Thematic event: Agriculture

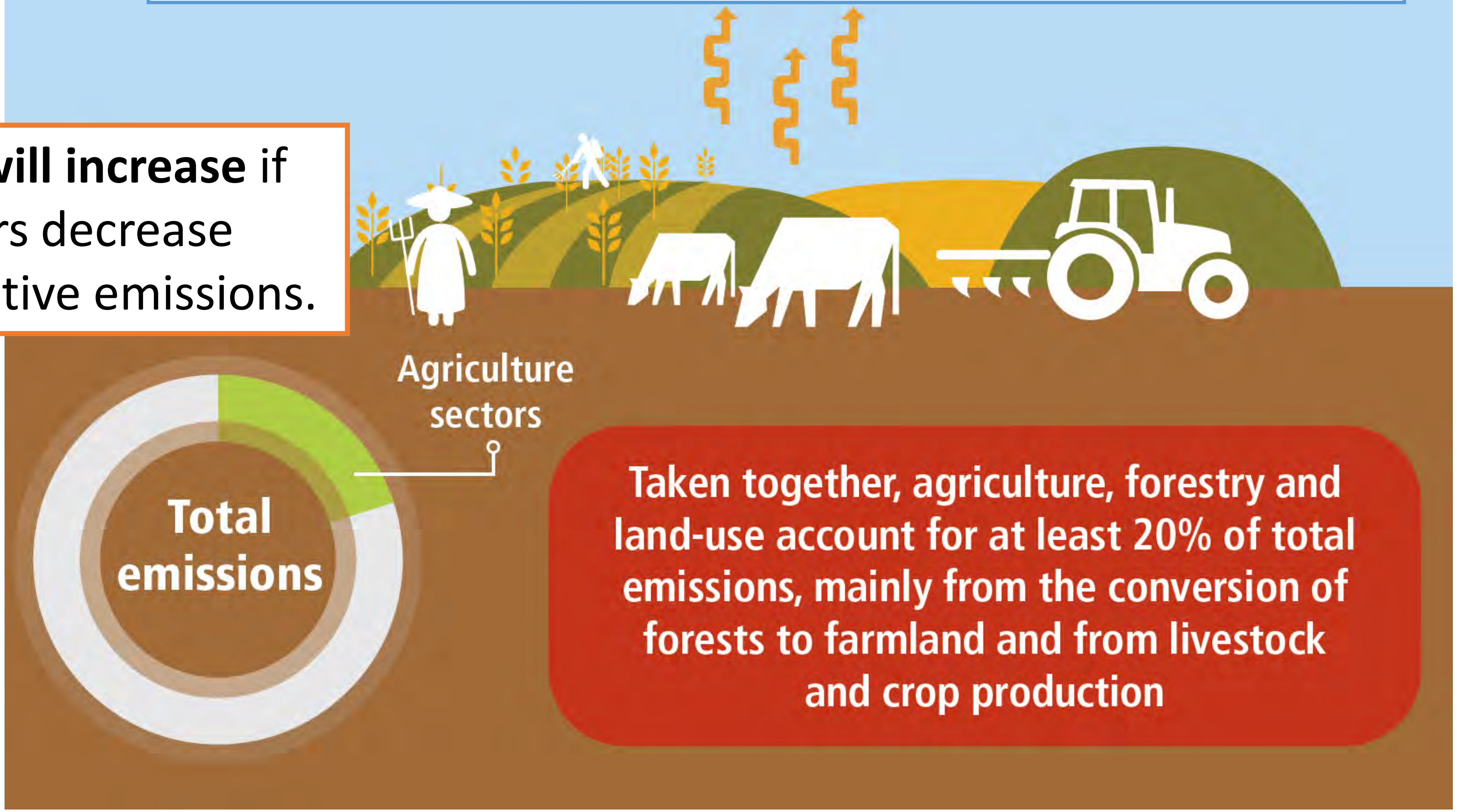
Agricultural activities with climate and sustainable development benefits

Early action: what role for agriculture?

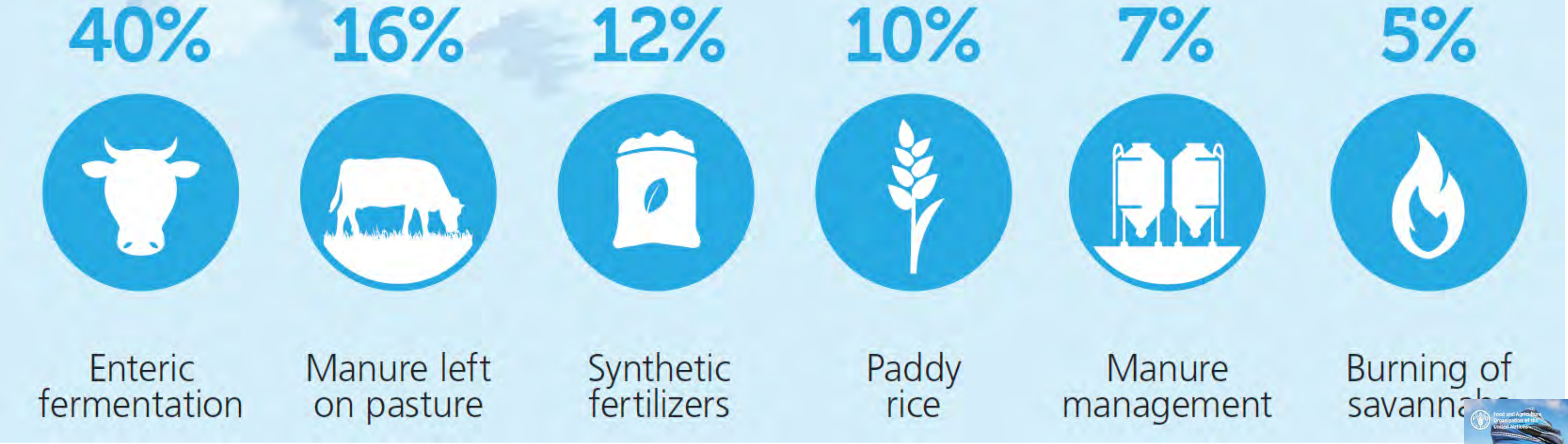
Martial Bernoux and Alexandre Meybeck
FAO

No 2°C pathway is possible without agriculture :
Global emissions need to peak and sharply decrease.
It is urgent to address mitigation in agriculture.

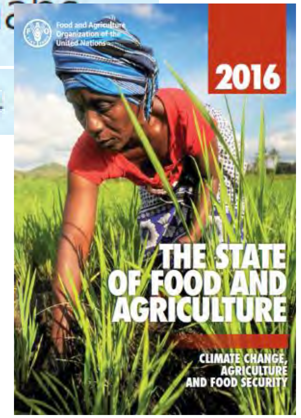
This share **will increase** if other sectors decrease their respective emissions.



The largest sources in agriculture
(without deforestation and forest degradation)



Figures are averages for the period 2005-2014



There are ways to reduce GHG emissions while addressing food security, having more productive, sustainable and resilient systems.

Adapted from FAO, 2016 - www.fao.org/publications/sofa/2016/en/

The Agriculture sectors can substantially contribute to mitigation of GHG increase

2 broad categories

Resource use and production efficiency

Carbon pools storage and replenishment

Food and Agriculture Organization of the United Nations

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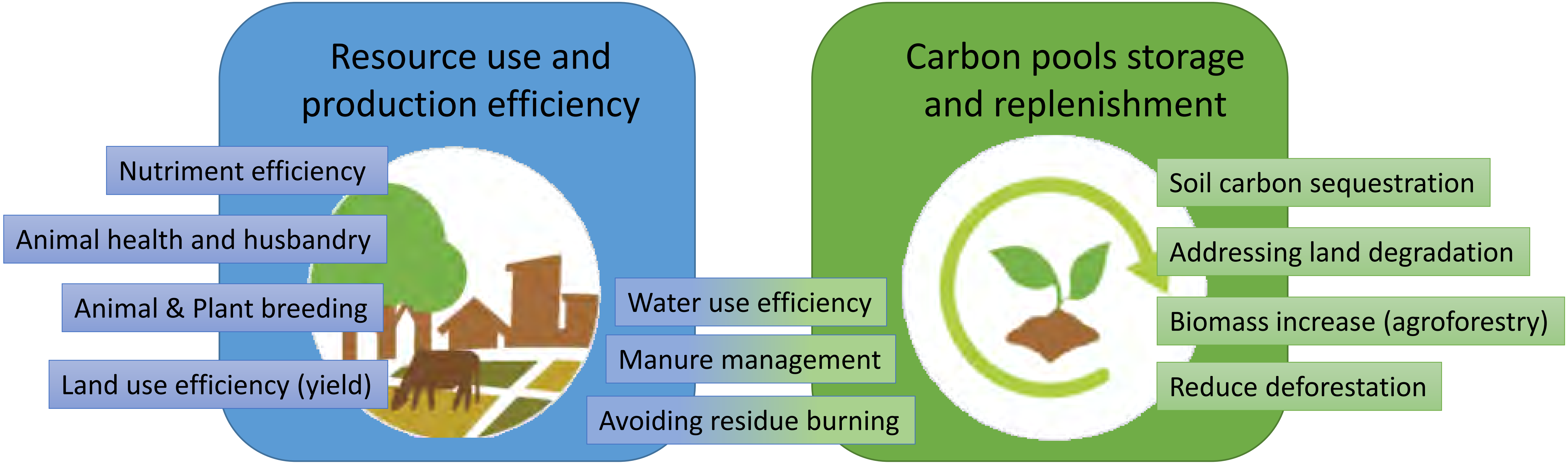


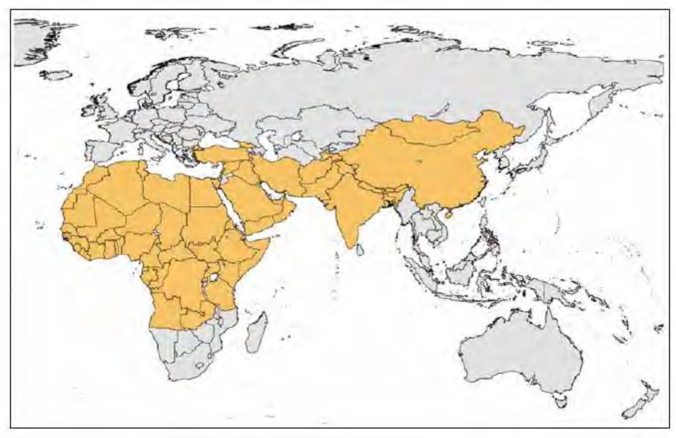
Resource use and production efficiency

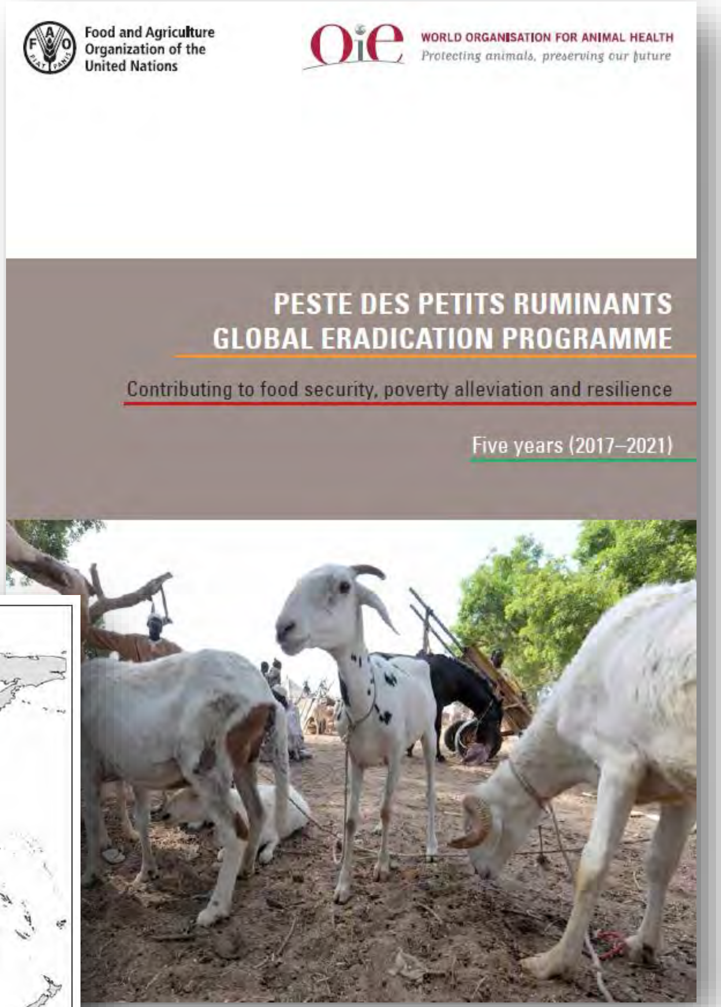
Animal health

Peste des petits ruminants (PPR), also known as sheep and goat plague, is a highly contagious animal disease affecting small ruminants.

Sheep and goats are two of the major livestock species kept and cared for by many of the world's poor.

PPR threatens about 80 percent of the global small ruminant population of nearly 2 billion animals.

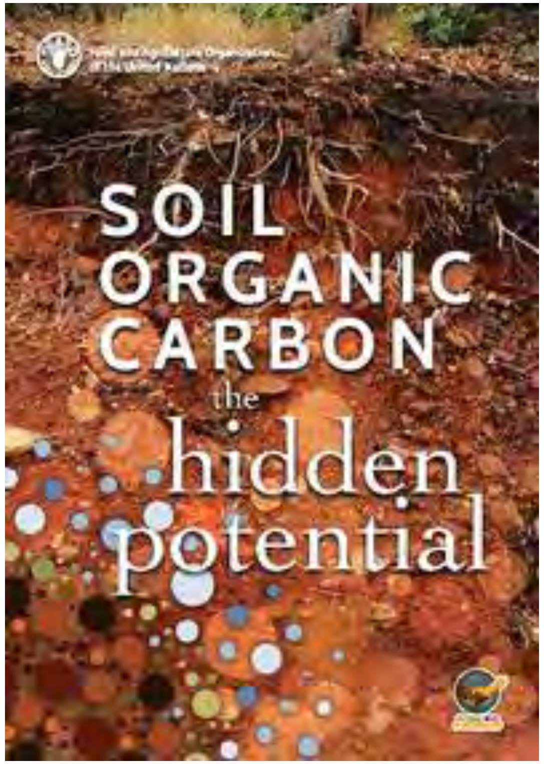




http://www.fao.org/ppr/en

Carbon pools storage and replenishment

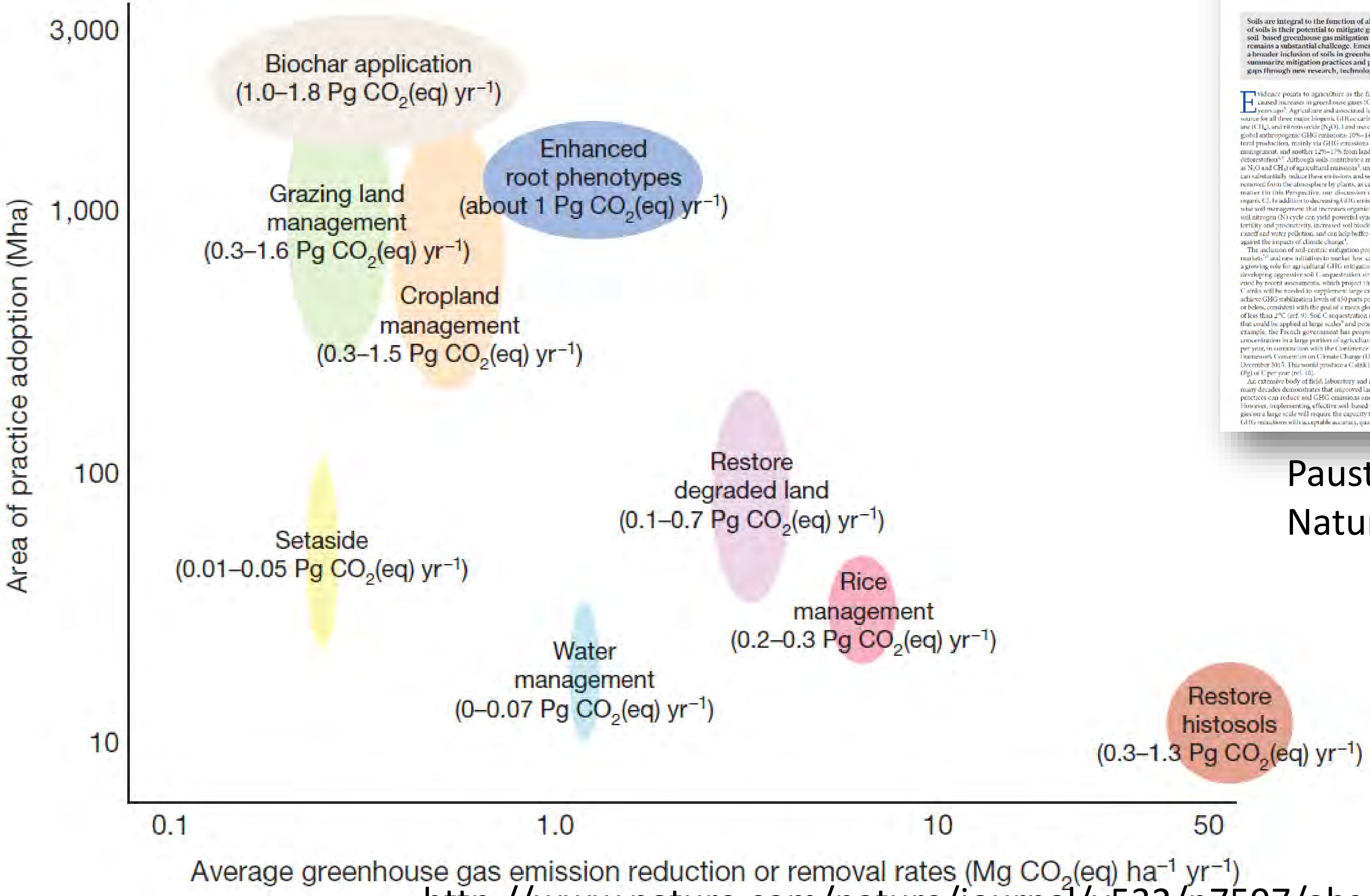
Soil carbon sequestration

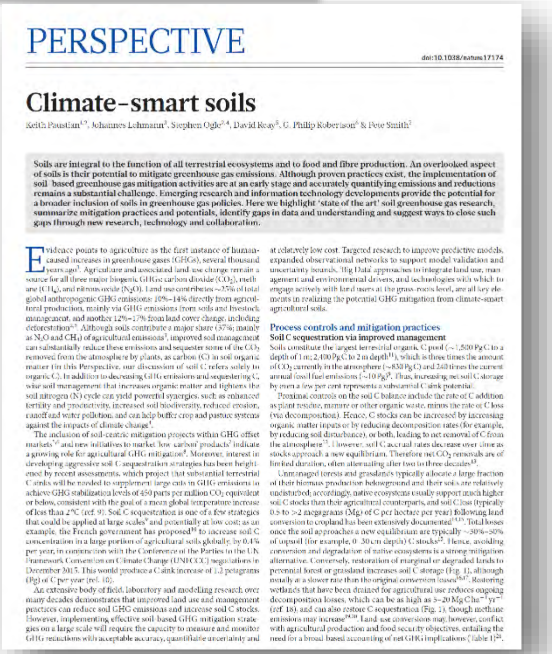


http://www.fao.org/3/a-i6937e.pdf

Carbon pools storage and replenishment

Soil carbon sequestration



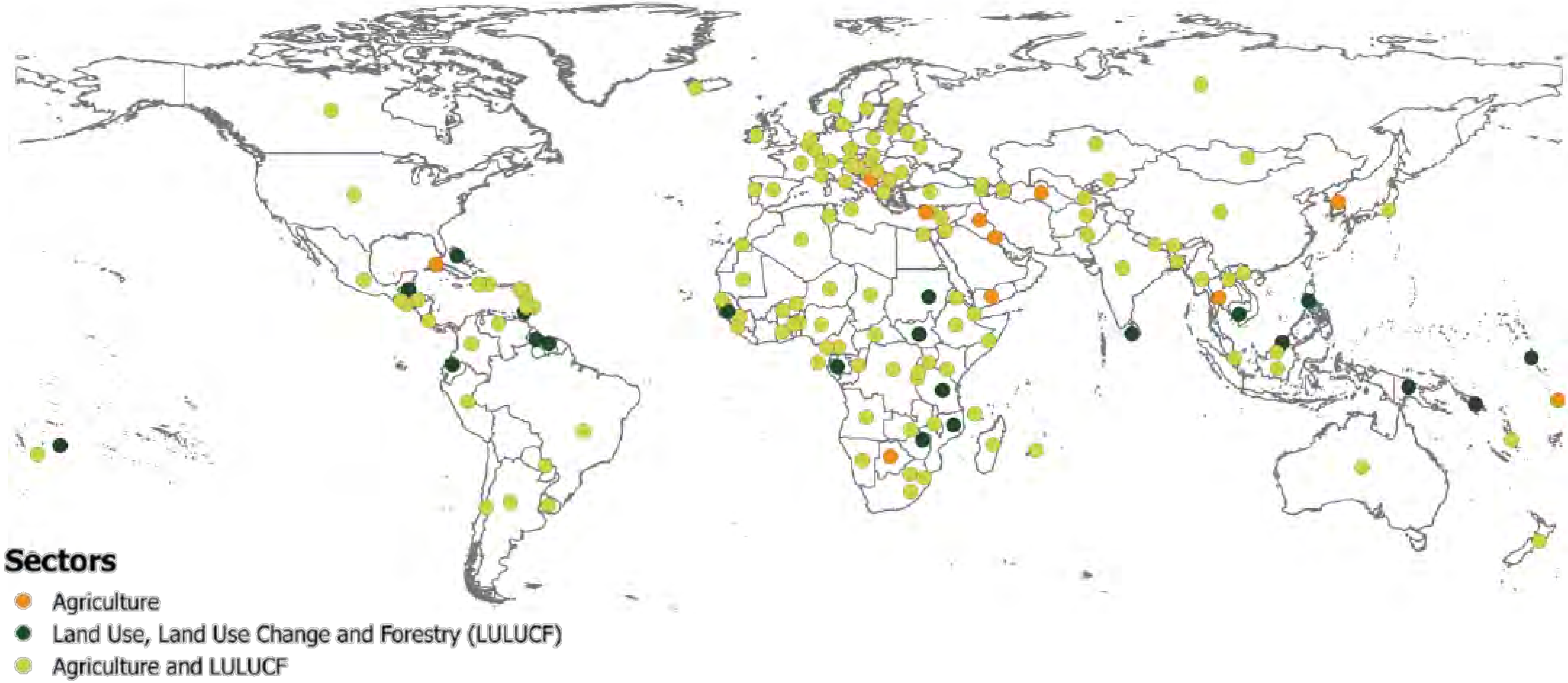

PERSPECTIVE

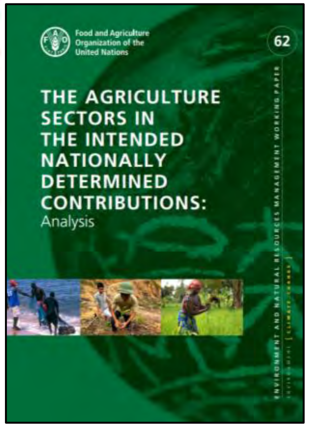
Climate-smart soils

Paustian et al., 2016 - Nature

http://www.nature.com/nature/journal/v532/n7597/abs/nature17174.html

INDCs/NDCs recognize the potential for mitigation lying in the Agriculture sectors

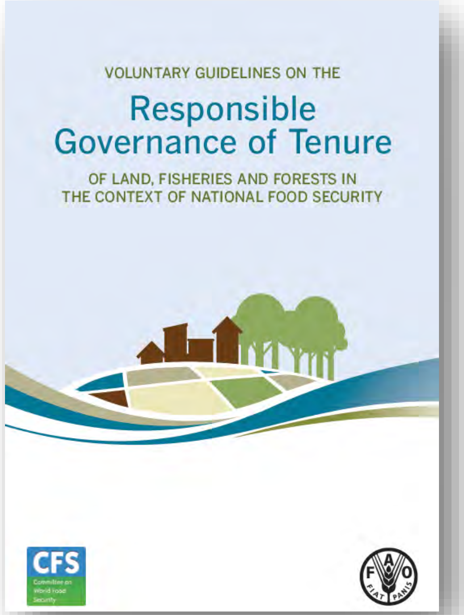




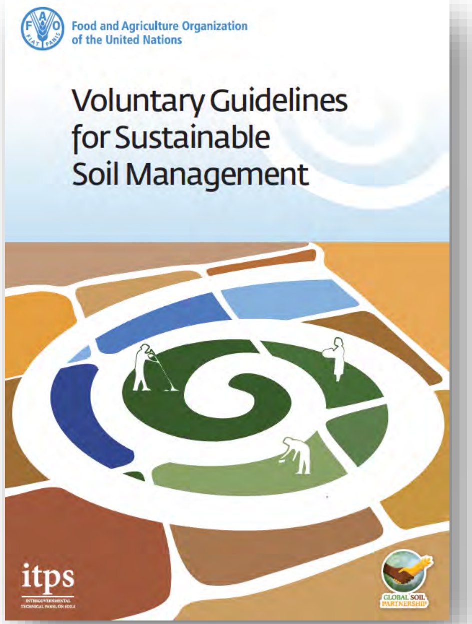
From FAO, 2016 - www.fao.org/3/a-i5666e.pdf

Mitigation options generally bring other sustainable development benefits

- Realization of the SDGs
- Improving ecosystems services
- Biodiversity
- Social and economic dimensions
- …



www.fao.org/docrep/016/i2801e/i2801e.pdf



www.fao.org/3/a-bl813e.pdf

Mitigation options generally bring other sustainable development benefits

A holistic approach:

Covering all agricultural sectors,
food security and nutrition,
Social, economics and other environmental issues,
to improve effectiveness by
addressing multiple challenges as one

Concrete examples from countries

Resource use and production efficiency

Carbon pools storage and replenishment