



# GLOBAL EVENT

JOHANNESBURG SOUTH AFRICA



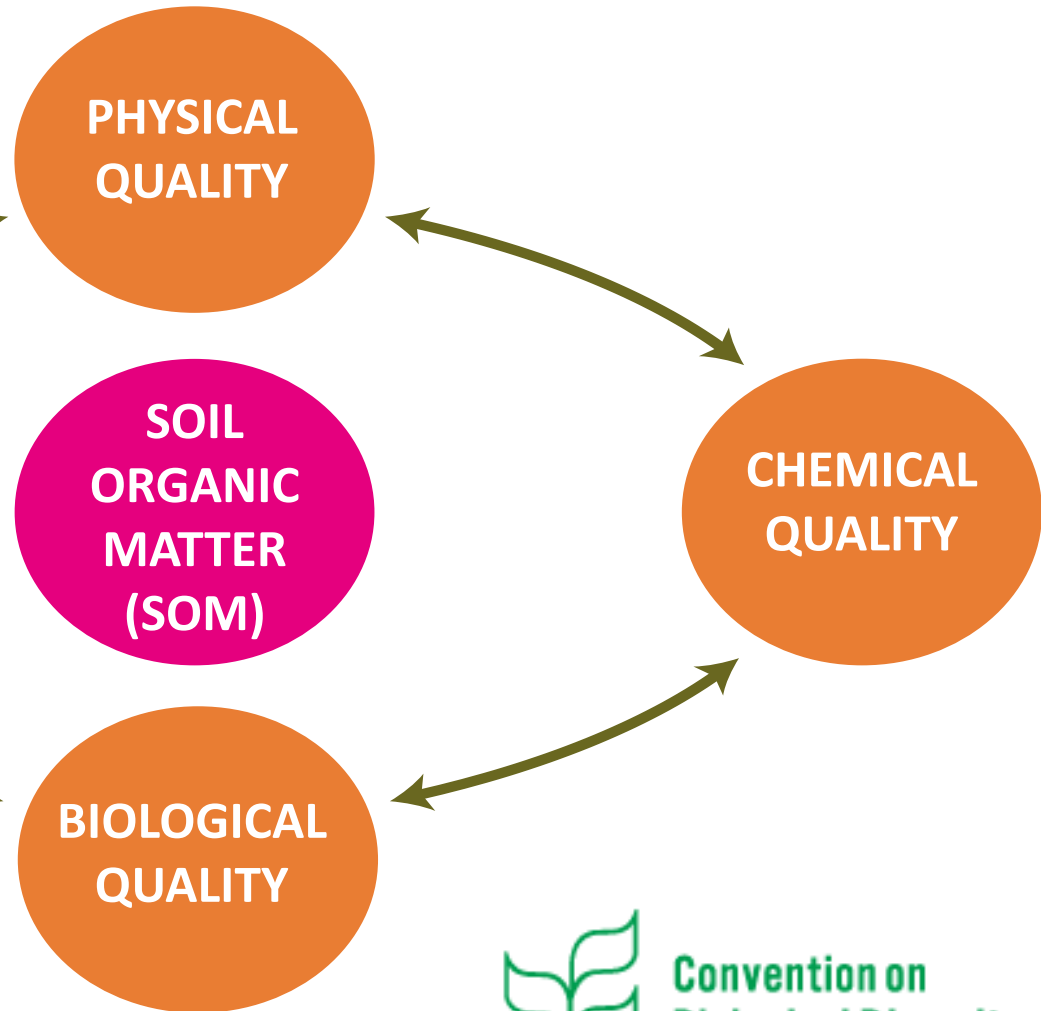
# **SOILS FOR FOOD SECURITY AND CLIMATE CHANGE: THE 4 PER MILLE INITIATIVE**

Hervé SAINT MACARY, Cirad, on behalf of Inra, IRD & CGIAR

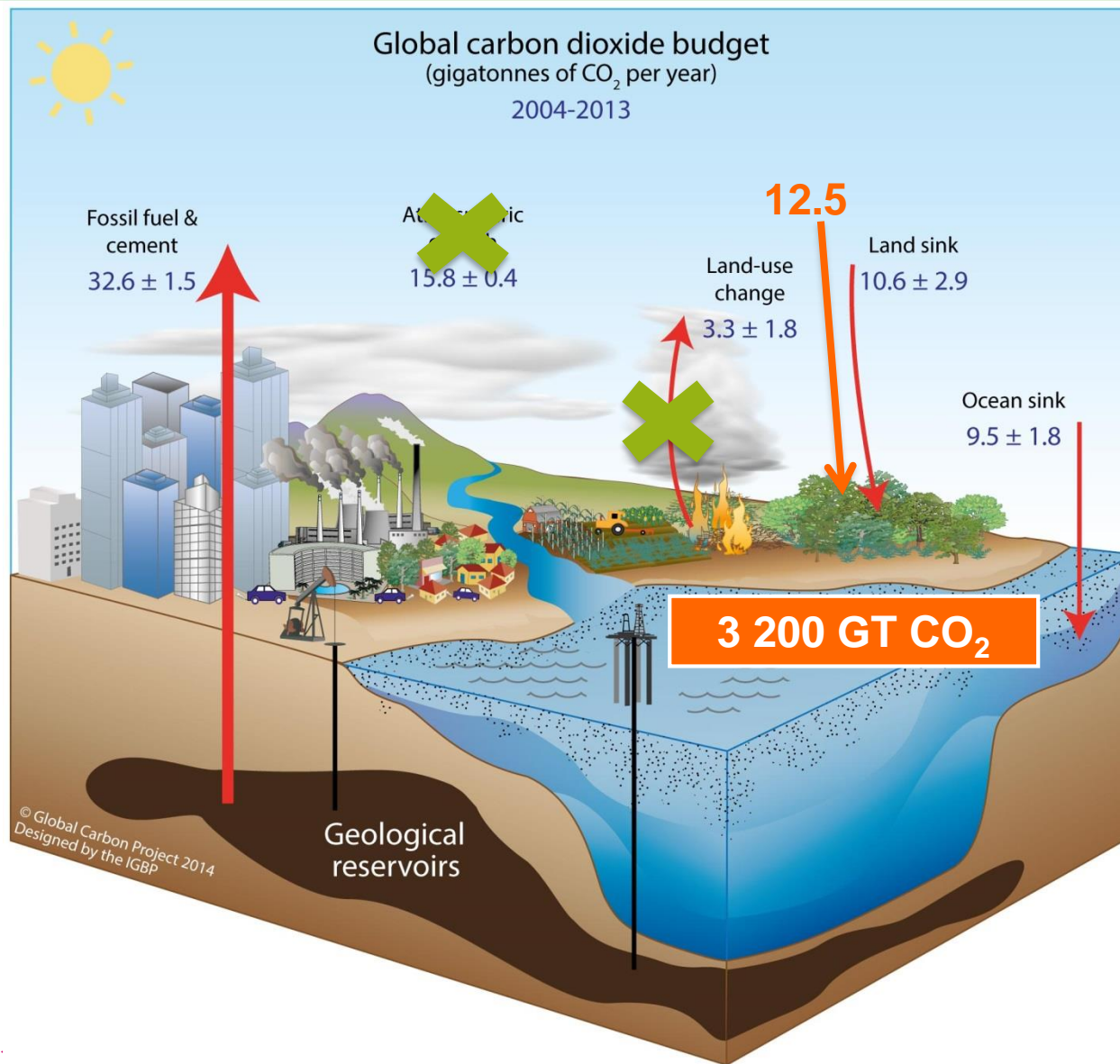
# 4‰ INITIATIVE : MULTIPLE ROLES OF SOIL ORGANIC MATTER (SOM)



INITIATIVE 4 PER 1 000



# 4 ‰ THE ASSUMPTION



$$\frac{12.5}{3\,200} = 4\text{‰}$$

and...what about

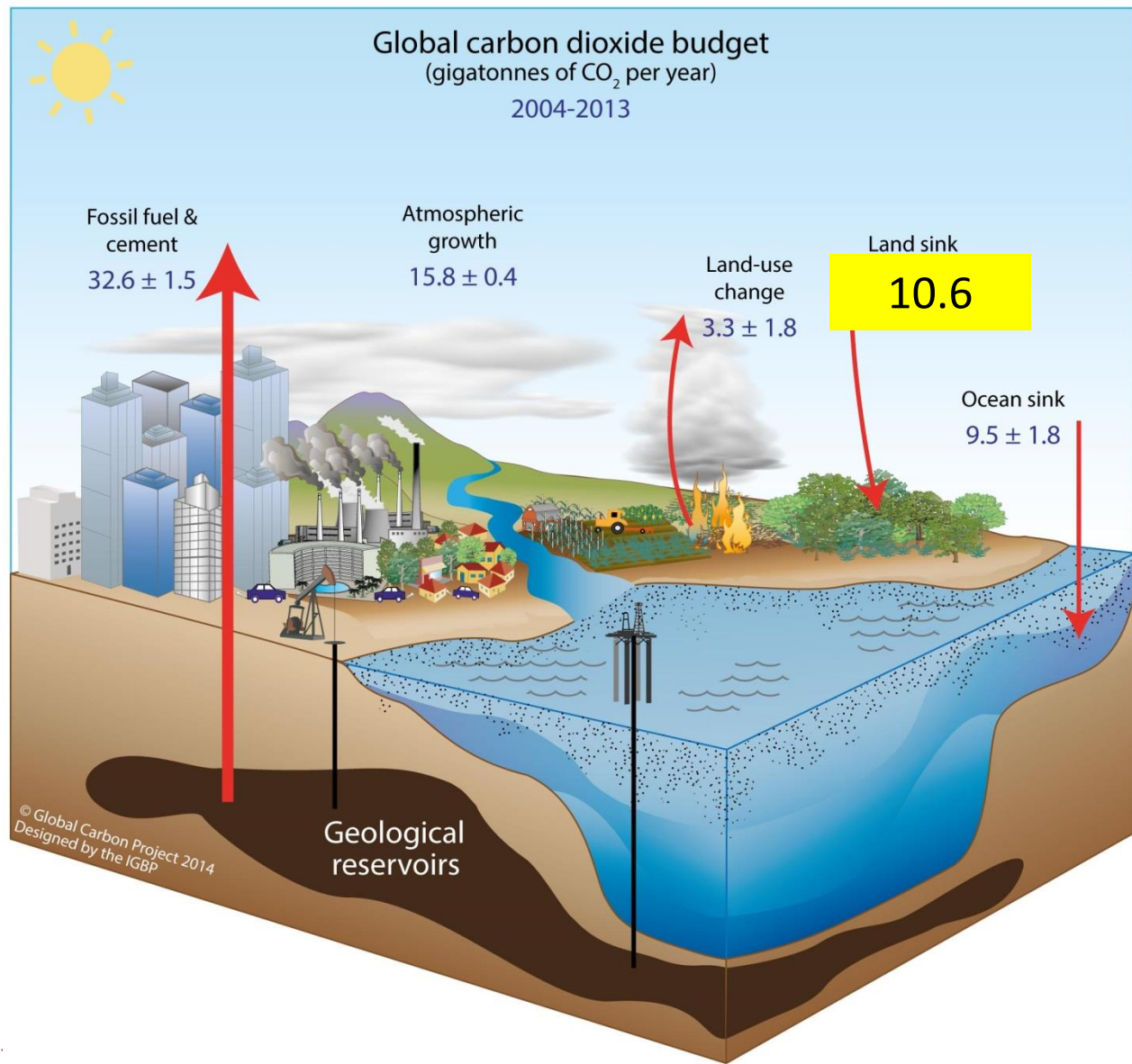
*Shaping Global by Strengthening the  
Link between Regional, National and  
Local and How to Get There?*

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INITIATIVE 4 POUR 1 000



# 4 ‰ THE ASSUMPTION

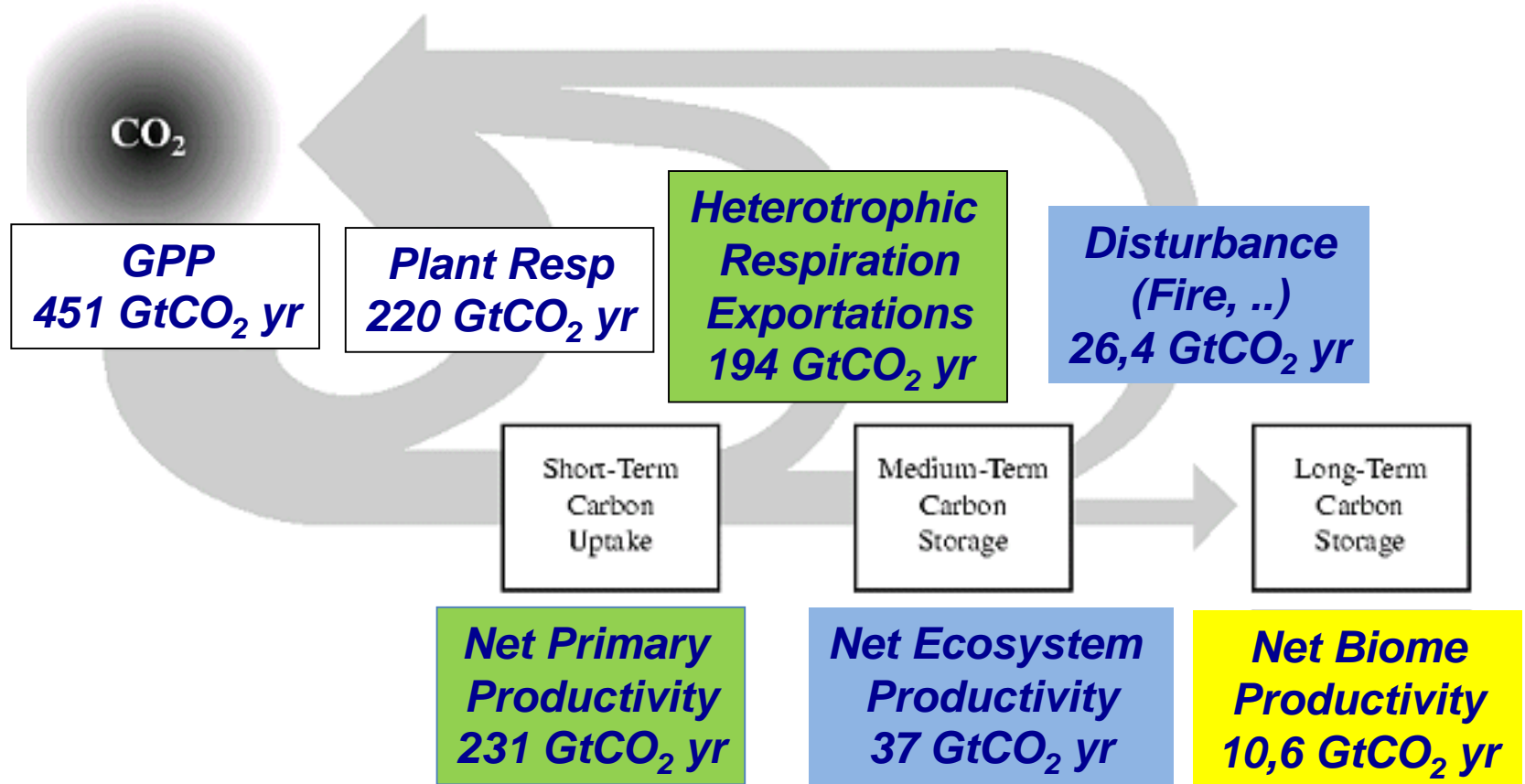


10.6  
Net biome  
productivity

# How ?

## Where does CO<sub>2</sub> comes from ?

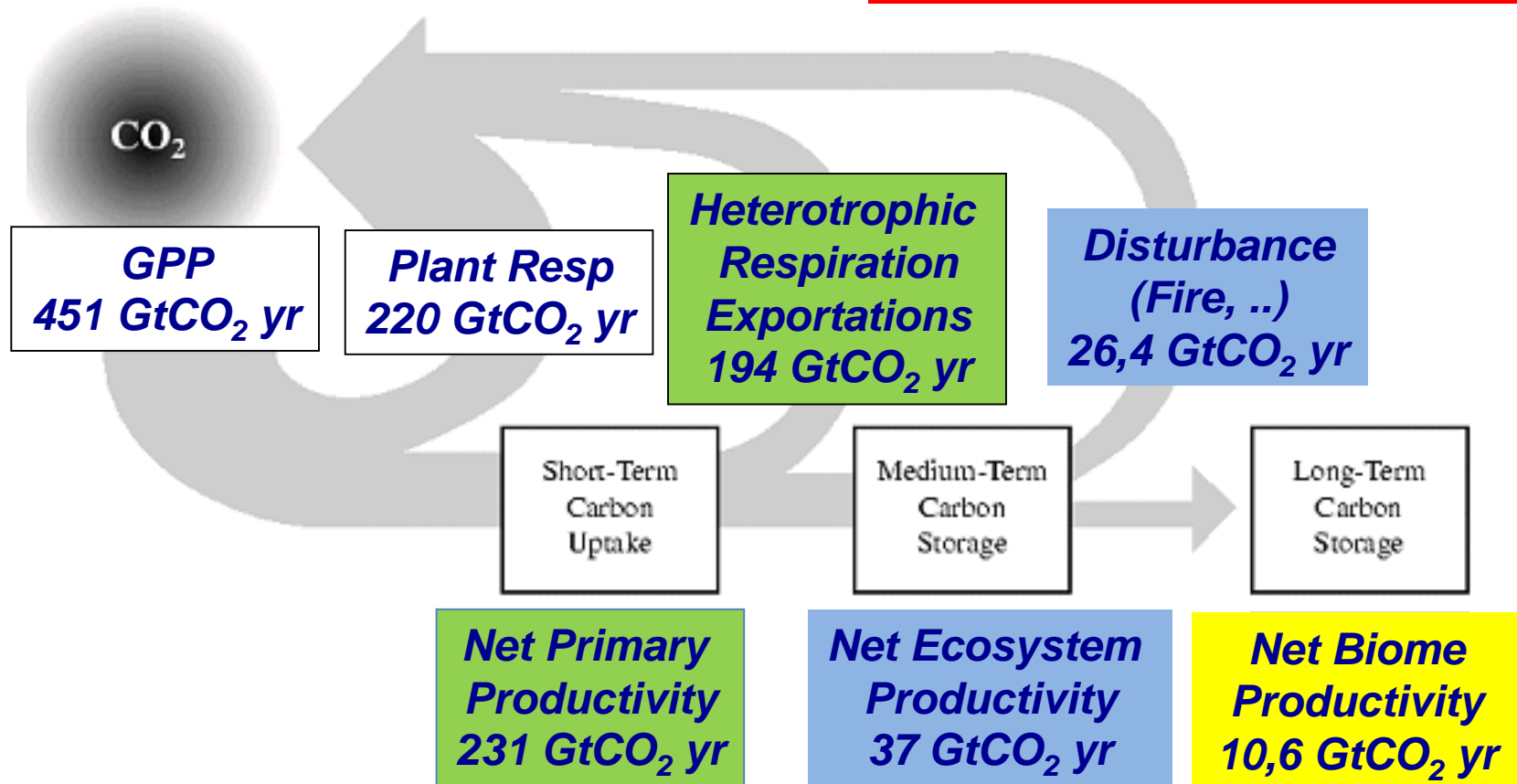
## Where does it go ?



# How ?

Actions are possible at different scales

- G : global
- R : Regional
- P : Plot
- C : Crop

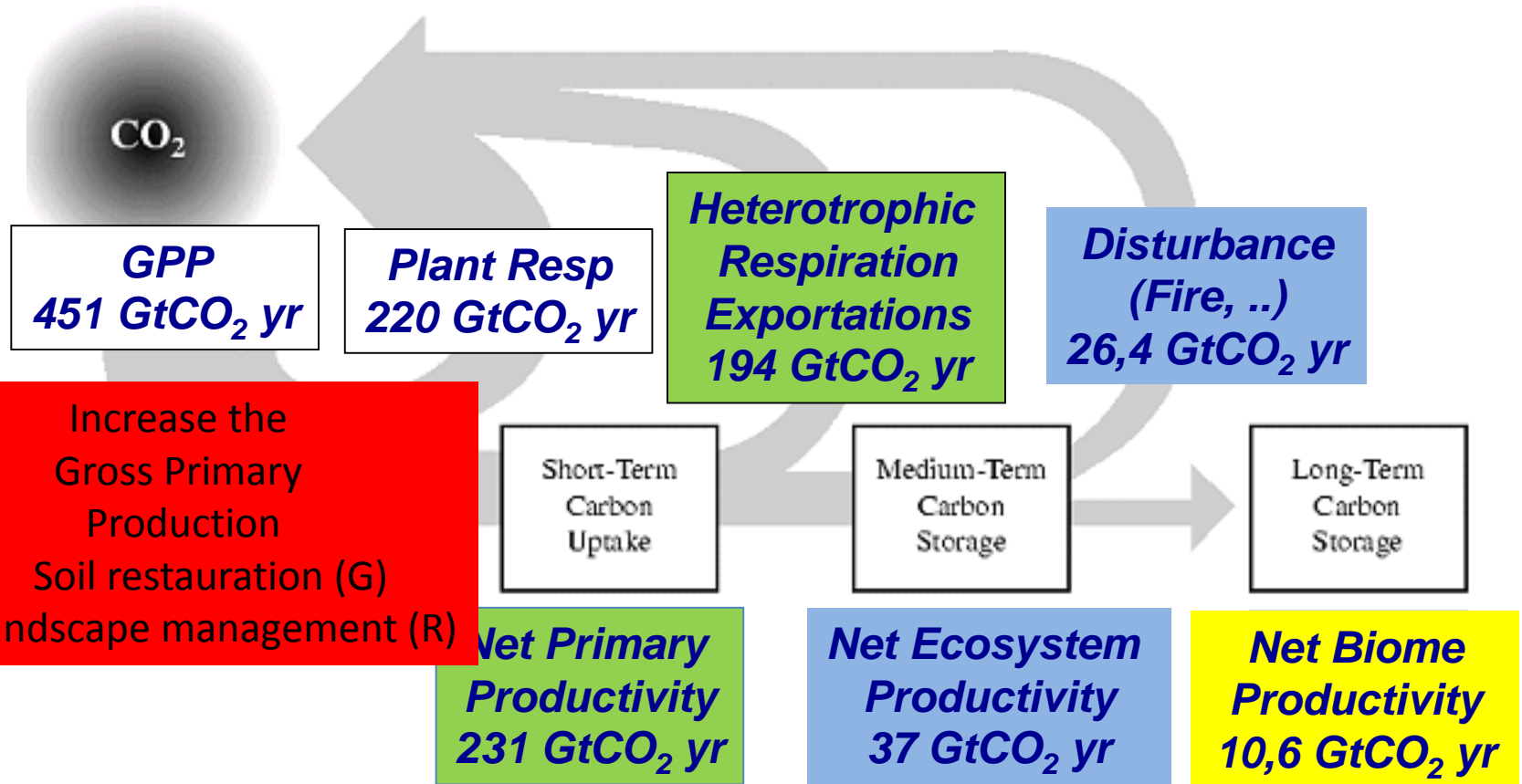


INITIATIVE 4 PER 1 000

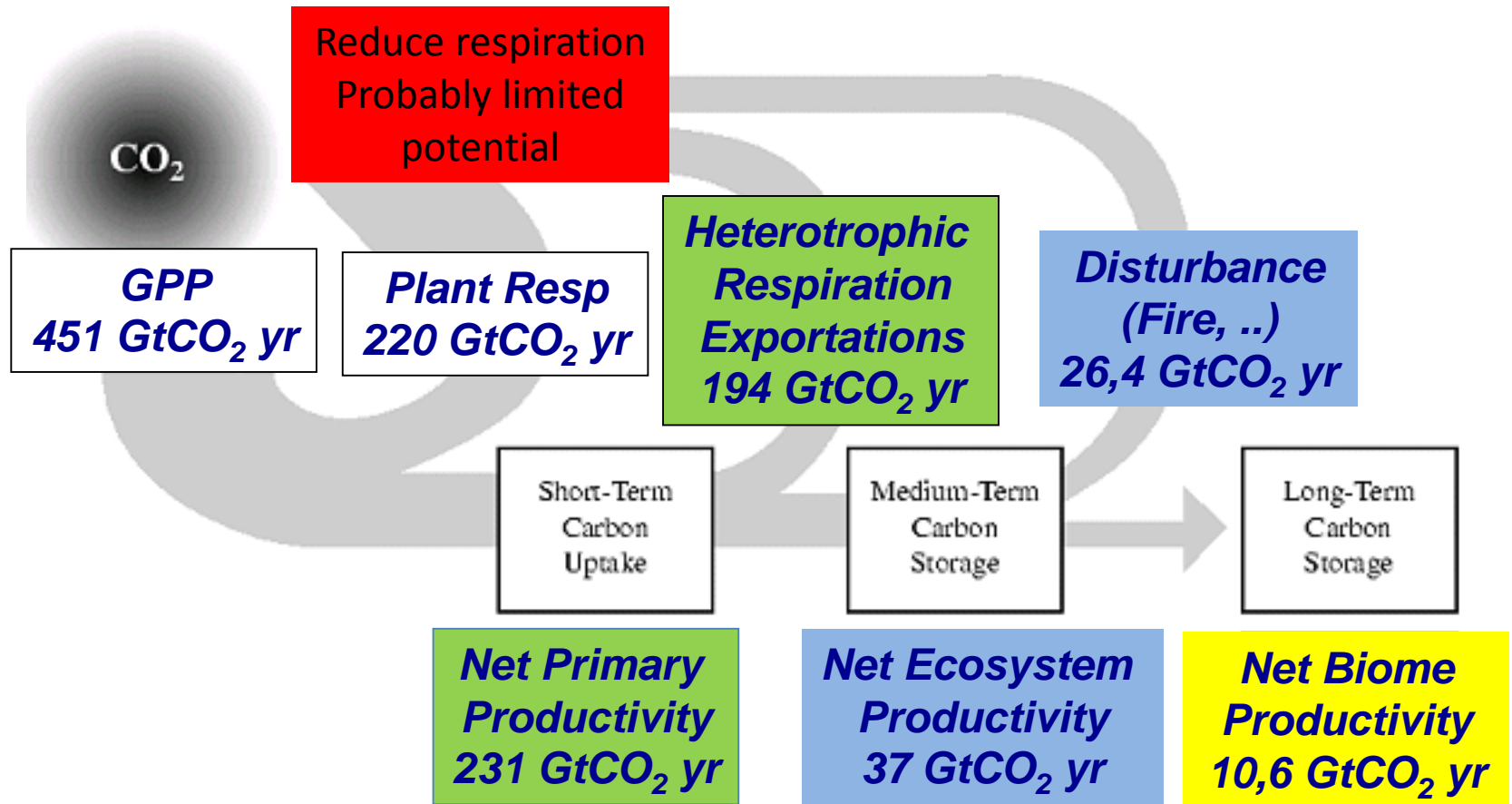




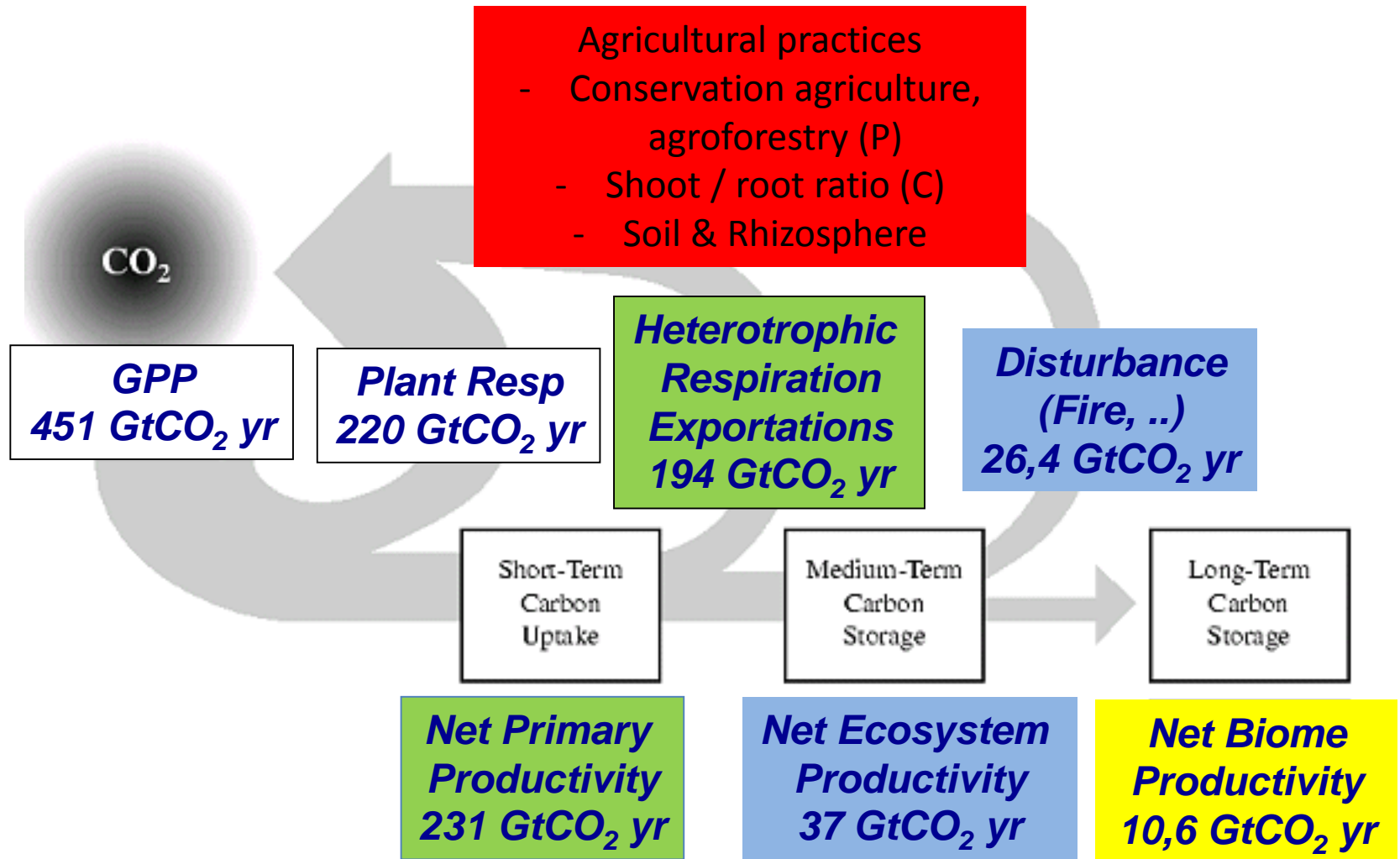
# How ?



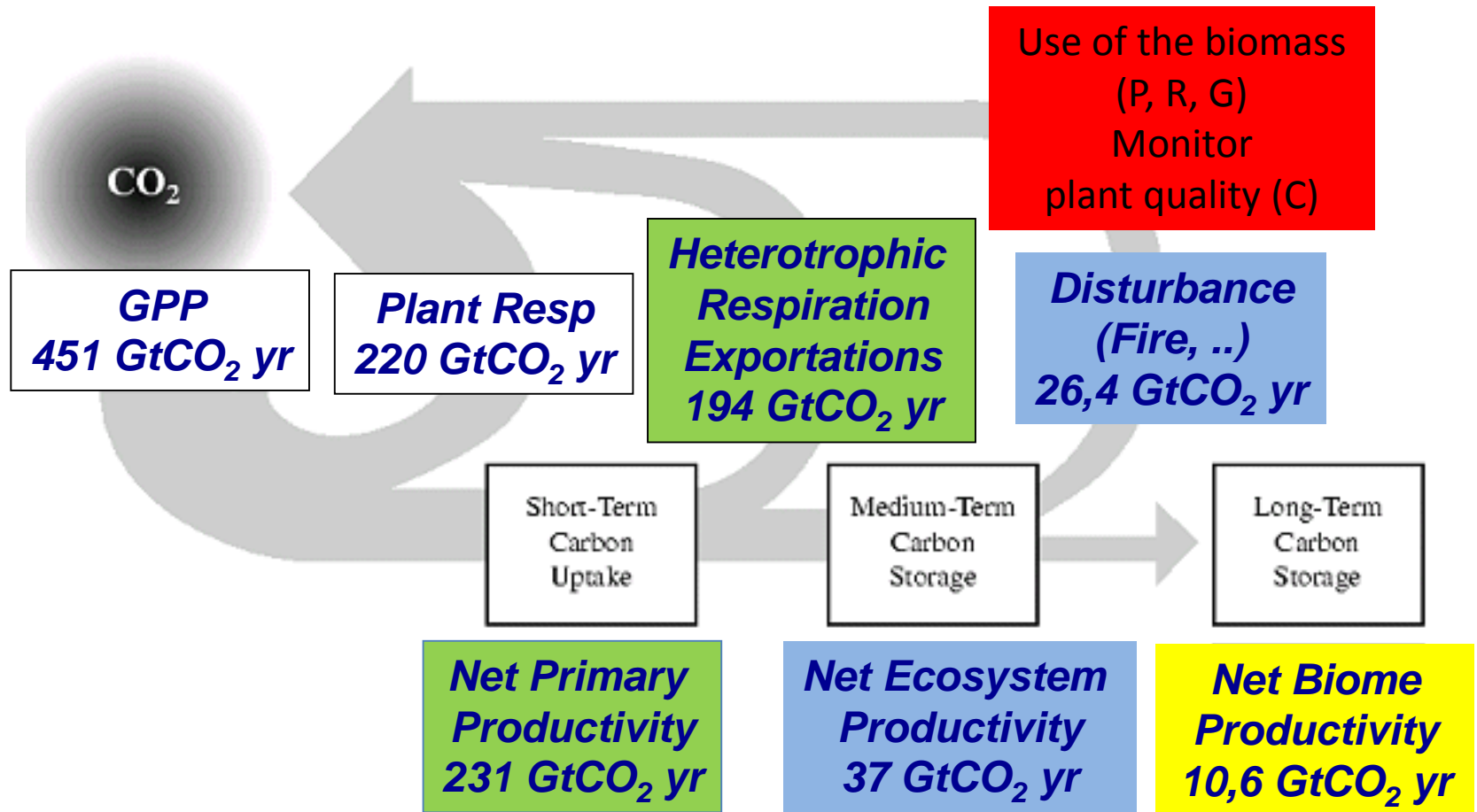
# How ?



# How ?



# How ?



# 4 ‰ INITIATIVE

## Upscaling or downscaling ?

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- > A strong political message
- > Mobilization of knowledges :  
interdisciplinary approaches towards a  
common goal
- > Combination and loops between several  
levels
- > Metrics and regular improvements

**INITIATIVE 4 PER 1 000**

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# Soils for food security and climate change

## 4‰ INITIATIVE



# THANK YOU