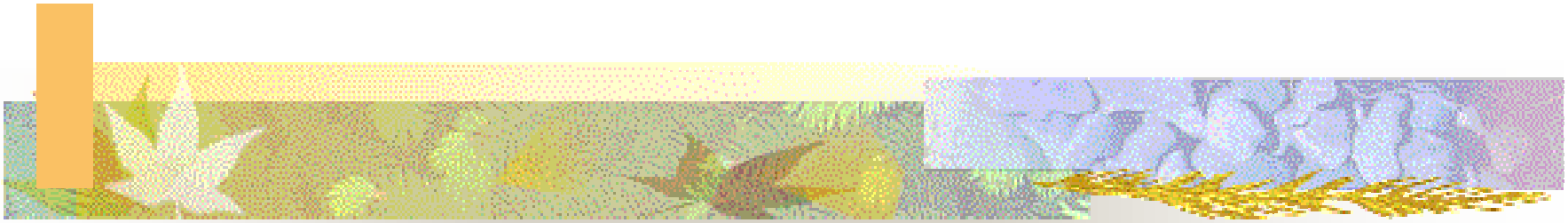
Carbon sequestration and trading: Implications for agriculture



François FALLOUX

Eco-Carbone

Presentation to International Policy Council

Stratford, October 14, 2007

1. Carbon sequestration: Global Context

Global carbon flows

Annual Carbon Flows (GtC)	
Atmospheric increase of CO2 (translated in C)	3.4
Sources	9.1
➢ Fossil fuels	6.4
➢ Land use change	1.1
➢ Tropical deforestation	1.6
Sinks	5.7
➢ Terrestrial in temperate regions	2.0
➢ Oceans	2.0
➢ "Missing"	1.7

30%

Carbon Sequestration => *win win*

Environmental benefits

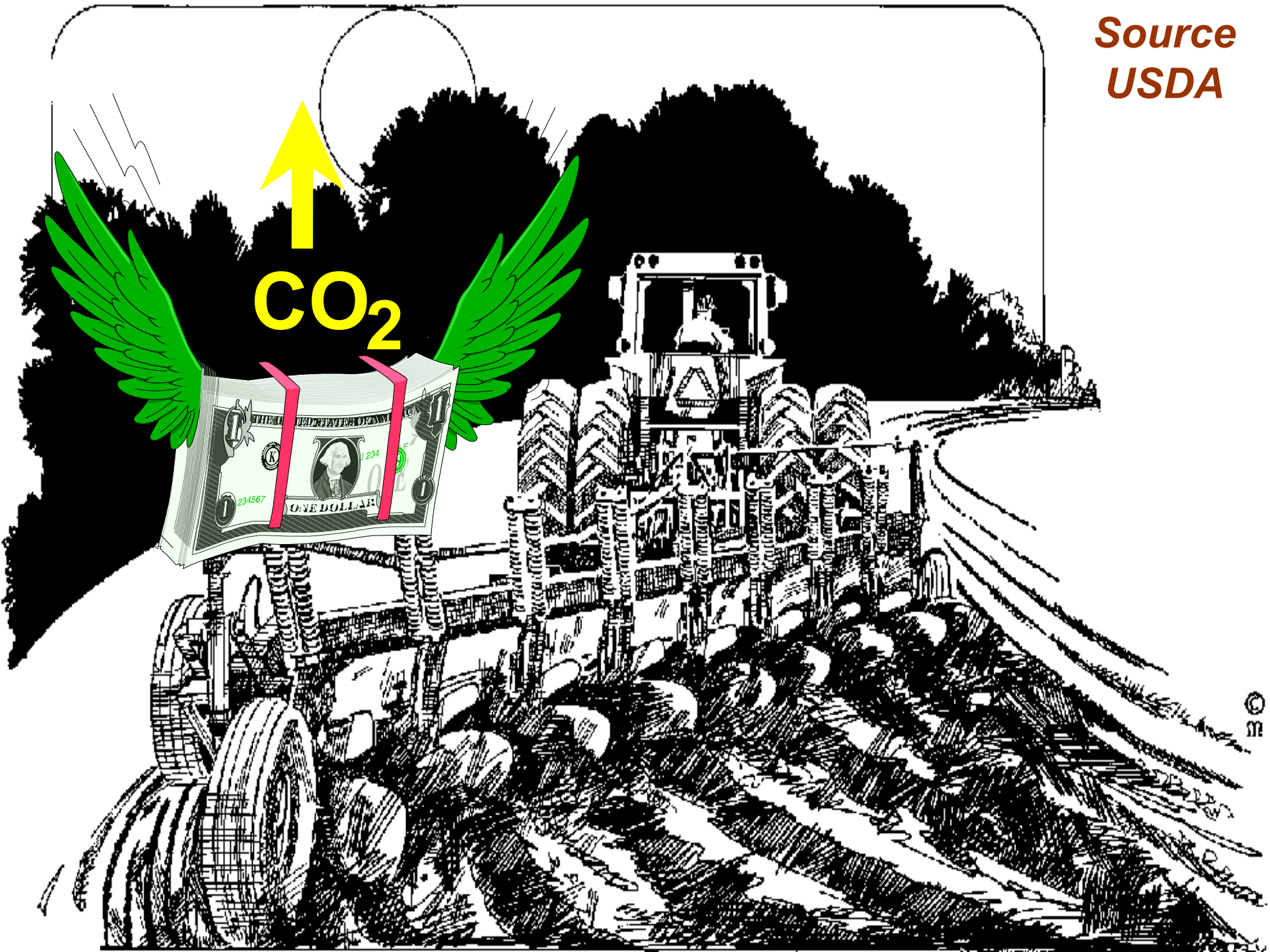
- increased water holding capacity and use efficiency
- increased cation exchange capacity
- reduced soil erosion
- improved water quality
- improved infiltration, less runoff
- decreased soil compaction
- improved soil tilth and structure
- reduced air pollution
- reduced power requirement
- reduced machinery wear

Carbon

A central role.

- reduced fertilizer inputs
- increase soil buffer capacity
- increase biological activity
- increase nutrient cycling and storage
- increased diversity of microflora
- increase adsorption of pesticides
- increases land value and gives soil aesthetic appeal
- increase capacity to handle manure and other wastes
- more wildlife

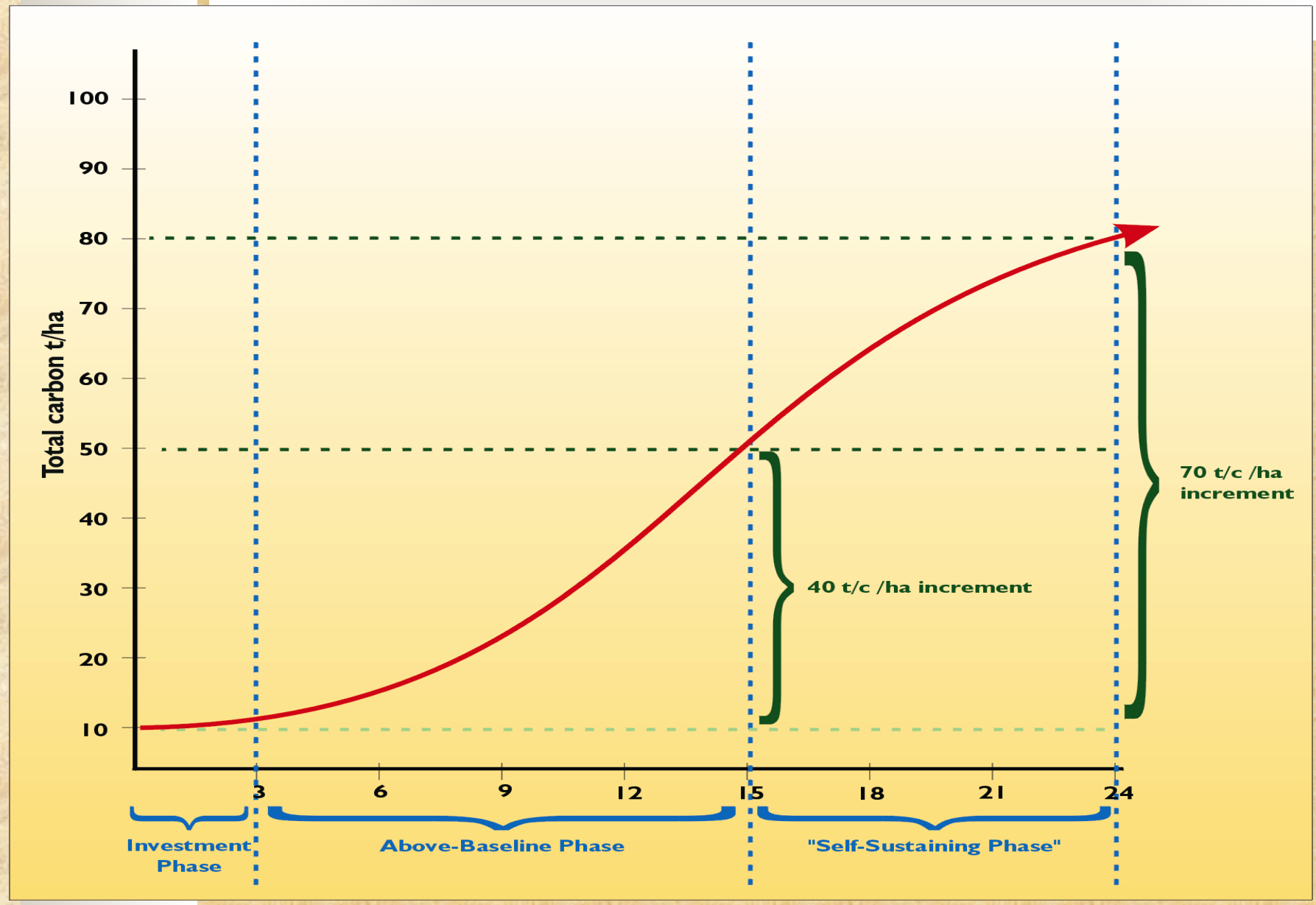
Source: USDA


Source
USDA
CO_2
ONE DOLLAR

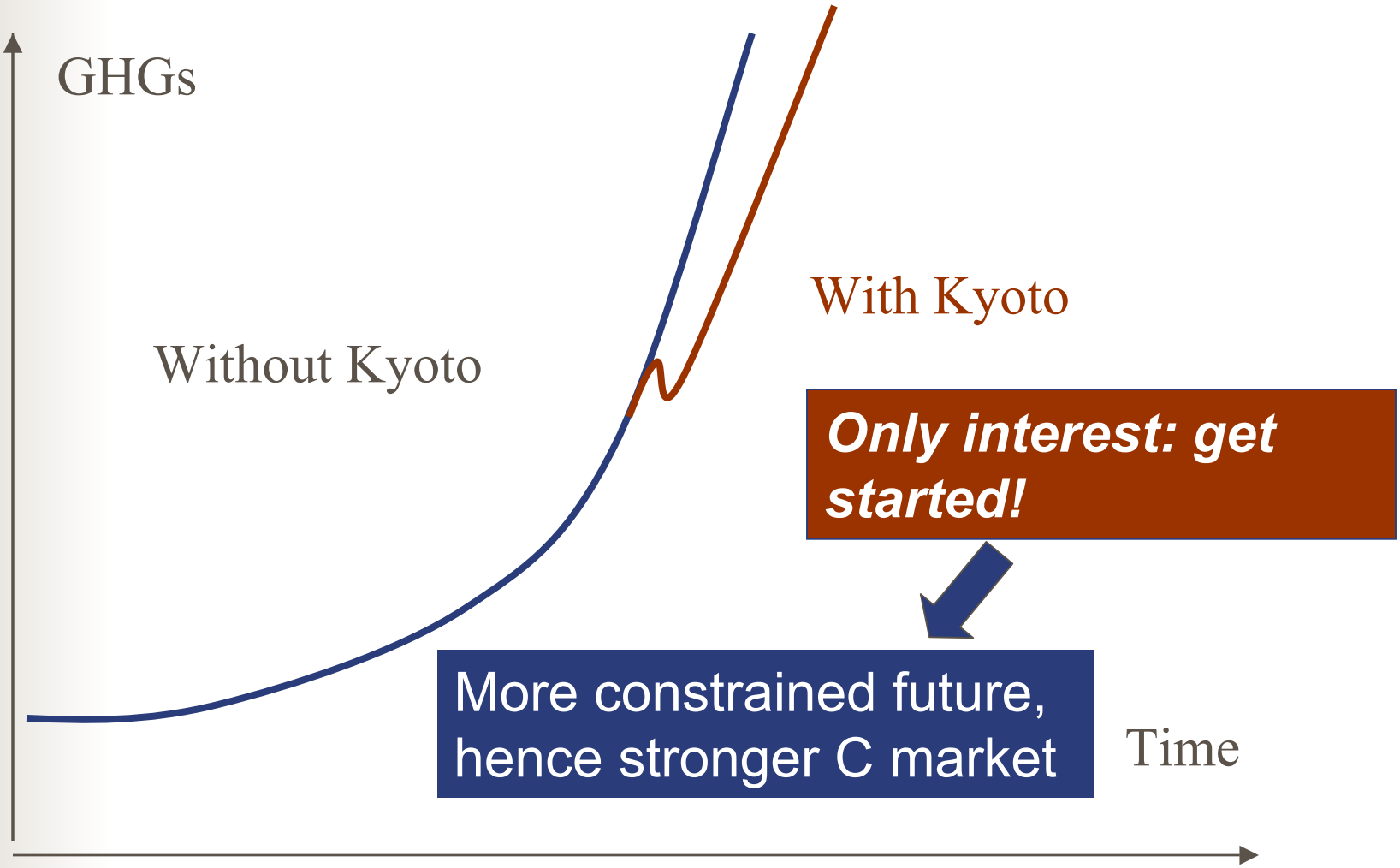
Brazil

No tillage in the State of Santa Catarina

Agro-Ecosystem/ Farming System Carbon Sequestration Project Concept



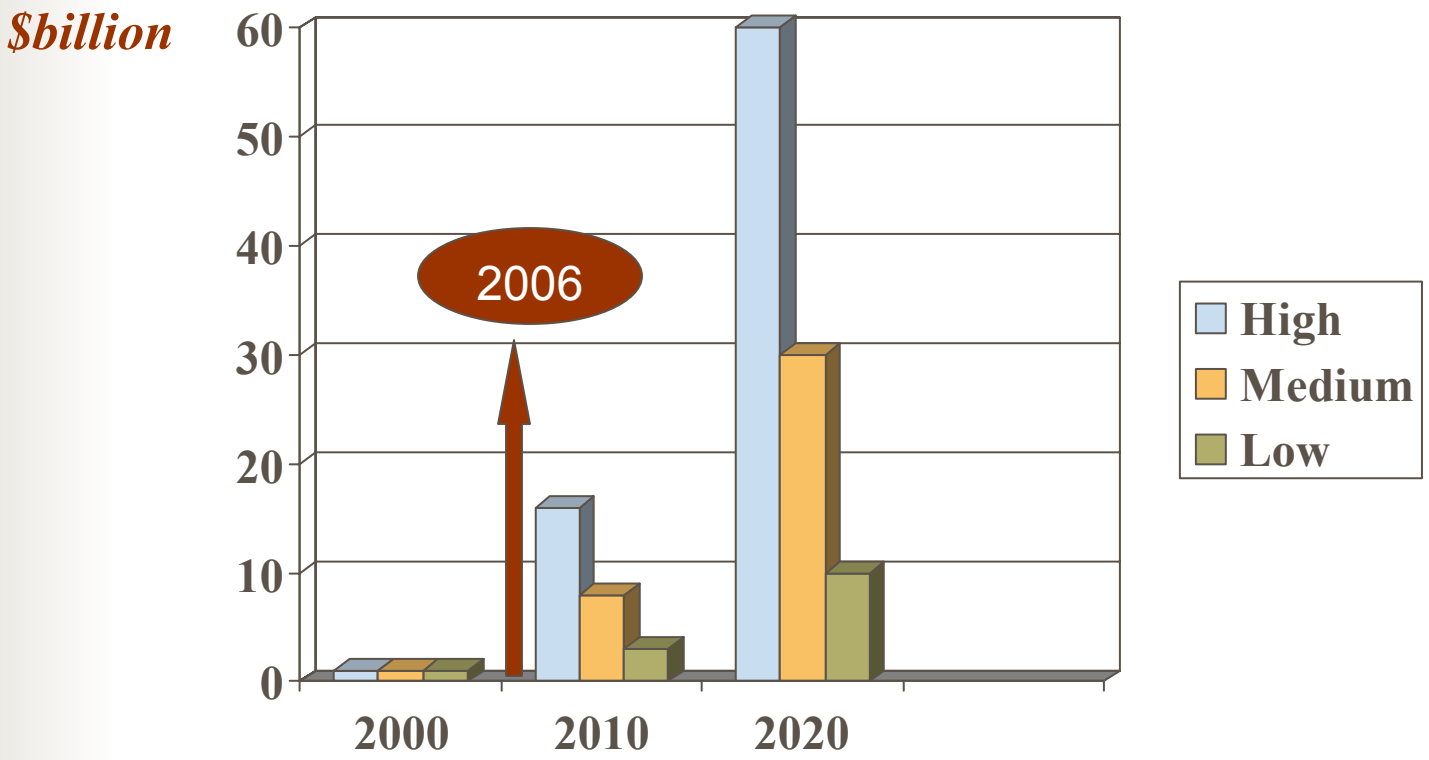
Expected Impact of the Kyoto Protocole



What's next after KP

- ***What should be done*: IPCC => recommend to divide GHGs emissions by a factor 2 or 3 to avoid going beyond double CO2 atmosphere (540 ppm)**
- ***What is being considered*: European decision: from -8% reduction (under Kyoto) to –20% by 2020, or –30% if USA join.**
- ***What is still missing*: Commitment to carbon sequestration**

Emerging CO2e markets: Forecast compared to real

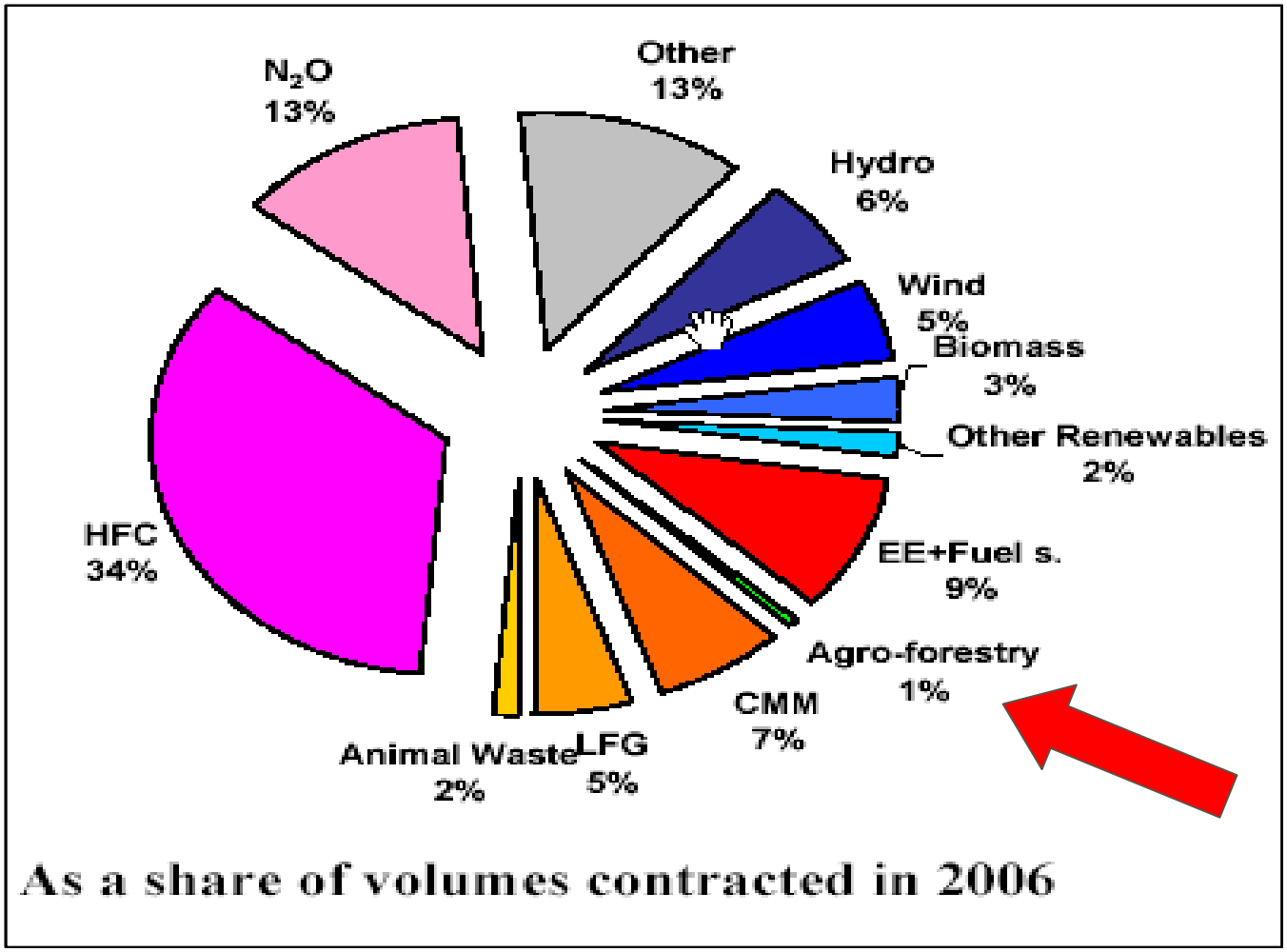


$30billion expected in 2007

Source: World Bank Study 1998 & 2002

2. C sequestration in CO2e markets

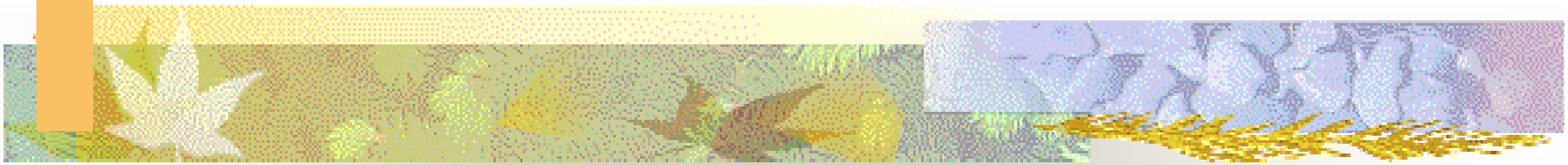
Marginal position of C sequestration



Barriers to C sequestration in CO2e markets

- A bad start with an exclusive focus on energy and industry sector
- Key international NGOs not very supportive
- Debate on carbon sinks vs. Sources
- Difficulty in terms of methodologies and carbon monitoring plans
- Lack of advocacy from agriculture and forestry sectors

5. Recommendations



8 recommendations

- ***R1*:need to inform the international debate on carbon sequestration in agriculture and forestry**
- ***R2*: need for training and capacity building to promote carbon sequestration in agriculture and forestry in developing countries**

8 recommendations (cont'd)

- ***R3**: need to scale up agricultural and forestry projects with carbon sequestration*
- ***R4**: need to start developing carbon sequestration in developed countries*
- ***R5**: need to promote no-tillage as one of the best ways to enhance soil carbon sequestration*

8 recommendations (cont'd)

- ***R6**: need to combine carbon sequestration with biomass energy in agro-forestry projects*
- ***R7**: need to simplify methodologies for baseline scenarios and carbon measuring and monitoring*
- ***R8**: need to incorporate deforestation avoidance in carbon sequestration projects in developing countries*

Conclusions

- *Win-Win => carbon sequestration market incentive to contribute to enhancing agricultural productivity and sustainability*
- *Enhance carbon sequestration in both developed and developing countries through projects, policy and measures*

8 recommendations (cont'd)

- ***R6**: need to combine carbon sequestration with biomass energy in agro-forestry projects*
- ***R7**: need to simplify methodologies for baseline scenarios and carbon measuring and monitoring*
- ***R8**: need to incorporate deforestation avoidance in carbon sequestration projects in developing countries*