Best Ecological Means, a triple win in the EU

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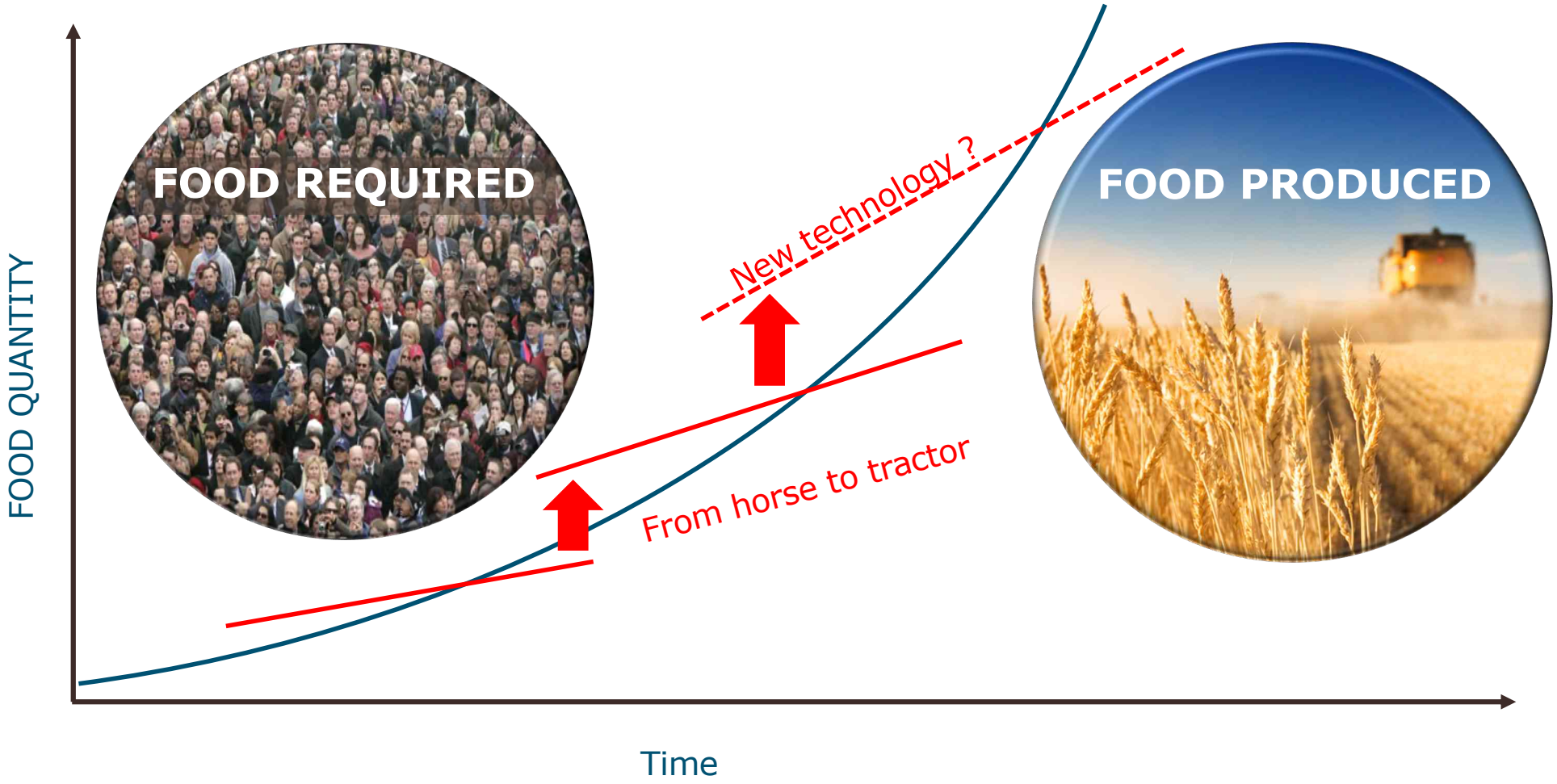
Technology and food



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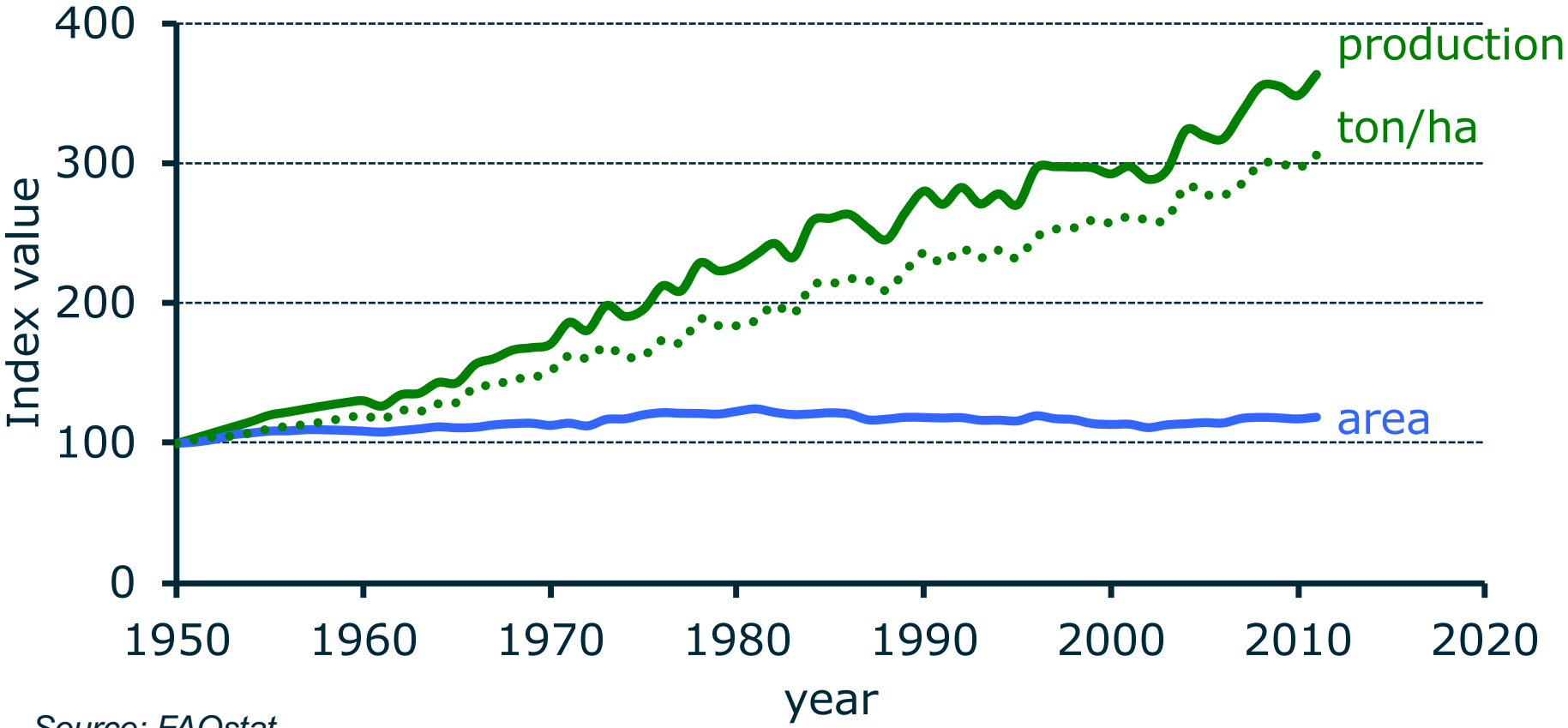
Global grain productivity (1950 – 2012)



Source: FAOstat

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Megatrends in agriculture

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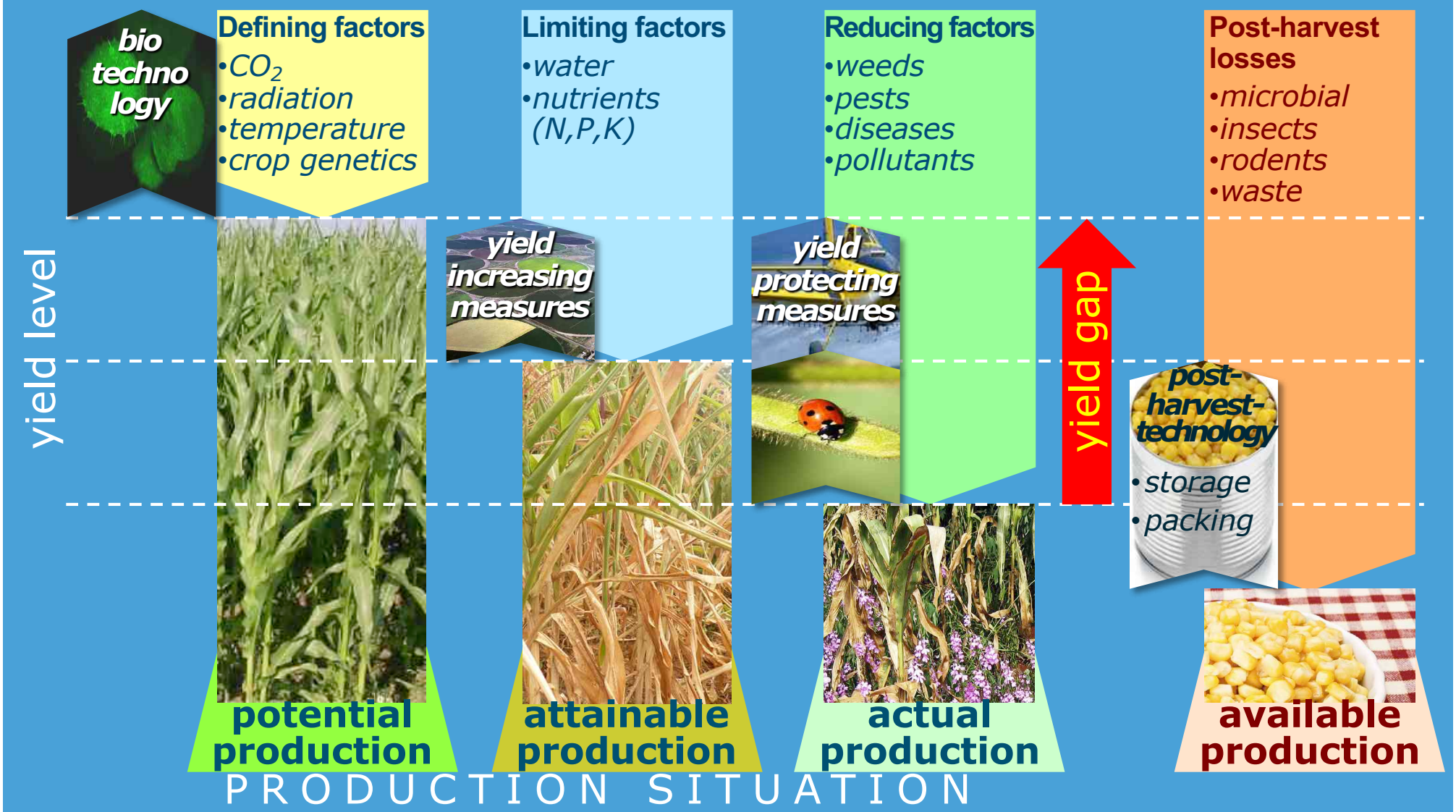
Production ecological principles



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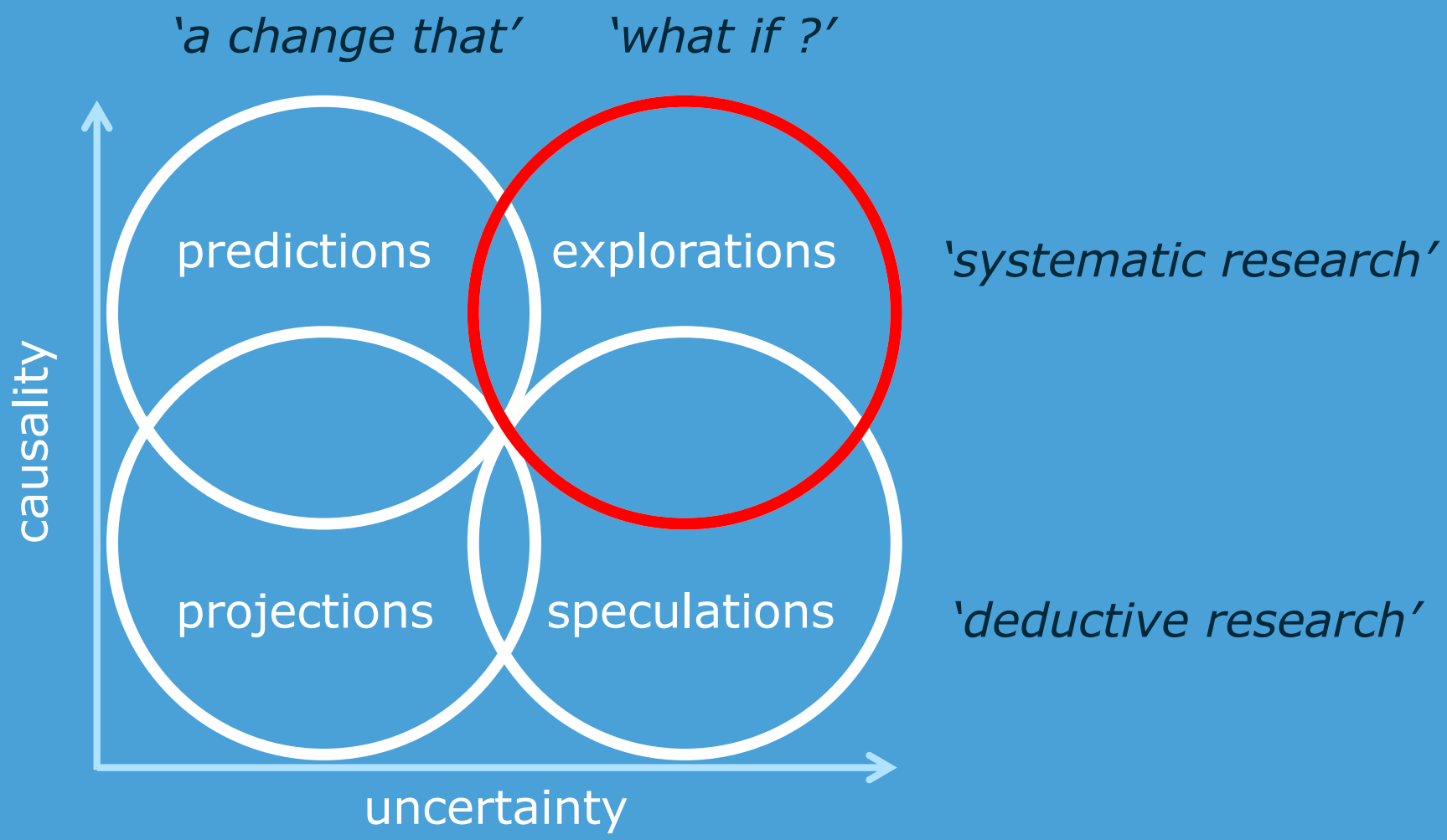
Scenario studies for future developments



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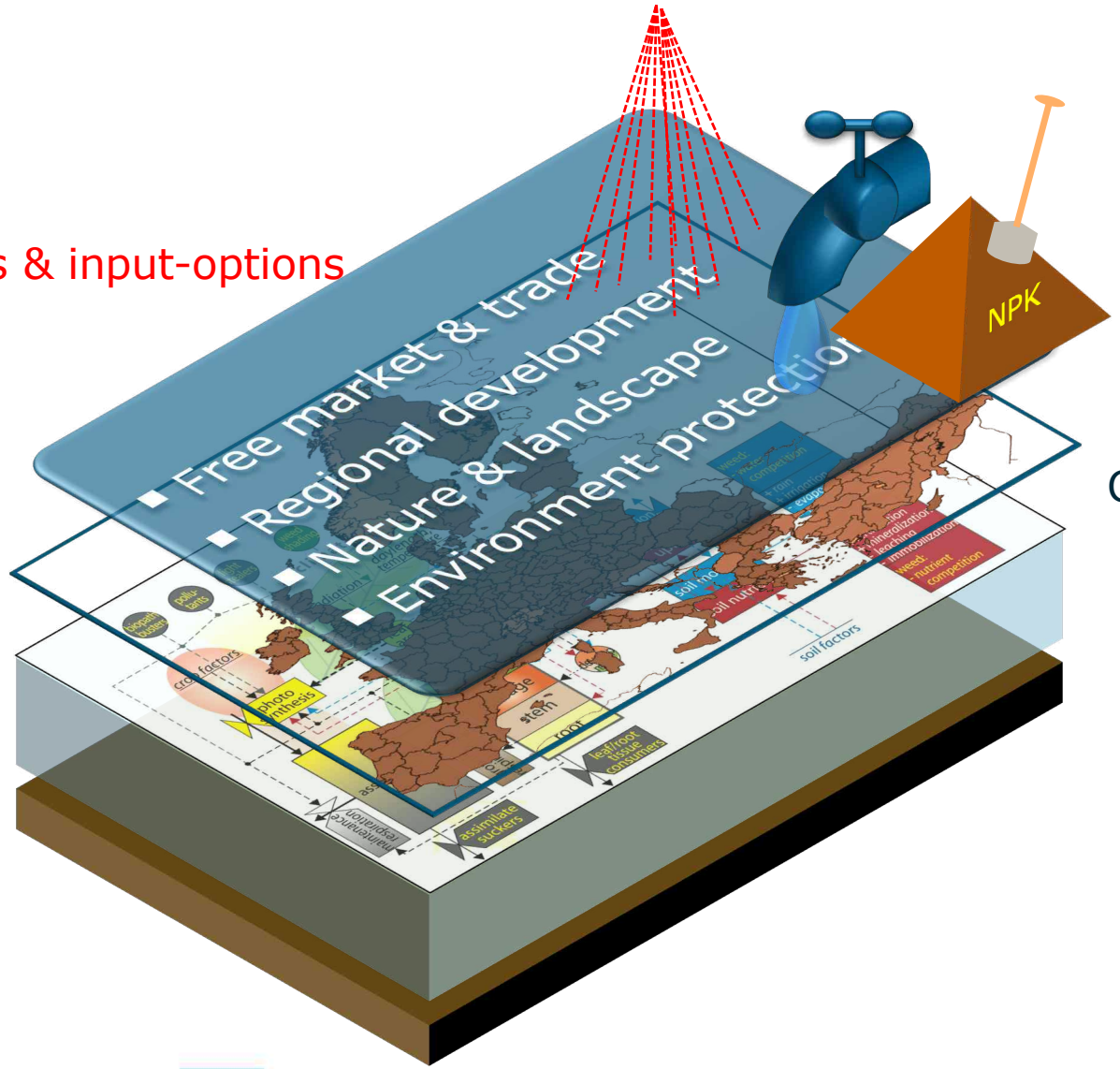
Land use scenario's

Scenario's & input-options

EU NUTS



CROP MODULE
- genotype
- climate
- soil

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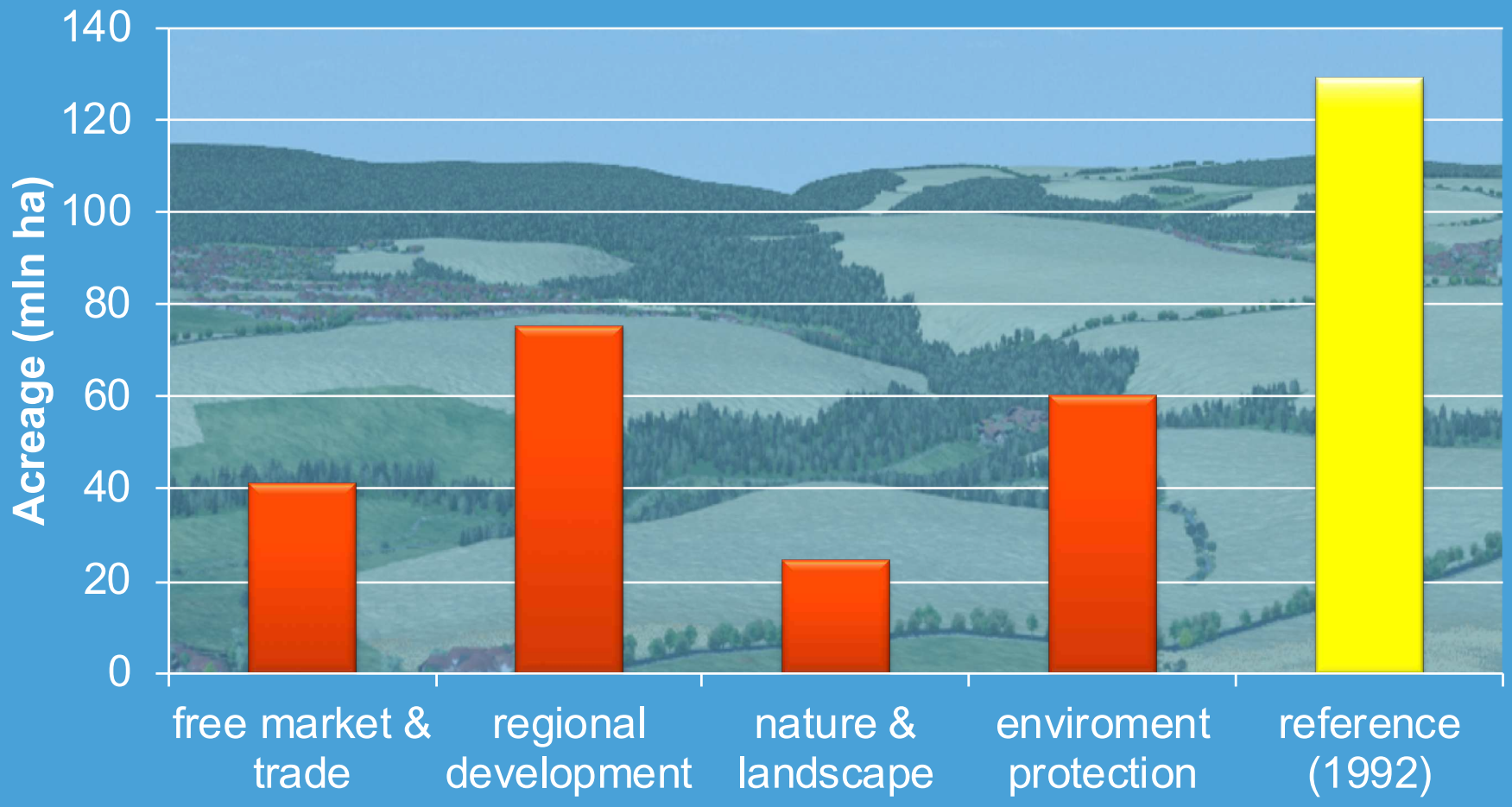
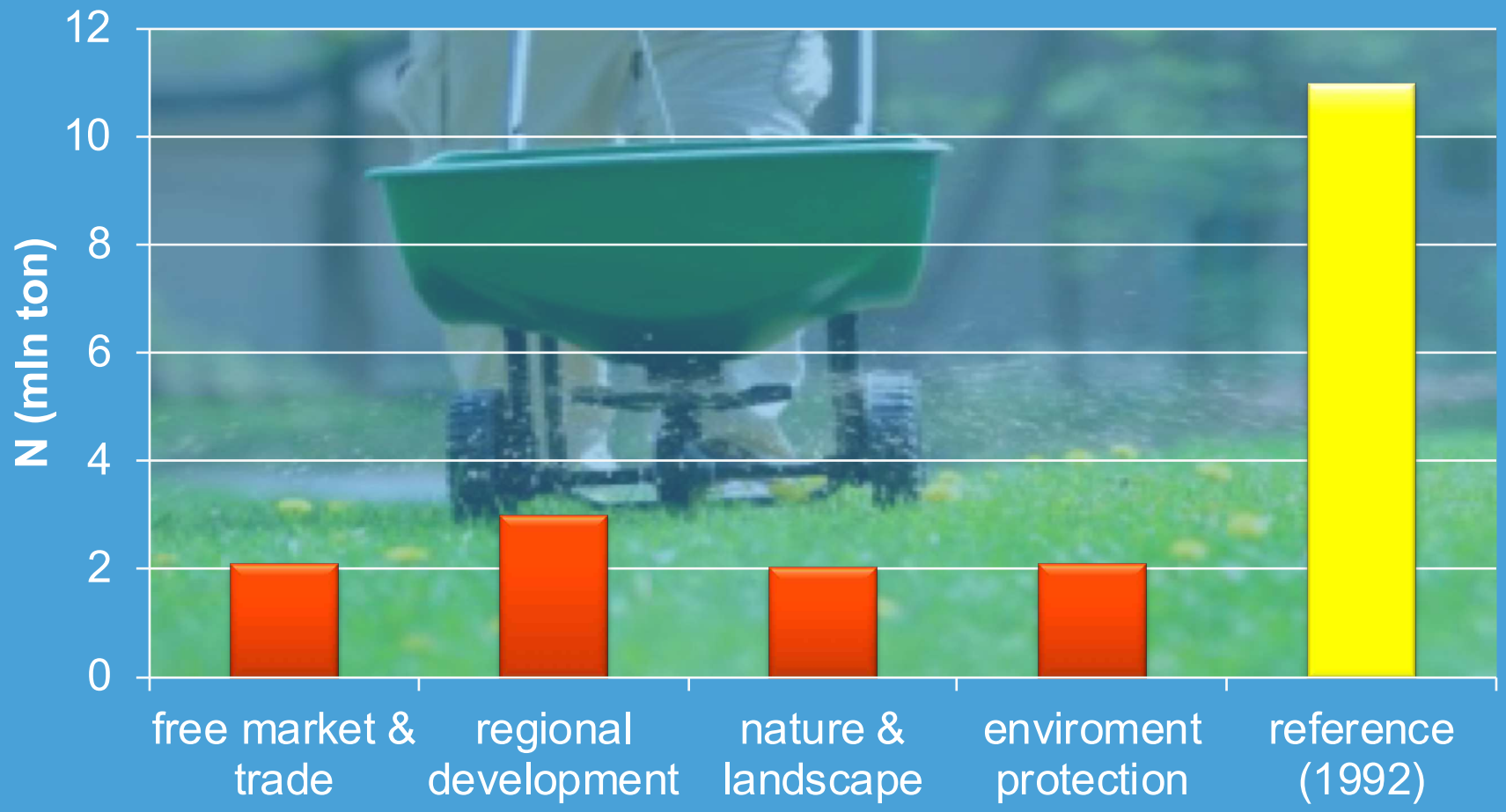
'Grond voor Keuzen' (WRR, 1992)

EU: soil use



'Grond voor Keuzen' (WRR, 1992)

EU: N-input



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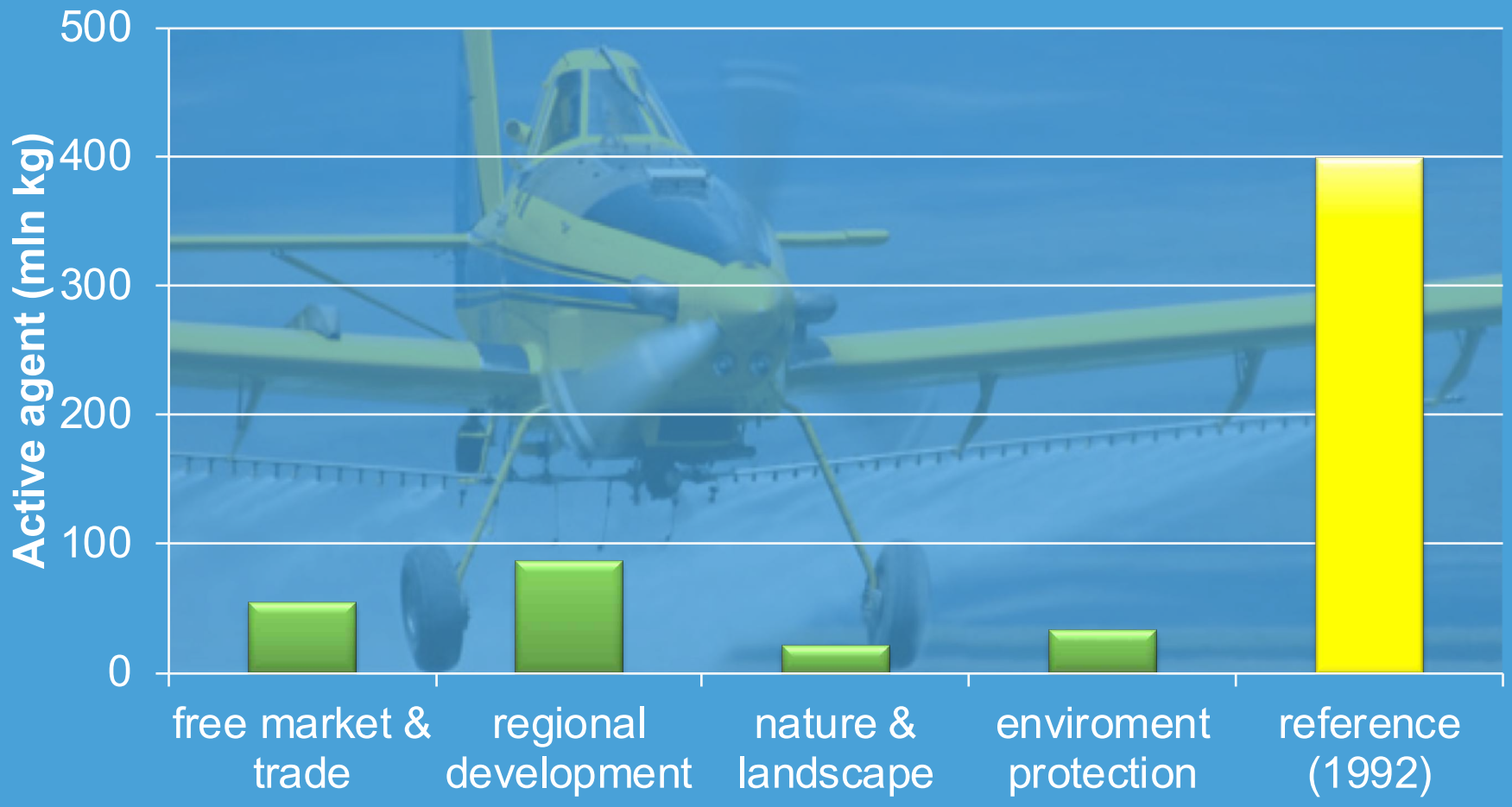
EU: pesticides



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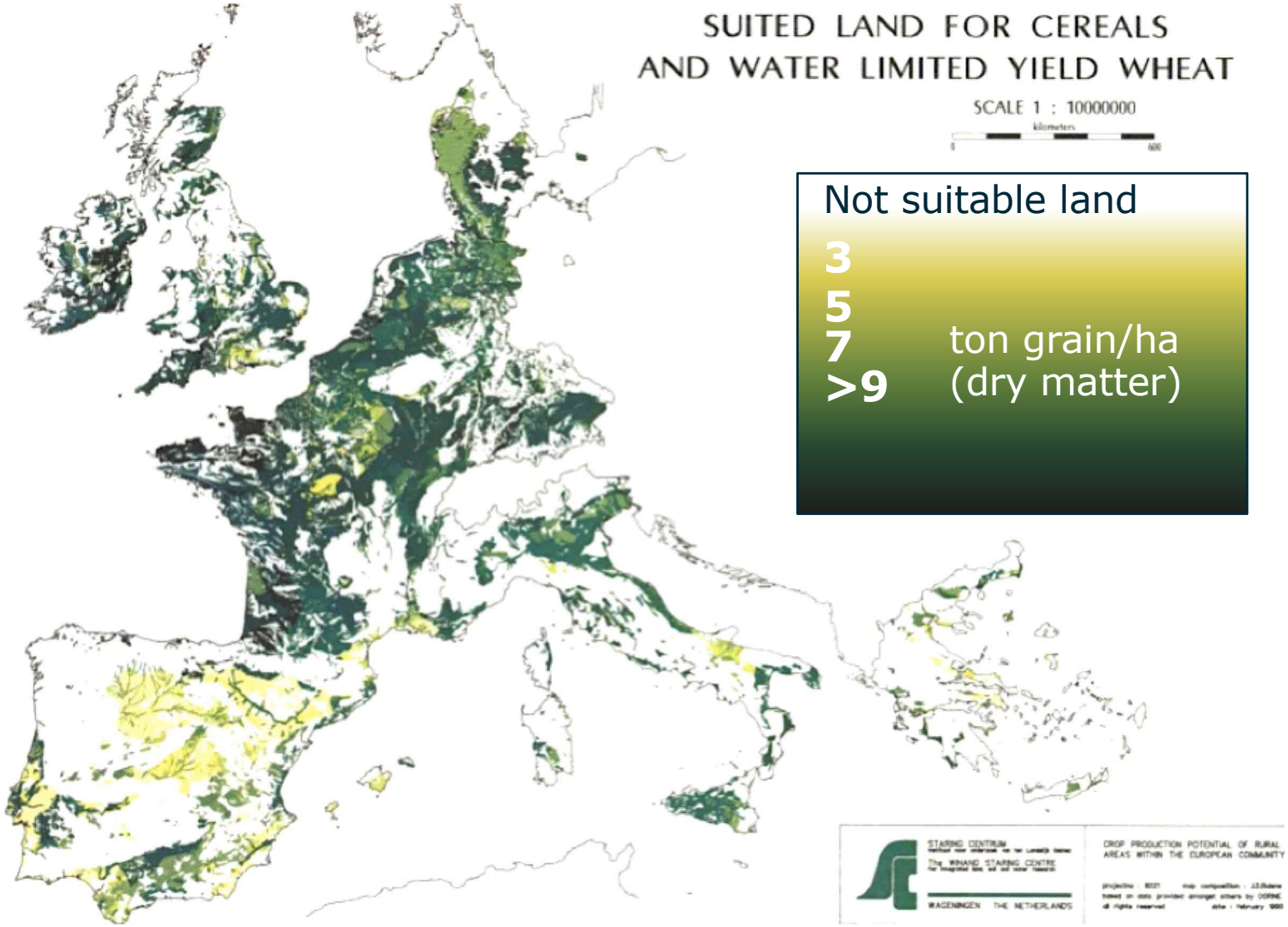
'Grond voor Keuzen' (WRR, 1992)

Wheat yields EU (water limited)



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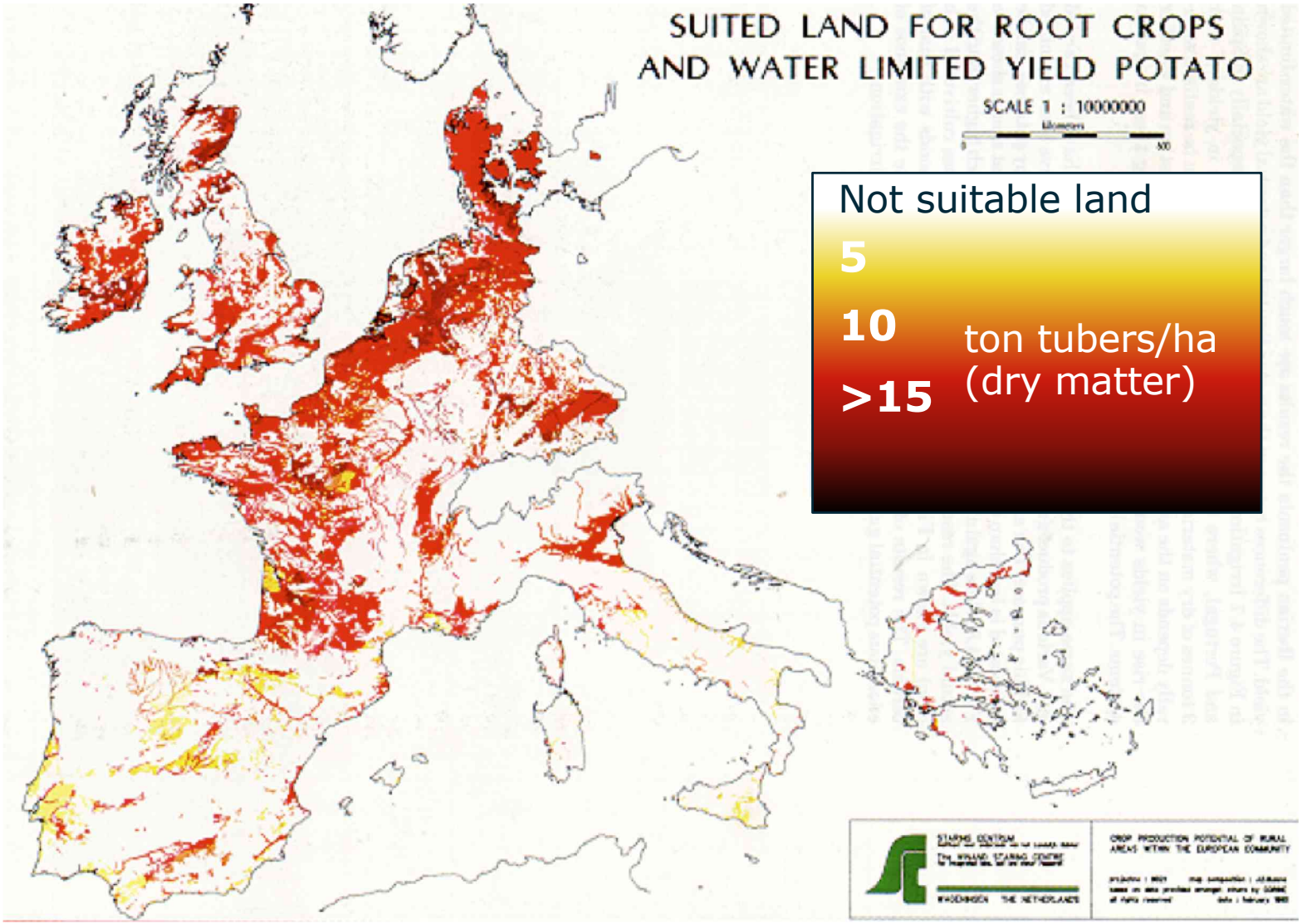
'Grond voor Keuzen' (WRR, 1992)

Potato yields EU (water limited)



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'Grond voor Keuzen' (WRR, 1992)

Precision agriculture: drones & farmbots

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Energy efficient greenhouses

photo: Luca Locatelli (National Geographic magazine, Sept 2017)

Soilless culture

photo: Luca Locatelli (National Geographic magazine, Sept 2017)

Metropolitan agriculture

photo: Luca Locatelli (National Geographic magazine, Sept 2017)

Best Ecological Means in nature & agriculture

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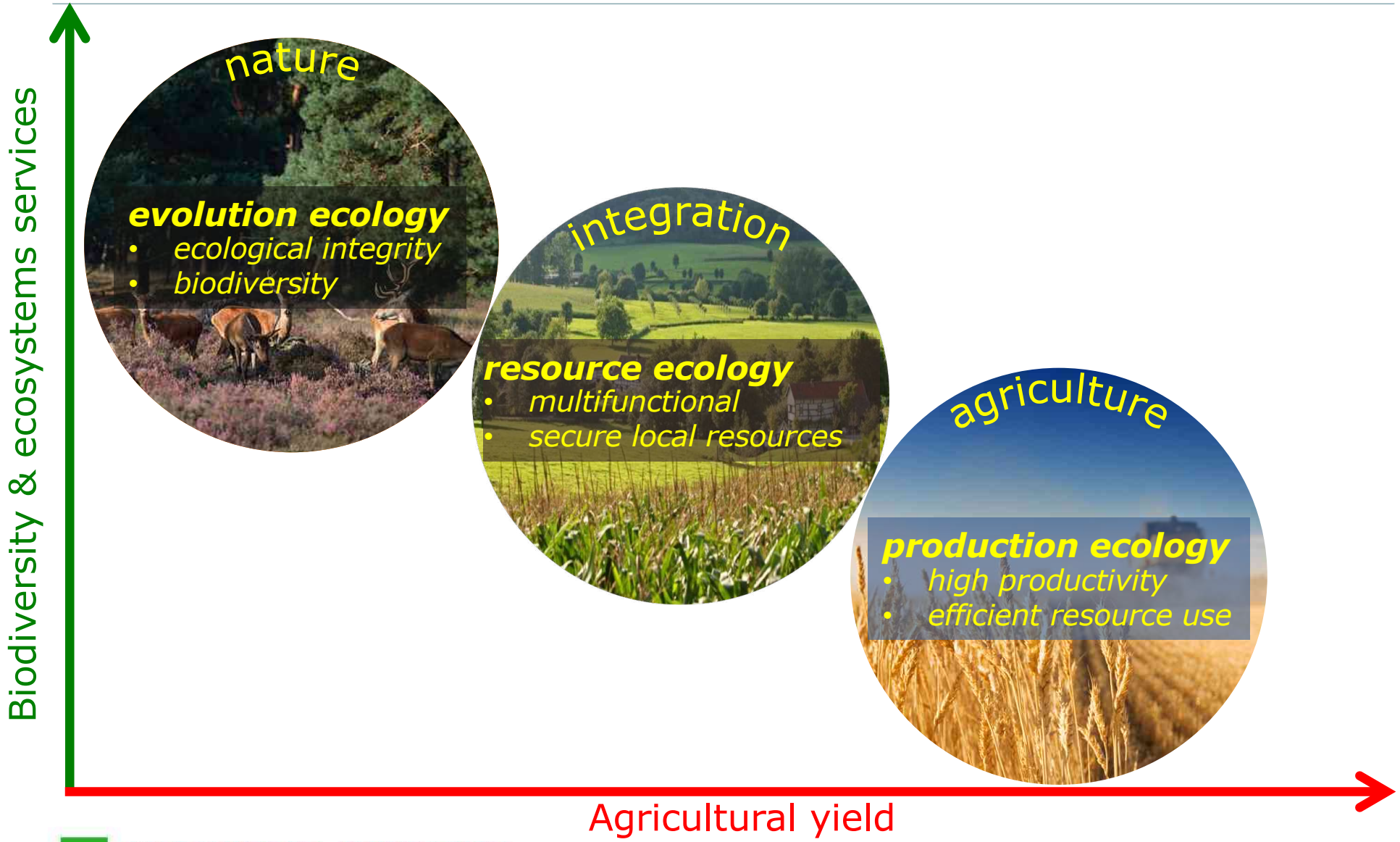
To share or to spare



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Best Ecological Means: *triple win*

1 economically efficient

2 least impact on environment

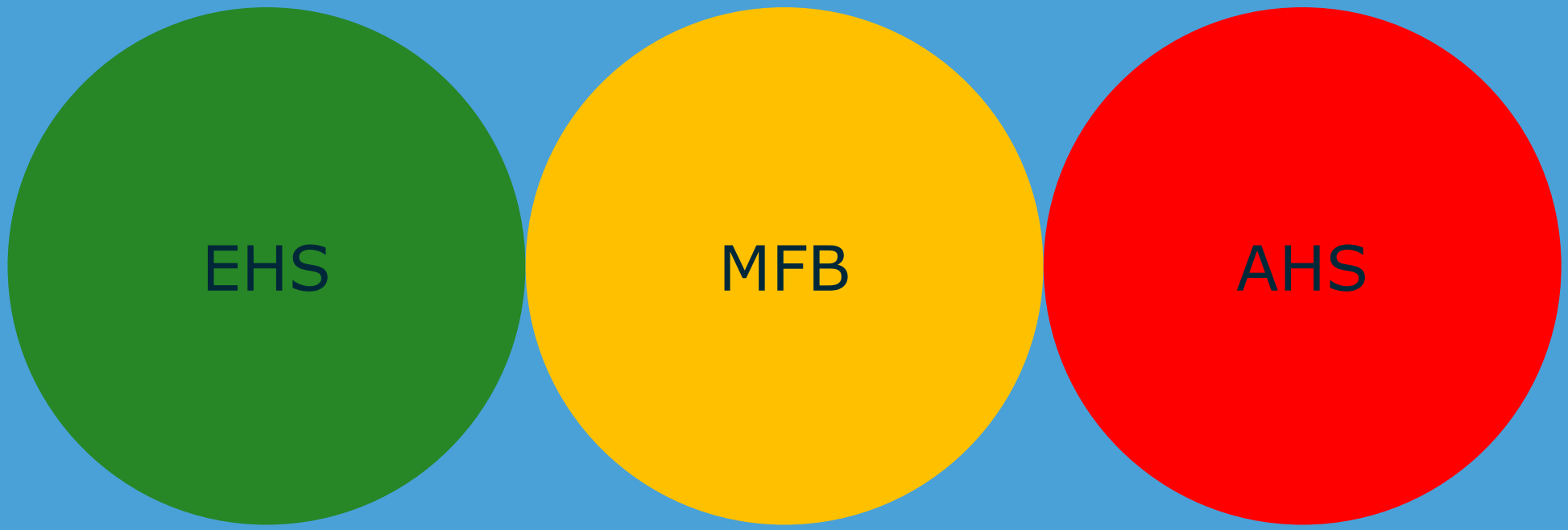
3 more biodiversity

4 Best guarantee for food security

5 Opportunities for biobased economy

Conclusions

- EHS as backbone in the EU possible
- Less agricultural land possible
- Threat by suboptimal agriculture and use of biofuel
- Three-way split desirable and achievable



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Thank you

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