



# Soil Health, Agriculture & Climate in New England – 4p1000 initiative *April 4, 2019*

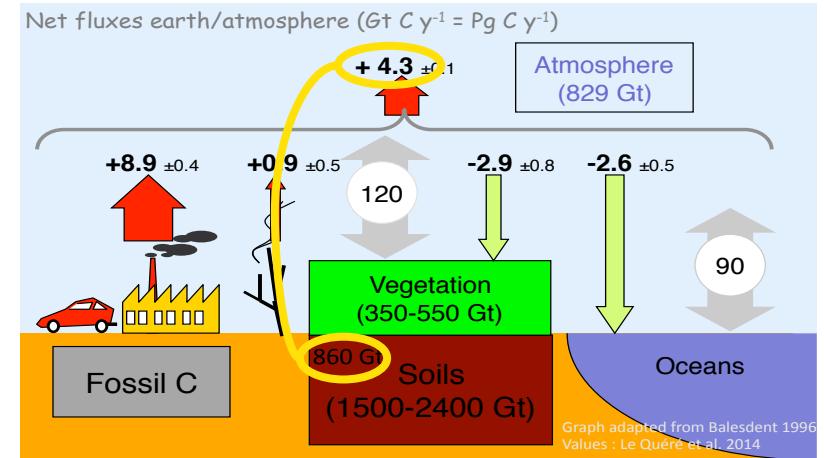


Sylvain Maestracci  
Agricultural Counselor

*Embassy of France / French Ministry for Agriculture and Food*

# The 4p1000 initiative in a nutshell

- **4p1000**, an international initiative launched in 2015 during the COP 21,
  - a simple idea: an annual increase of 4 ‰ of the world soil surface carbon stocks would nearly compensate for the annual CO<sub>2</sub> increase in the atmosphere
  - of course, cannot be done everywhere on Earth, so we need active policies and involvement to promote carbon storage in agricultural area and forests
  - how to do it: combat deforestation, promote agro-ecological practices that increase the quantity of organic matter in soils
  - while mitigating climate change, an increase of organic matter in soils can enhance yields in crops, diminish flood risks, and enhance food security (especially in developing countries)



# 4p1000 governance and example of practices

- **A light international and multi-stakeholders platform :**
  - All types of stakeholders: Countries and local governments, including France, Canada, Mexico, California, and in Massachusetts: Great Barrington County; farmer associations; Non-profits and NGOs; Research and universities; Companies
  - Governance: a consortium for decision-making (183 members), the forum of all the partners (359) to consult and collaborate with all stakeholders, a scientific and technical committee (14 scientists) to focus on research and provide the best science
- **Examples** of good practices to be promoted



# 4p1000: Some partners and members in 2018



United Nations  
Convention to Combat  
Desertification



AFD  
AGENCE FRANÇAISE  
DE DÉVELOPPEMENT



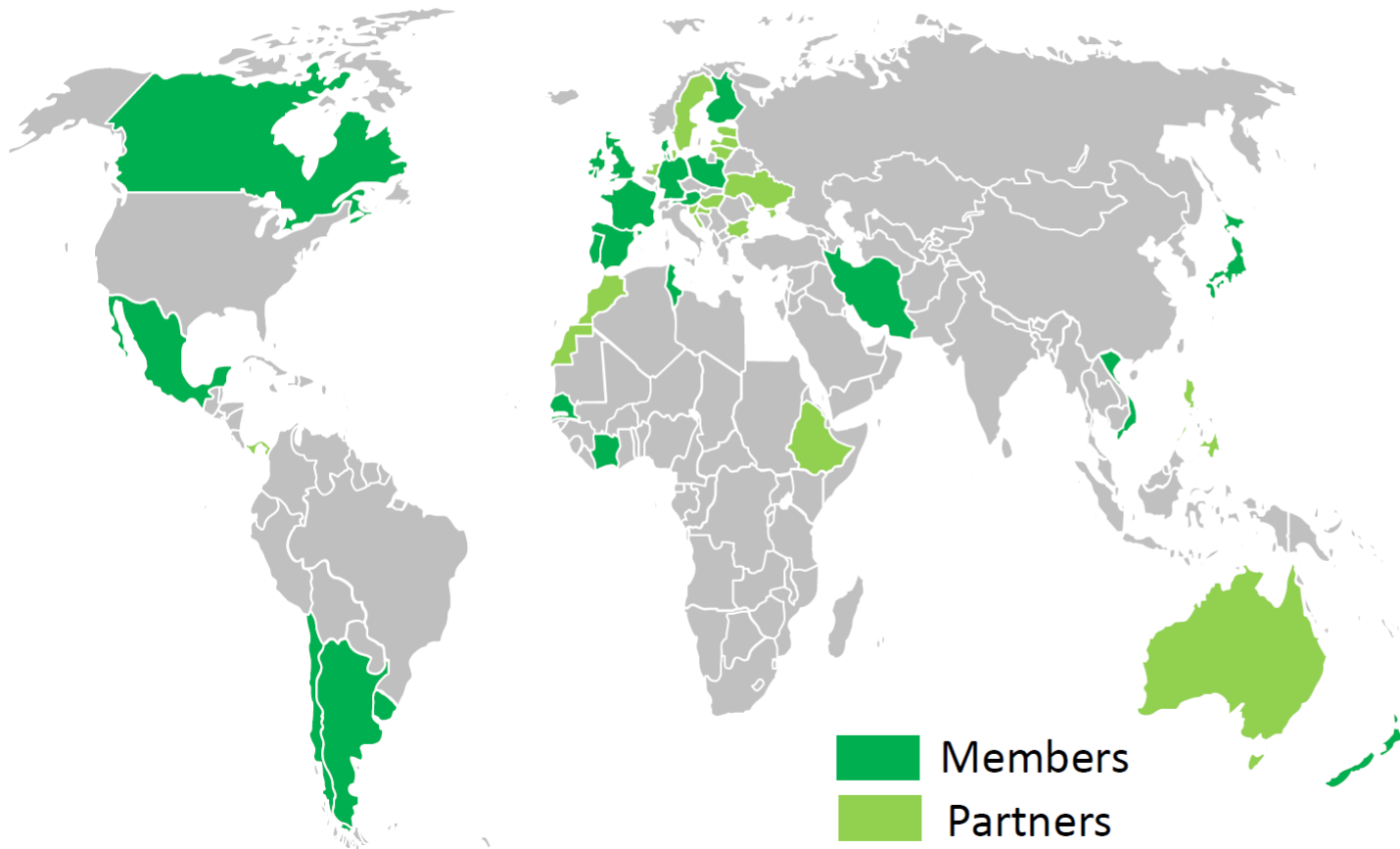
Asian Development Bank



The World Bank



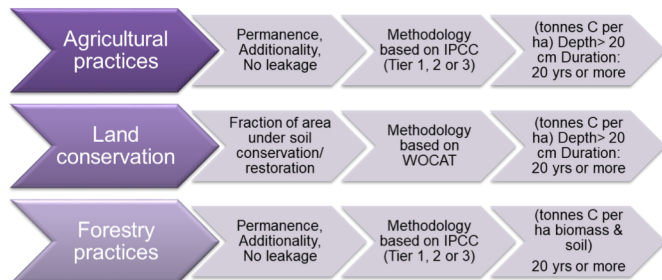
Etc.



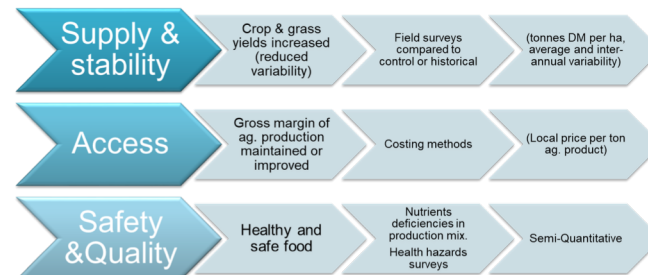


# Set of reference criteria for evaluation for projects & actions – Criteria, indicators, methods and units

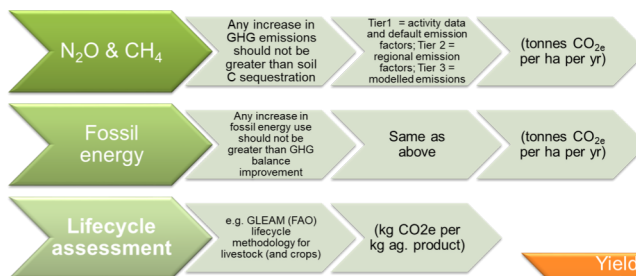
## Soil carbon and land conservation or restauration



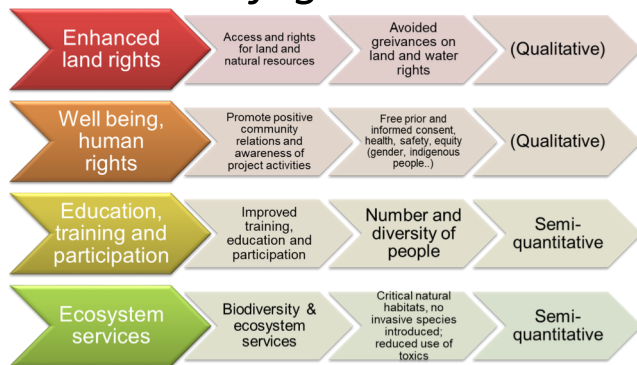
## Food security



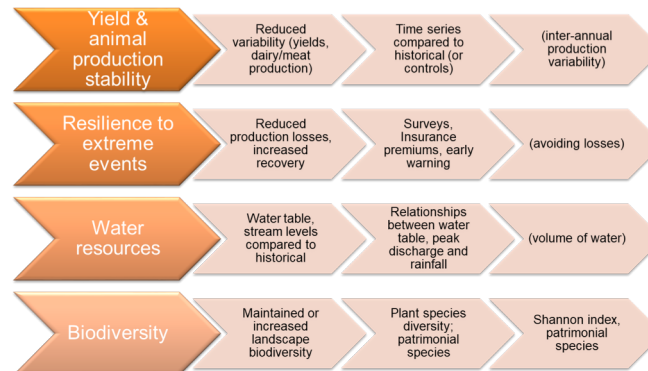
## Mitigation



## Safeguards



## Adaptation



# Climate change and 4p1000 implementation in France: Agroecology projet

- France has developed a broad strategy to push changes in agriculture toward more sustainable production methods: the **Agroecology projet**

## • Goals

- Systemic approach* at the farm level as well as in its relationship with local ecosystems and local agri-food chains
- Reliance on *positive interactions in the agricultural ecosystem*: conservation and improvement of natural resources by efficient management of inputs and practices (including enhancement of biodiversity and biological regulations)
- Enhancement of economic performance* of the farm including through ecological performance

## • Governance

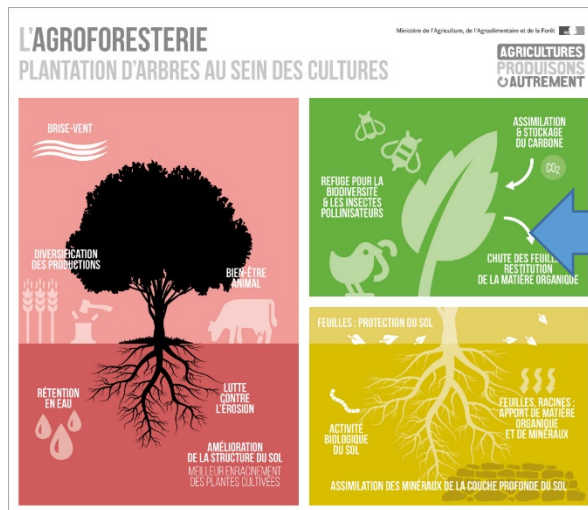
- Collective governance* of the project with the main stakeholders of the sector
- Definition and implementation of a *collective and comprehensive action plan* (17 chapters ; more than 70 actions)
- Modification of other policies* from this new perspective, and articulation with other national strategies: National Low Carbon Strategy, National Biodiversity Strategy





# Climate change and 4p1000 implementation in France : programs used

- Alongside the Agroecology project, several programs and policies are engaged in tackling the climate change challenge
  - Programs from the Common Agricultural Policy
    - Cross-compliance* as a condition to receive surface payments
    - Green payment scheme*: direct payment with ecological conditions
    - Agri-Environment-Climate measures* (equivalent of Conservation programs): one measure aimed at healthy soils, measures to maintain and extensively manage grasslands and pastures -
    - Program for *Organic farming*



- Legumes plan: promoting planting protein crops (areas decreased in France) to limit fertilizer use and enhance farm autonomy
- Agroforestry plan: developing agroforestry as an agroecological farm system
- Research: soil is one of the four priorities of the national “Agriculture and Innovation 2025” Plan
- Outreach and Training



# Climate change and agriculture policy

## What's done in California and Maryland



- In Maryland: Healthy Soils Program
  - Management of nutrients for Chesapeake Bay water quality
  - Program adopted in 2017
  - Healthy soil consortium that meets on a regular basis, with all stakeholders



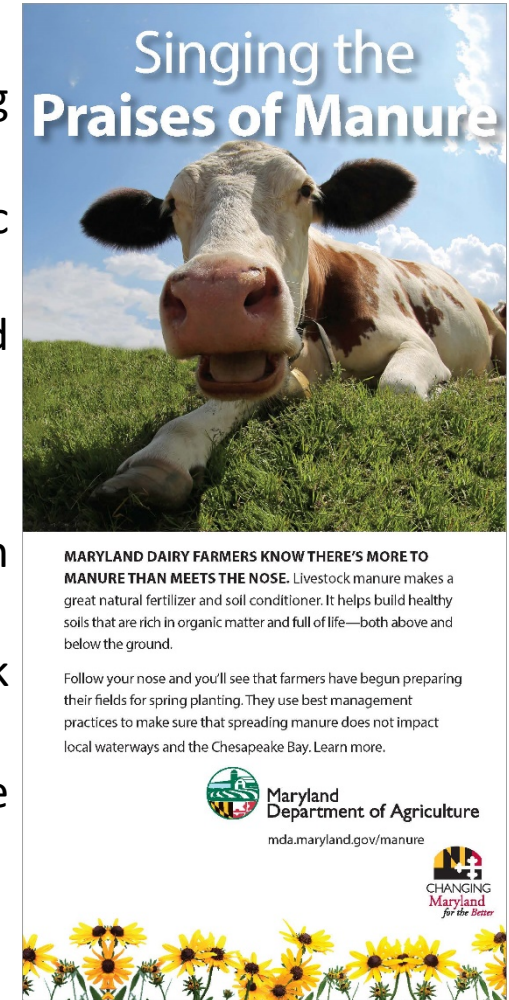
- In California: Healthy Soils Initiative
  - Launched in 2015
  - For farmers, both incentive programs and demonstration projects





# Climate change and 4p1000 implementation for instance, what can be done on a dairy farm?

- On **crops**: transform the parcel into a carbon sink
  - cover crops, to have a cover all year round (including permanent pasture)
  - no till, or light tillage, to avoid disturbance of top soil organic matter
  - Think legumes in crop rotation or planting: less fertilizer (and feed for cows)
- On **animal husbandry** :
  - manure management: a good management on parcels can contribute to further increases of carbon storage
  - Grazing management: grazing on a limited area, with quick rotations of the herd
  - Animal feed, curb the formula used: flaxseed for example reduce GHG emissions
- But first and foremost: **think Organic matter**



***Thank you for your attention***



MINISTÈRE DE L'AGRICULTURE ET DE L'ALIMENTATION

