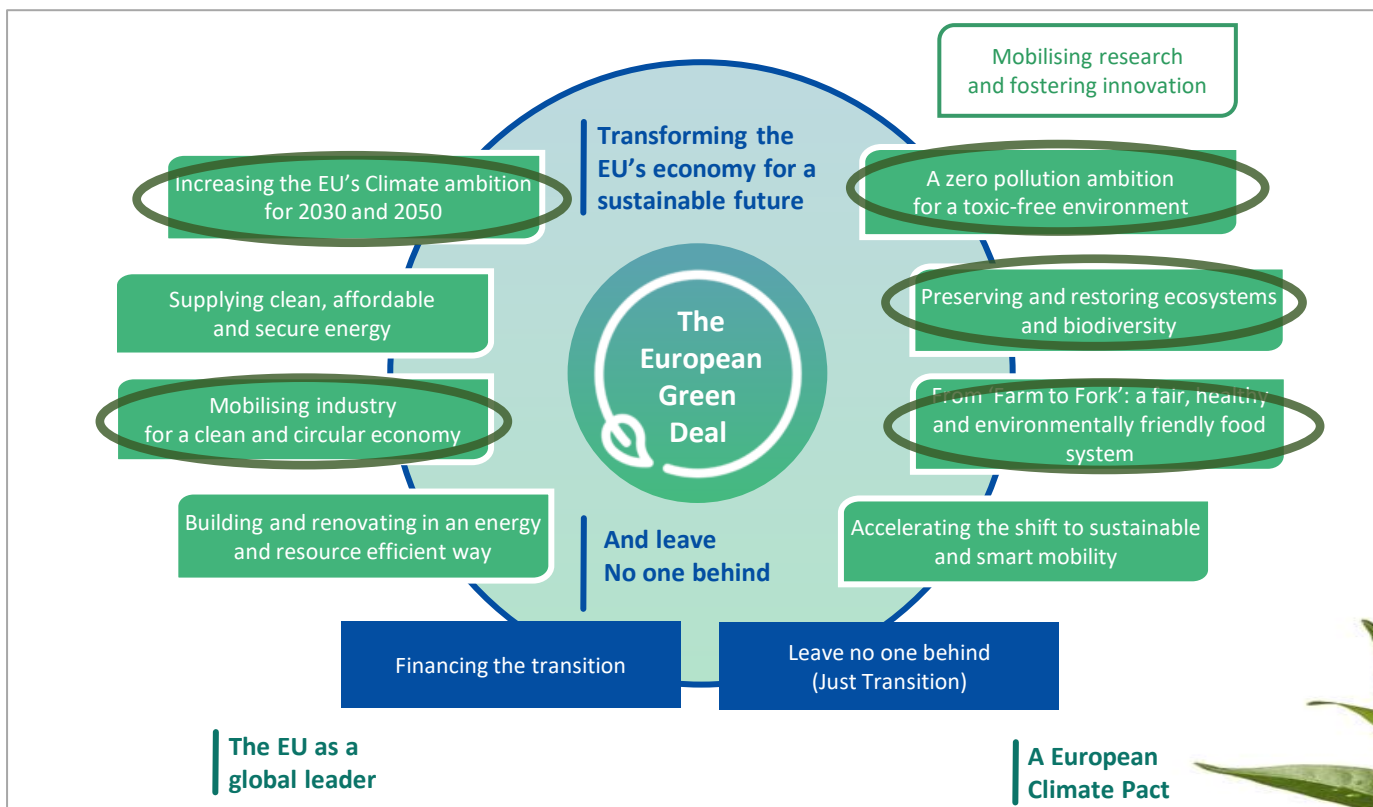
Joint Research Centre

EU Soil Observatory

GSP Partners Day 4 per 1000 session

12/07/2023

## Policy context



Soils are a cross-cutting theme within the European Green Deal

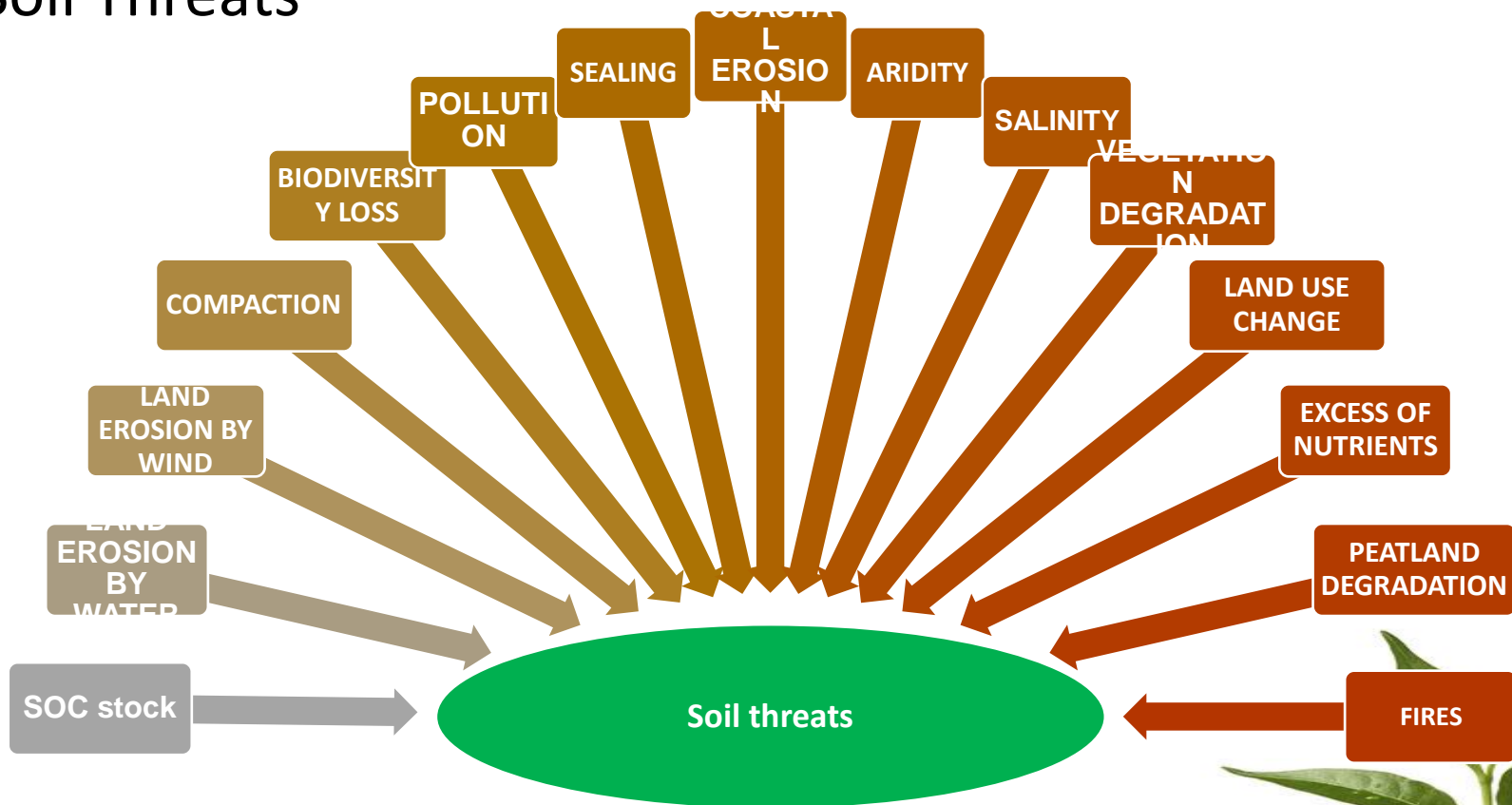




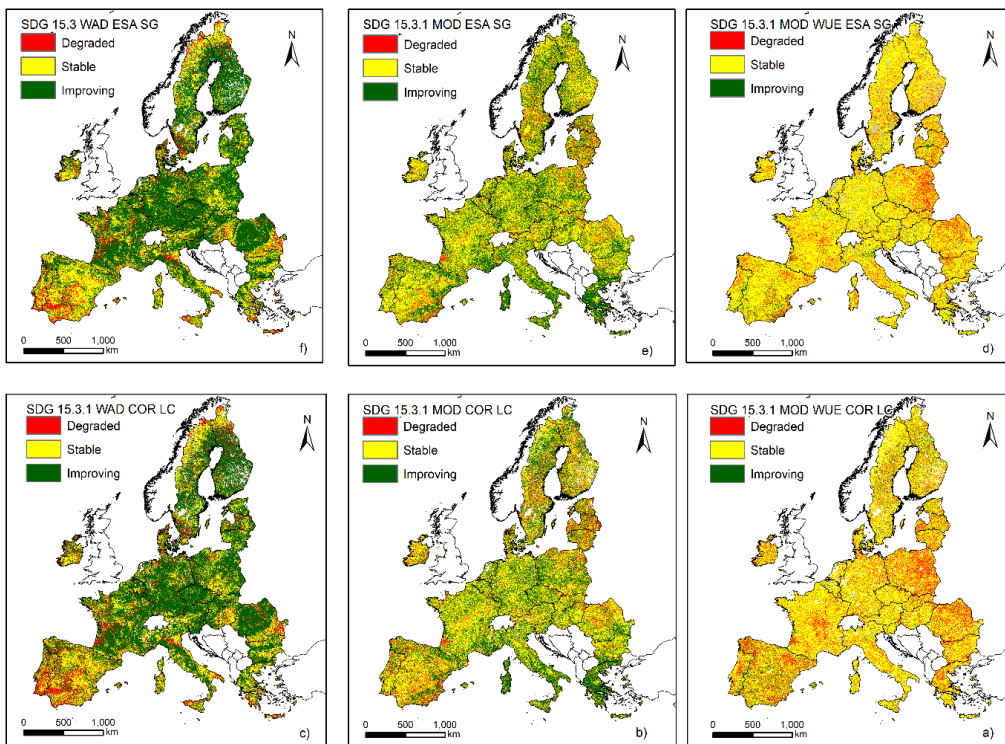
# Soil and ecosystem services



## Soil Threats



## SDG 15.3.1 indicator, different scenarios

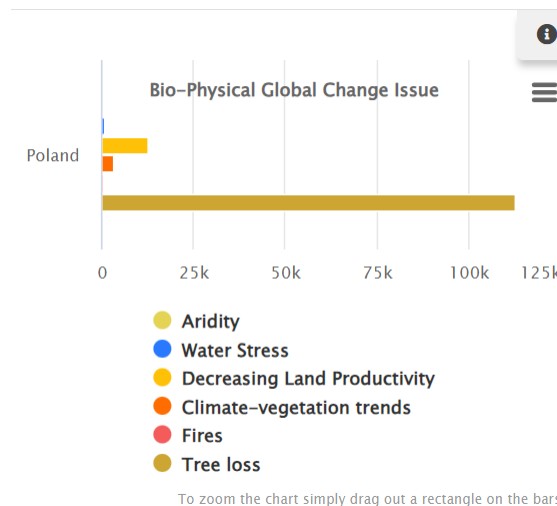
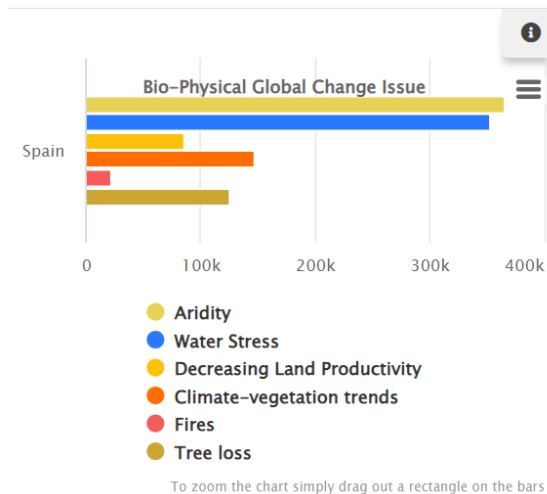


LD Assessment using original and alternative sub-indicators in **Trends.Earth**

- a) MODIS **WUE** LP, ESA LC, LUCAS SOC stock,
- b) MODIS LP, CORINE LC, LUCAS SOC stock.
- c) WAD LP, CORINE LC, LUCAS SOC stock,
- d) MODIS **WUE** LP, ESA LC, SoilGrids SOC stock.
- e) MODIS LP, ESA CCI LC, SoilGrids SOC stock,
- f) WAD LP, ESA CCI LC, SoilGrids SOC stock,



## World Atlas of Desertification



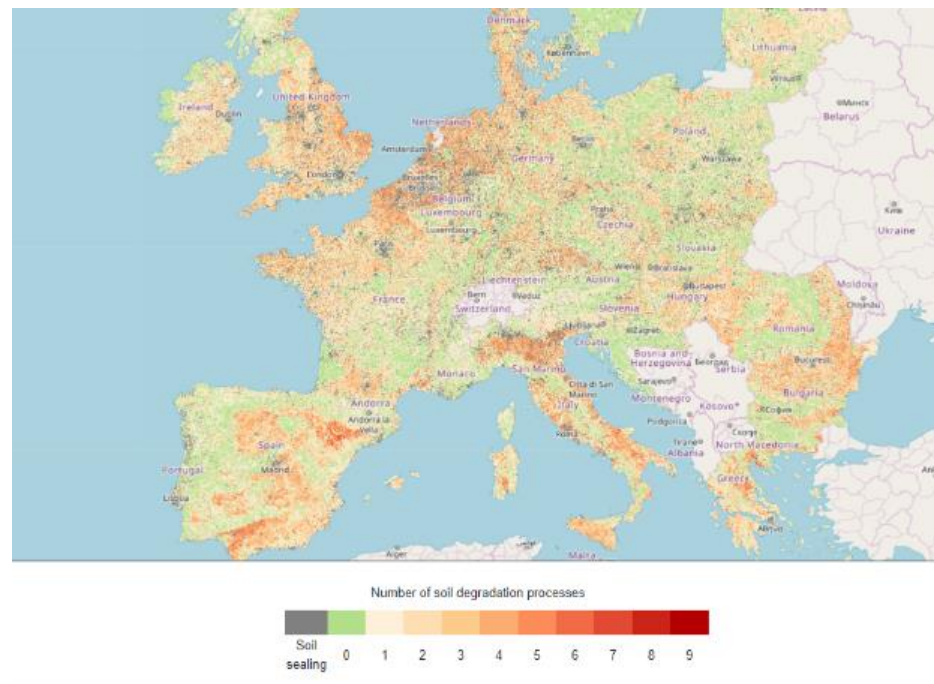
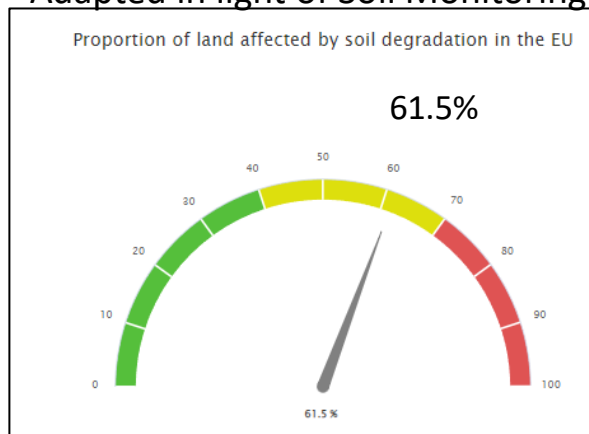
## EUSO Soil Dashboard



### Convergence of scientific evidence

- 61.5 % of unhealthy soils
- Dashboard shows location and different types of soil degradation in the EU

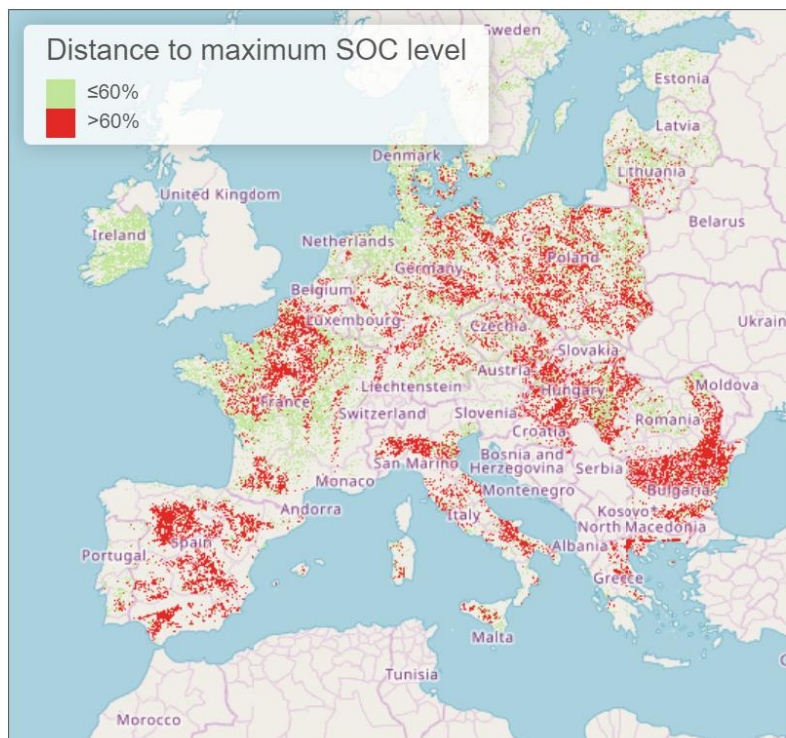
### Adapted in light of Soil Monitoring Law



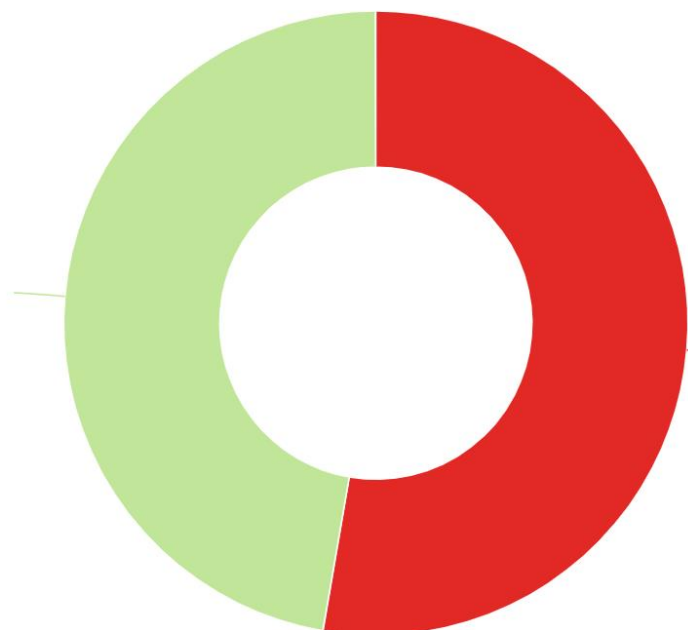
<https://esdac.jrc.ec.europa.eu/esdacviewer/euso-dashboard/>



## Non-optimum SOC stocks



Areas where distance to maximum SOC level >60%, % (based on areas with data)



<https://esdac.jrc.ec.europa.eu/esdacviewer/euso-dashboard/>

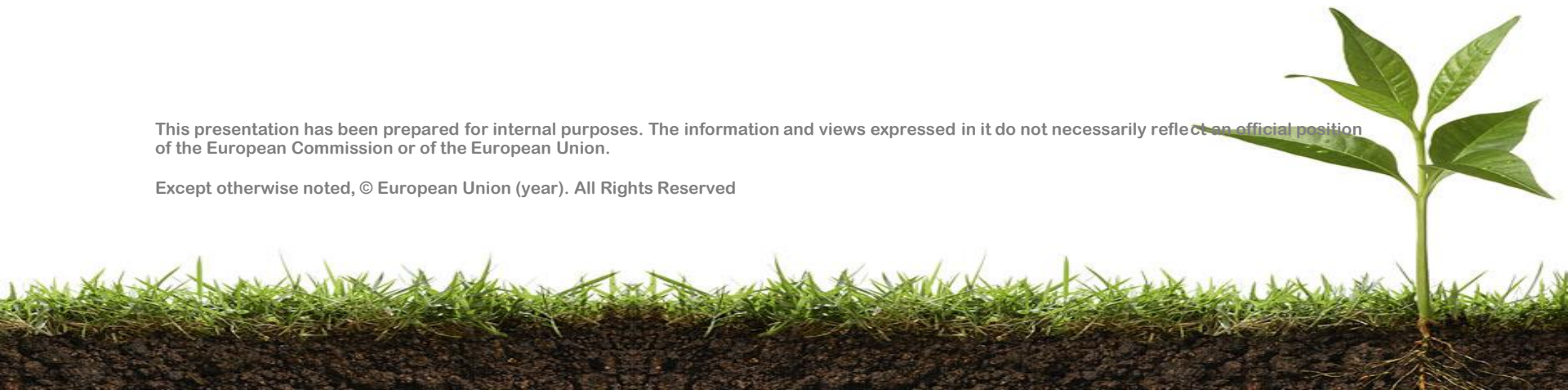


# Thank you – questions?

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# “Soil Health from scientific perspectives”

by

**Dr. Job KIHARA**  
**(Soils Team Leaders of**  
**Alliance Bioversity International-CIAT**

(video)







## VIDEO of Dr. Job KIHARA



# Healthy Soils are

<p><b>carbon rich soils</b> through carbon sequestration which allow climate change mitigation</p>	<p><b>soils rich in organic matter full of life and biodiversity</b> which can support high biodiversity ecosystems above soil</p>	<p><b>soils rich in organic matter</b> which can absorb high quantities of water to be used by plants and which are less sensitive to erosion (wind and water)</p>	<p><b>fertile soils</b> allowing agricultural production on the long run with stabilized yields</p>
--------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------

So, an healthy soil is the minimum basis to reach the objectives of the following UN Conventions and Organization



Thus, the indispensable starting point...

As a conclusion, it is vital to support this resolution proposal from CA4SH & “4 per 1000” Initiative at the COP 28 and participate to the numerous side-events that we, collectively, would like to organize at this occasion.



*DRAFT proposal for governments to issue a*

**SOIL HEALTH RESOLUTION OF SOIL CHAMPIONS AT COP27 and COP28**

**A commitment to enable and scale healthy soil practices to both adapt to and mitigate climate change**

To achieve the goals of the Paris Agreement, the [Sustainable Development Goals](#), restoration targets, and food and nutrition security goals, we need comprehensive action. In the past, energy-based solutions were the sole focus of climate policies. However, nature-based solutions can make an essential contribution to combating climate change. Specifically, carbon solutions that use and increase the absorption capacity of natural carbon sinks, most notably soil, offer advantages and co-benefits.

The projected mitigation potential in agriculture via improved crop and livestock management is **1.8-5.5 Gigaton CO<sub>2</sub>(eq) per year in 2030**. This is comparable to the mitigation potential of wind energy. Yet, carbon sequestration in agriculture is still limited. If we manage soil well, it can be an important ally in our fight against climate change.

We lose **24 billion tons** of topsoil every year. This is due to unsustainable land and soil management practices that accelerate degradation through erosion, salinization, compaction, acidification, loss of organic carbon and biodiversity, and chemical pollution accumulation. By scaling sustainable and regenerative farming and grazing practices, and supporting farmers, pastoralists and land managers on the ground who implement them, global agriculture can shift from being the world’s largest driver of soil degradation to its greatest restorer.

Now is the time for multi-stakeholder action to build an enabling environment at multiple levels for supporting, financing, scaling and monitoring healthy soil ecosystems. The Soil Health Resolution is a step toward achieving this.





# GSP Plenary Assembly – Soil Partner’s Day – 13th July 2023



# www.4p1000.org

## Join us



## Support us

