avalon

Impact of Large-Scale Conversion to Organic Farming on Greenhouse Gas Emissions

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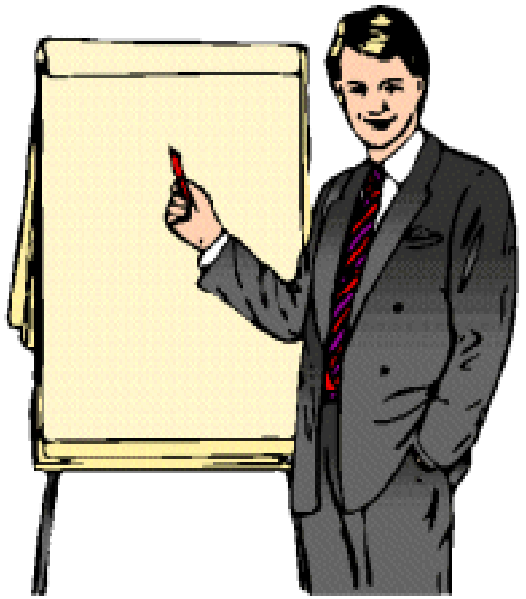
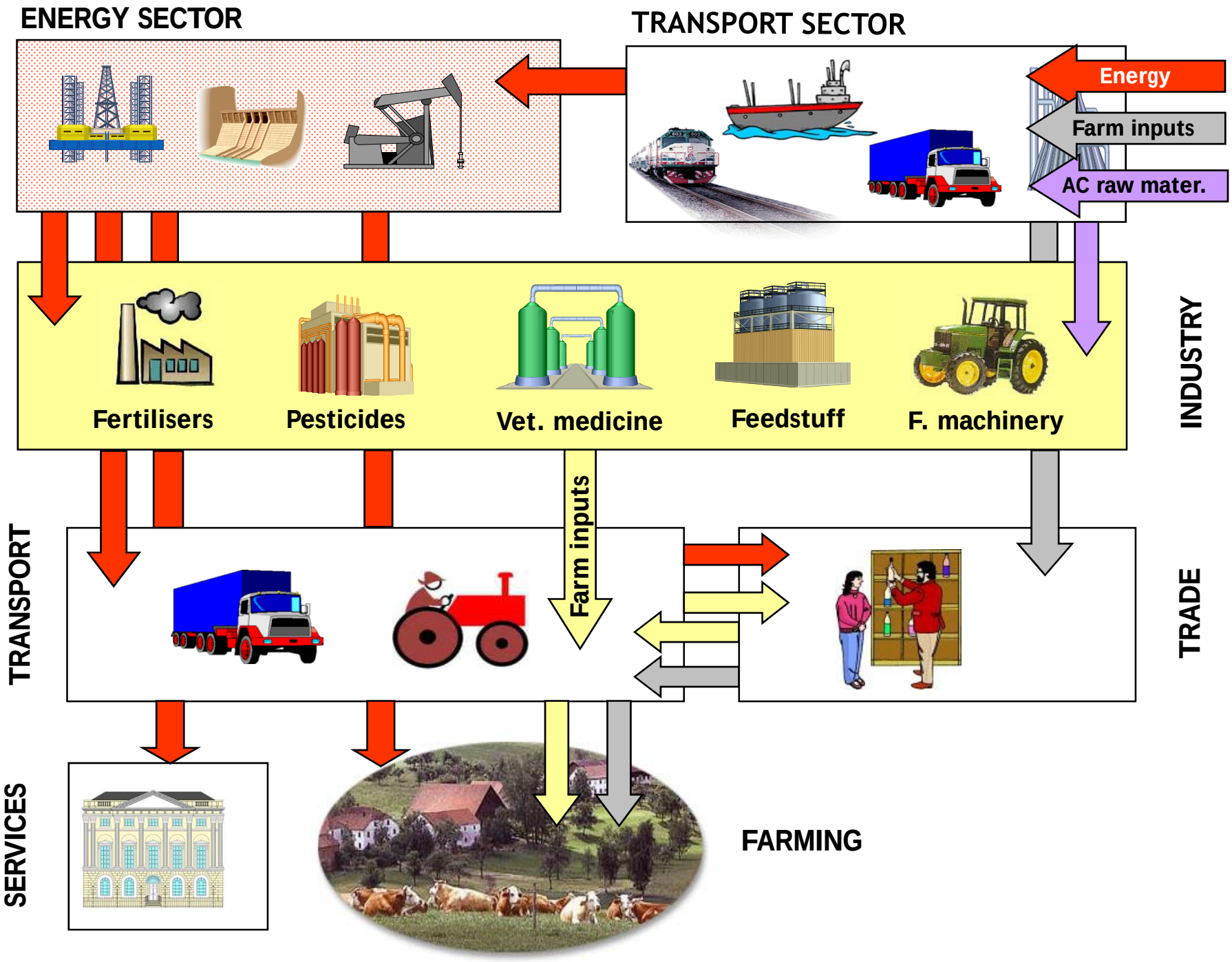


1. Question
2. Metodology
3. Results (HR, UK, EU)
4. Conclusions

QUESTION


What if...
?
Policy relevant question

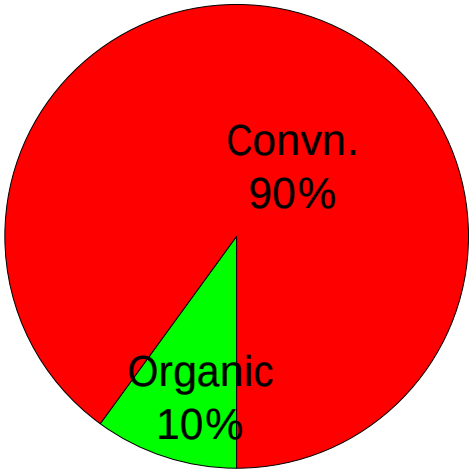
METHODOLOGY
(Croatia study)

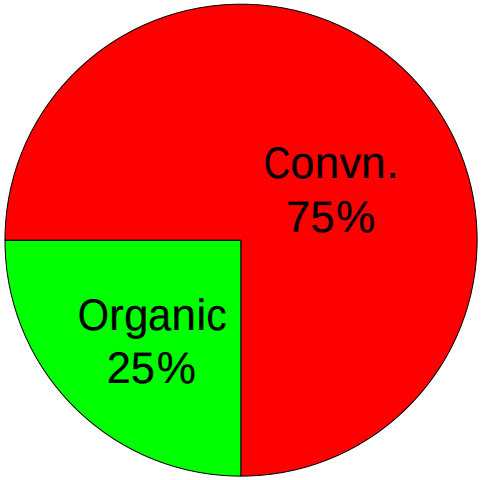

ENERGY SECTOR
TRANSPORT SECTOR
Energy
Farm inputs
AC raw mater.
Fertilisers
Pesticides
Vet. medicine
Feedstuff
F. machinery
INDUSTRY
TRANSPORT
Farm inputs
TRADE
SERVICES
FARMING

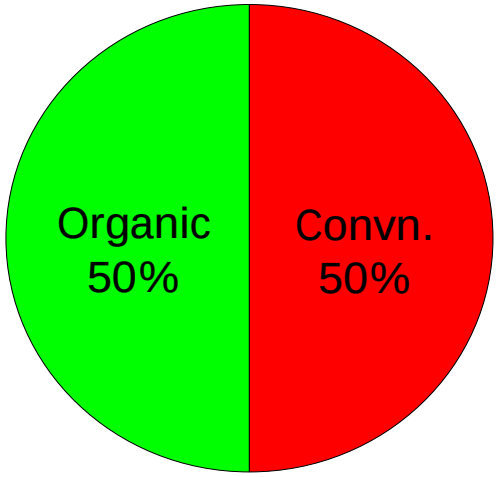

External
costs

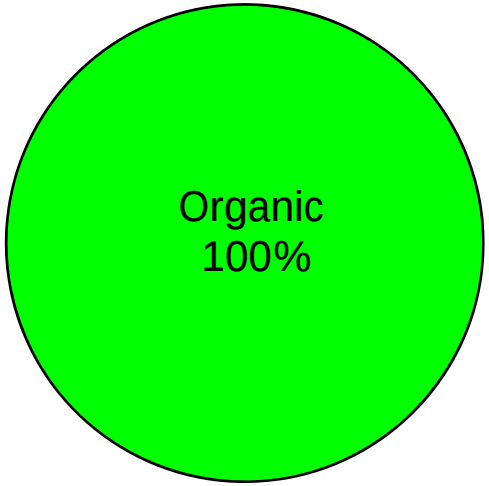

Monetary value for CO_2 damage

Organic scenarios: area







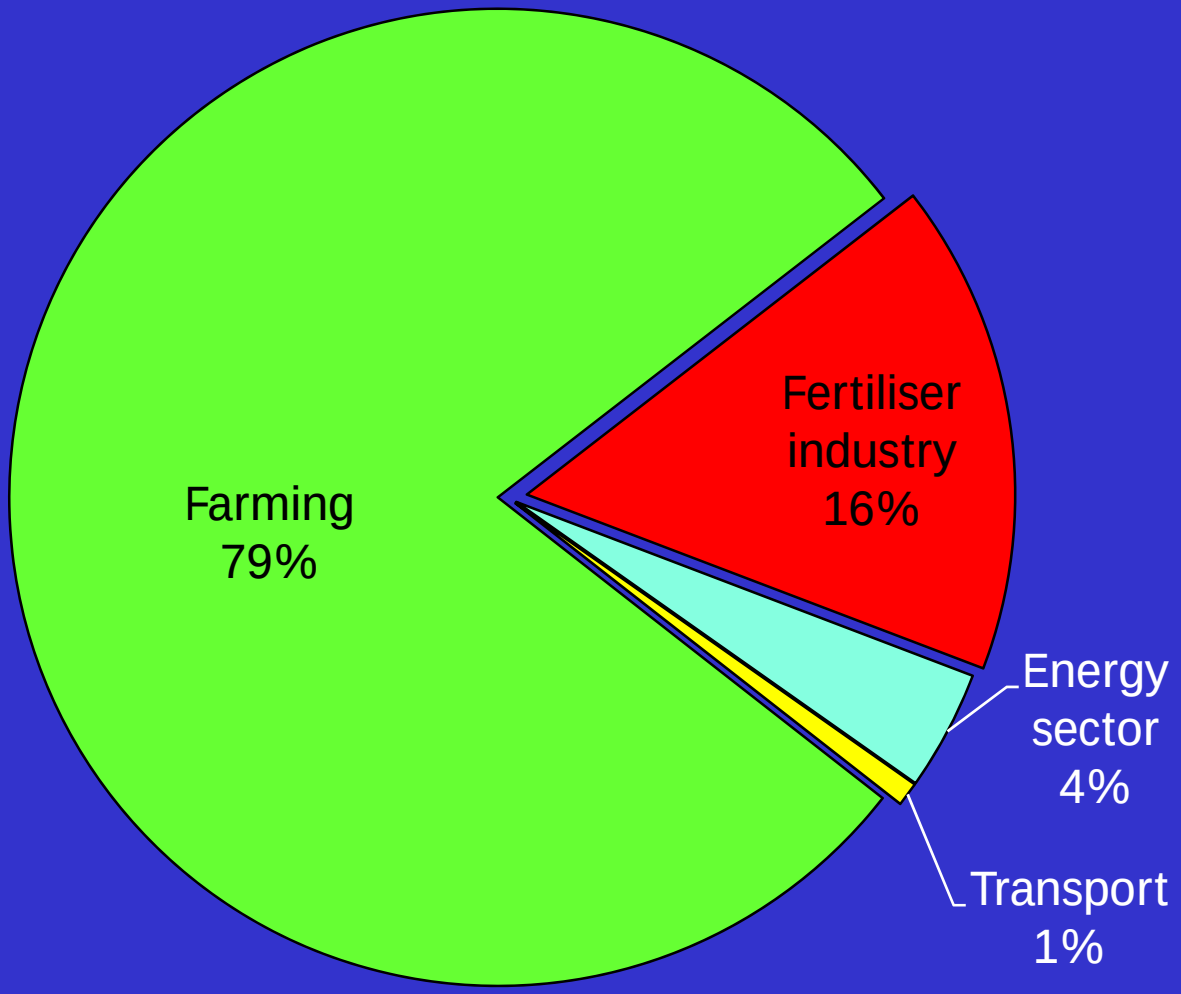


RESULTS
(Croatia study)

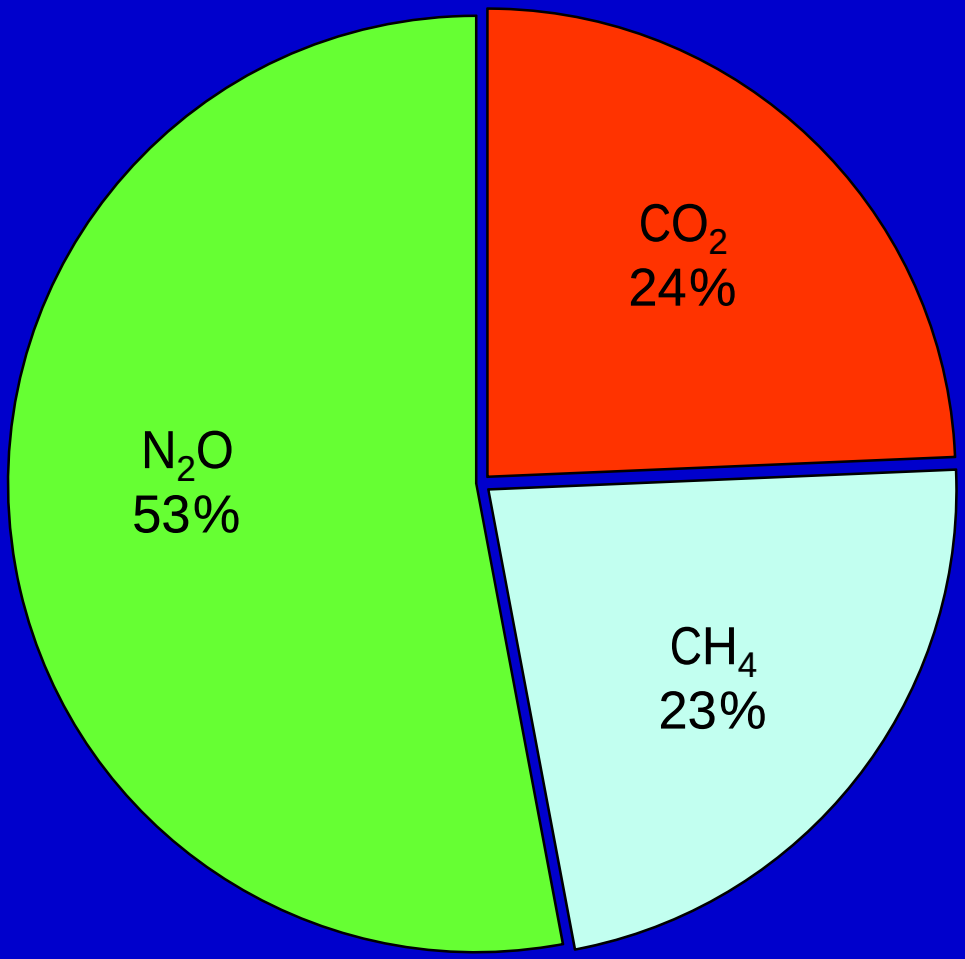
BASELINE

(2001-2005)

Sectoral contribution to GHG emissions (CO_2 eq)



Split of emissions by GHG



External costs

= 50% of GVA created

Price of agric. commodities

Market price

Price with internalised costs

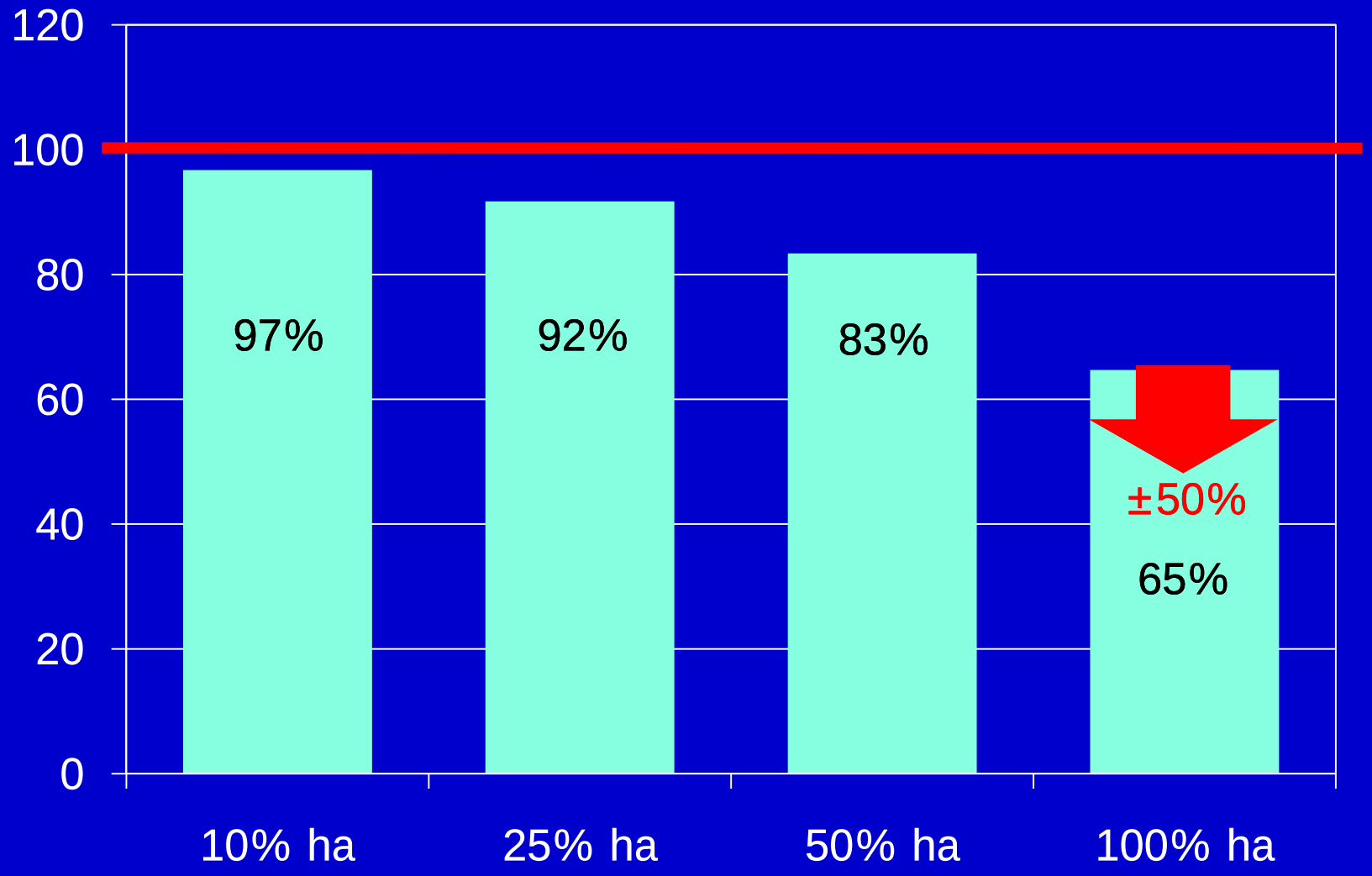
Fertilisers

- 40 % of all GHG
- 3 % of national GHG
- 5 % of national FED
- 12 % of national gas consumption

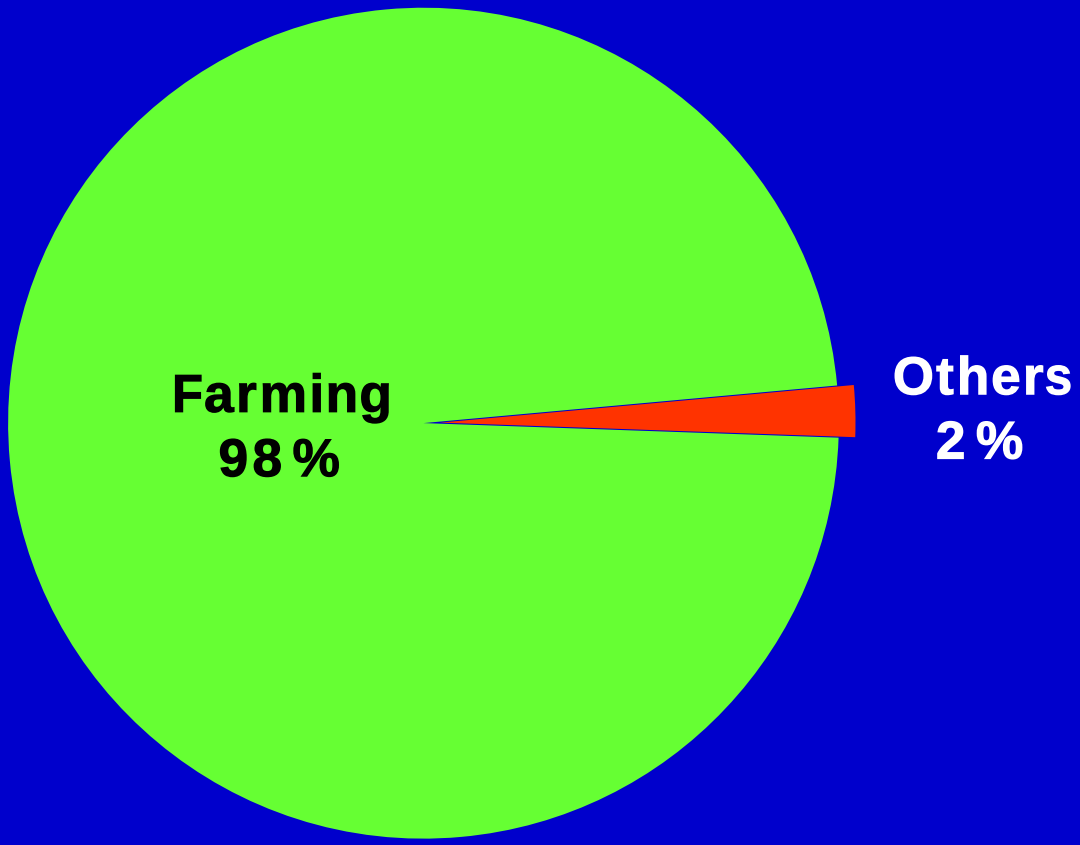
RESULTS
(Croatia study)

ORGANIC scenarios

GHG emissions as compared to baseline (=100)



Sectoral share in GHG emissions under the total conversion to organic



An UK scenario

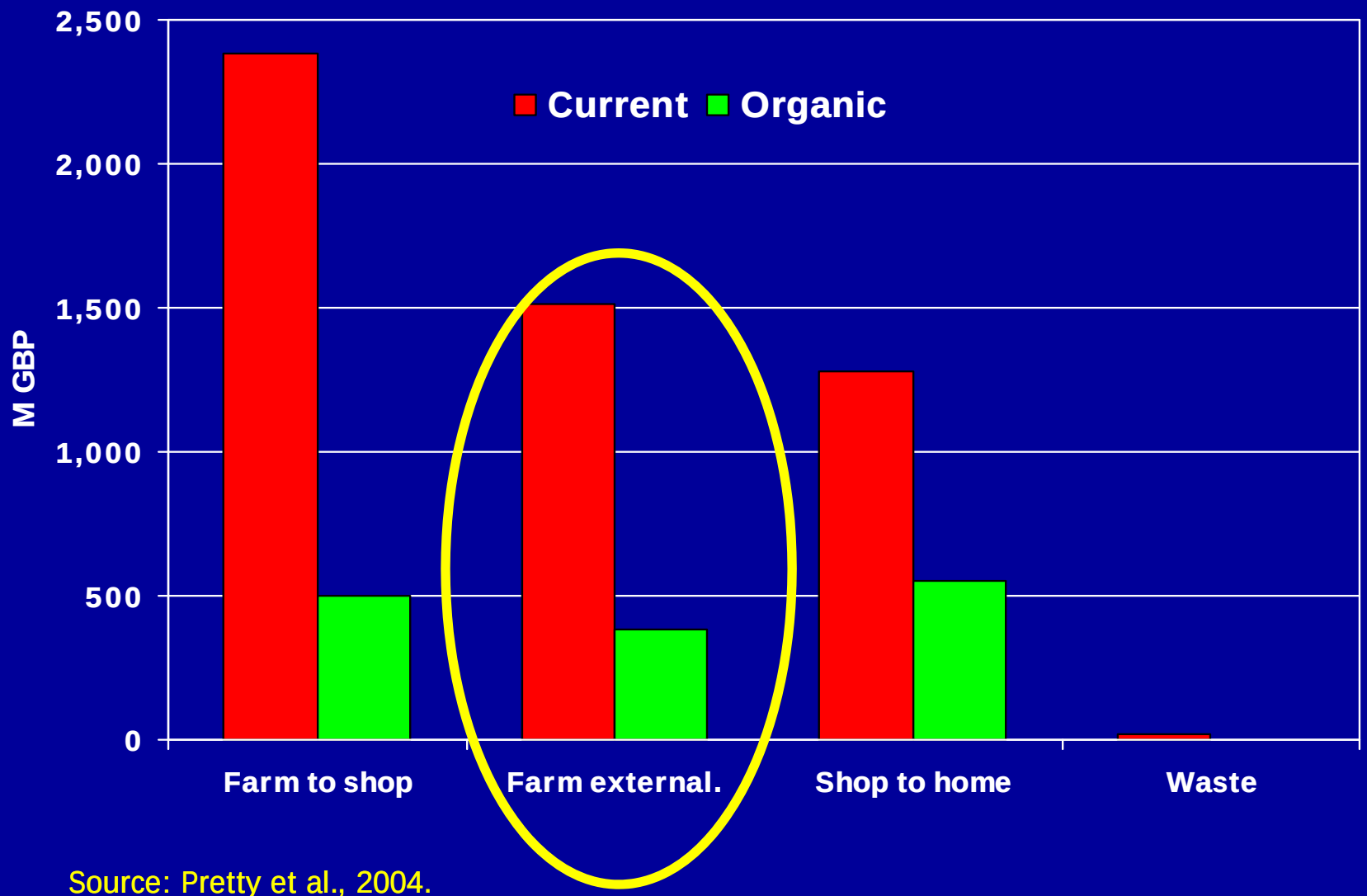
An UK study
(Pretty et. al. 2004)

GHG reduction under 100% convesion to OF = 60%

Household GHG emissions

- 4 t CO_2 = car
- 4 t CO_2 = house
- 8 t CO_2 = food!!!

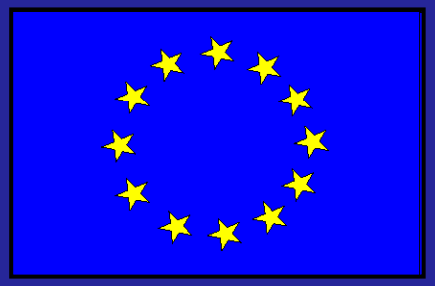
Current vs. home-delivered organic food



Source: Pretty et al., 2004.

EU-27

EU-27



- Fertiliser production = 1.8% GHG emissions
- Farming sector = 9% of all GHG
- If all organic = ±4% GHG reduction

  = 50% Kyoto target (2008-2012)


CONCLUSIONS

Critical messages

1. Pioneering work
2. Methodolgical issues
3. Fertilisers are the key!
4. Only 100% conversion = ±50% GHG reduction
5. OF great contribution to Kyoto targets

EU Ministers meeting on CC and agric, Sep 15


Thank you!