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International Water Expo

Water: Economics, Policy, Politics and Agricultural Celebration

Water Policy in Spain: an example of changing paradigms

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Sylabus
(14 points)

1. Four major landmarks in Spanish water policy

2. Three main drivers of change

3. Three illustrative examples of changing paradigms

4. Four hypothesis to think about the future

1. Major Landmarks

- **Landmark 1 – The 1999 Water Law Reform (amending the 1985 Water Law)**
  - Water markets
  - Desalination
  - A new commercial approach for new water projects

  - Economics, water rights and the institutional setup remained intact (1985)

1. Major Landmarks

- **Landmark 2 – The EU Water Framework Directive (2000)**
  - Restore ecological status
  - Economics: pricing and costs
  - New approaches towards water planning
  - Public partipation

  - The WFD was transposed in 2003, and work began in 2004.
  - WFD is an EU policy that all member states are **obliged** to implement

1. Major Landmarks

- **Landmark 3 – The 2001 National Hydro Plan**
  - The Ebro grand transfer
  - Major efforts to upgrade and install sewage treatment plants
  - Drought contingent plans

  - Ebro works, began in 2003
  - Treatments plants, still ongoing
  - Drought plans approved in 2007

1. Major Landmarks

- **Landmark 4 – The 2004 Ammended National Hydro Plan**
  - Ebro transfer, stopped
  - Desalination, as the major alternative
  - Desalination plans, significantly delayed
  - An allegedly new era for water policy began

2. Drivers of change

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- **Driver 1 – Changing discourses and perceptions**

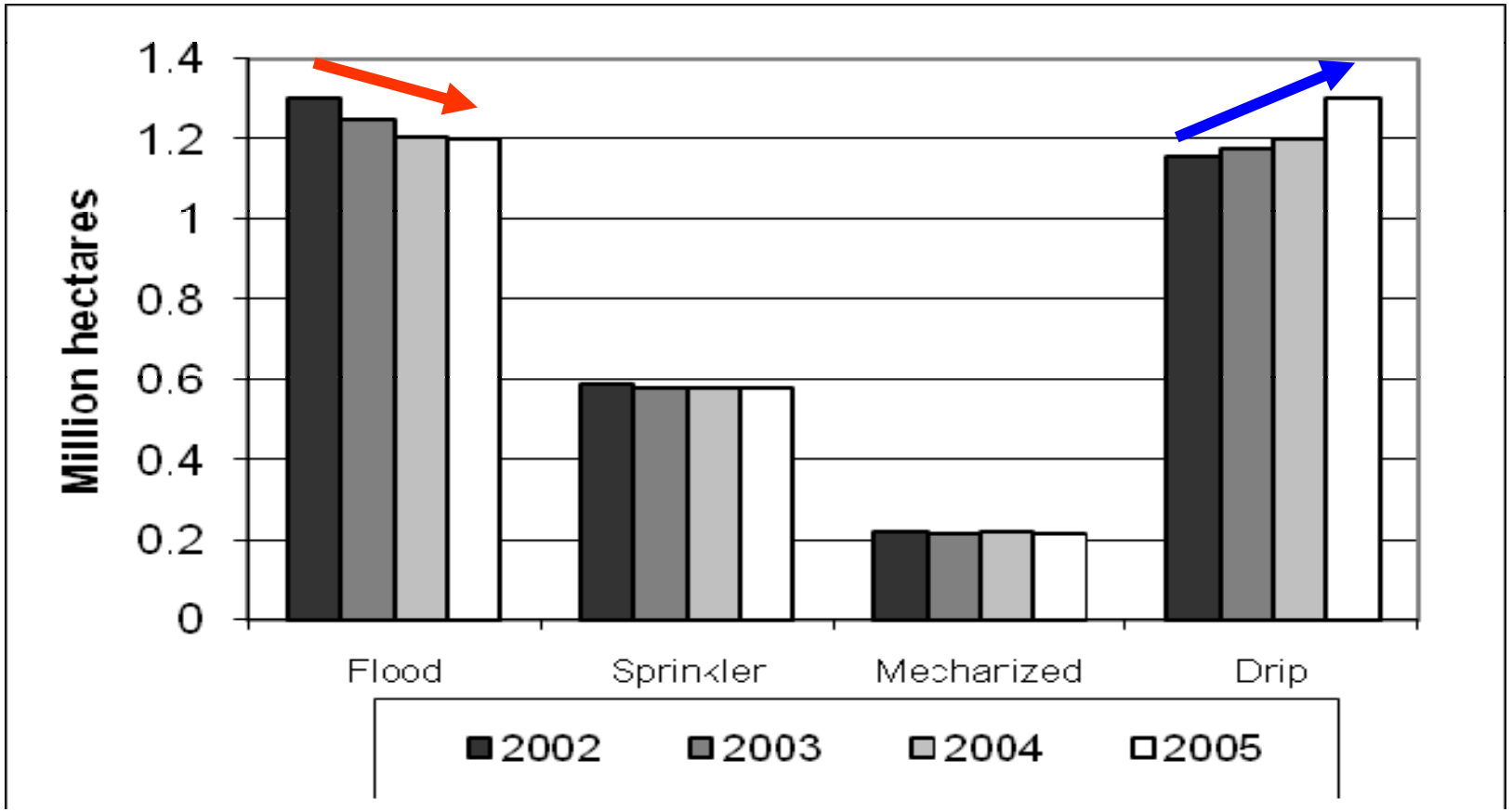
  - The breakdown of consensus
  - The regional disputes: claims of absolute sovereignty vs claims of essential needs
  - The recognition of water quality going worst
  - Climate change models projecting worsening conditions
  - Scientific harvest booming (not in patents)

2. Drivers of change

- **Driver 2 – The farm water demand**
  - Pre-2003, strongly driven by EU farm support programs
  - The National Irrigation Plan (2001-08), 1.4 mill Ha. completely refurbished/reformed
  - Decoupled income support changing crops and technology
  - Post-2005, conditionality (CAP 'Health check')
  - Water pricing reform, delayed
  - Almost 100% recovery prices (narrow definition of costs)

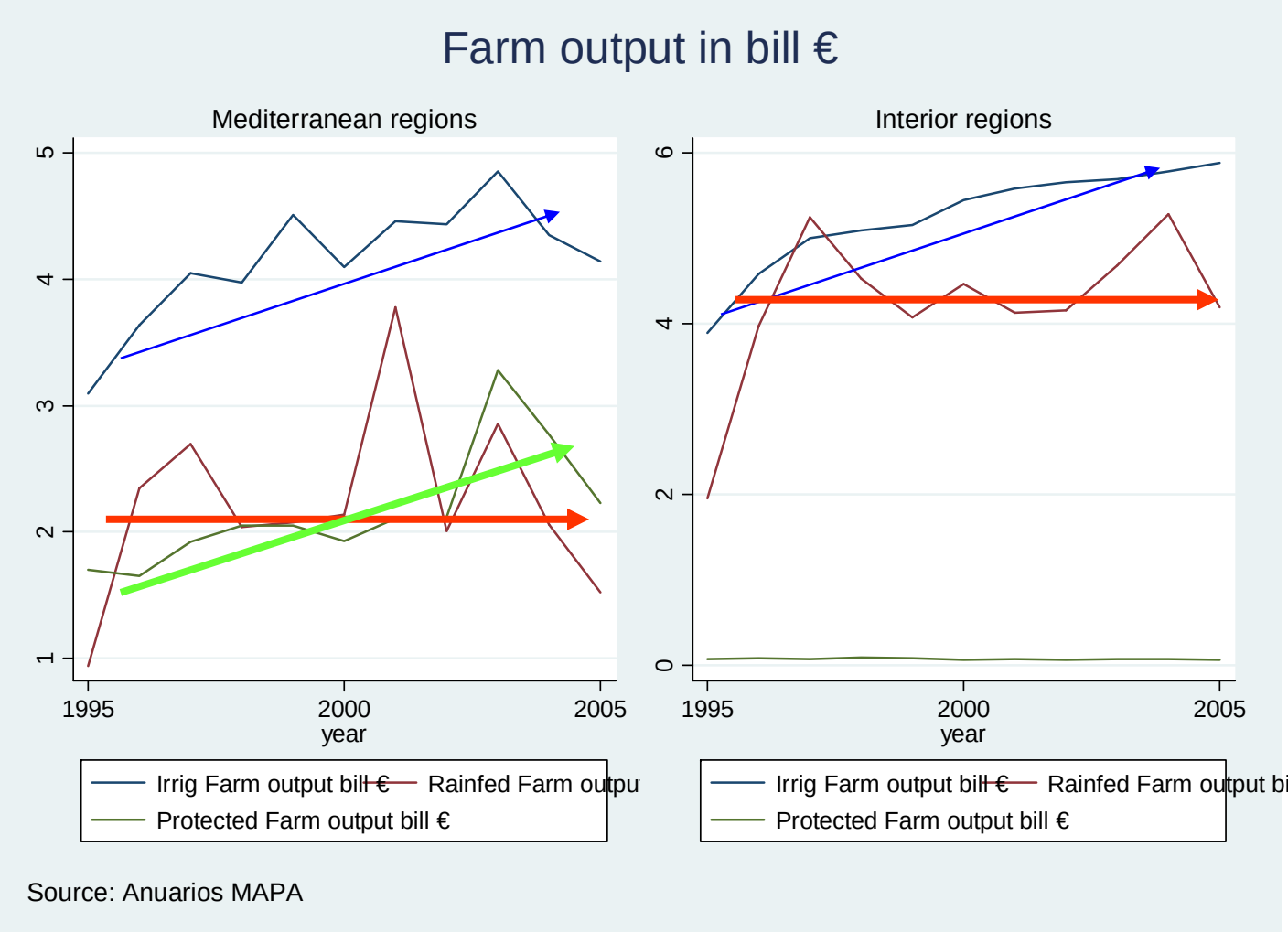
2. Drivers of change

- **Driver 2 – The farm water demand (cont)**
  - Growth of drip irrigation technologies



2. Drivers of change

- **Driver 2 – The farm water demand (cont)**
  - Increased land and water productivity



Source: Anuarios MAPA

2. Drivers of change

- **Driver 3 – Prevailing 'urban' views of water problems**
  - Irrigation, no longer seen as a benign water user
  - Adversarial views: farming-environmental
  - The 'Irrigation-water-too-cheap' as the main culprit of drought and scarcity situations

2. Drivers of change

- **Driver 4 – Climate change**
  - Increasing supply instability
  - Increasing crops' demand
  - More extreme precipitation regimes

3. Examples of changing paradigms

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- **Example 1 – Market instruments**
  - Multiplication of water exchanges among irrigators
  - Public buy-outs:
    - Permanent for solving groundwater overexploitation
    - Annual to increase water supply in stressed basins
  - Prices for farmers:
    - Initially, >0.13 €/m^3 ($285 per a.f.)
    - Now, >0.20 €/m^3 ($385 per a.f.)

3. Examples of changing paradigms

- **Example 1 – Market instruments**

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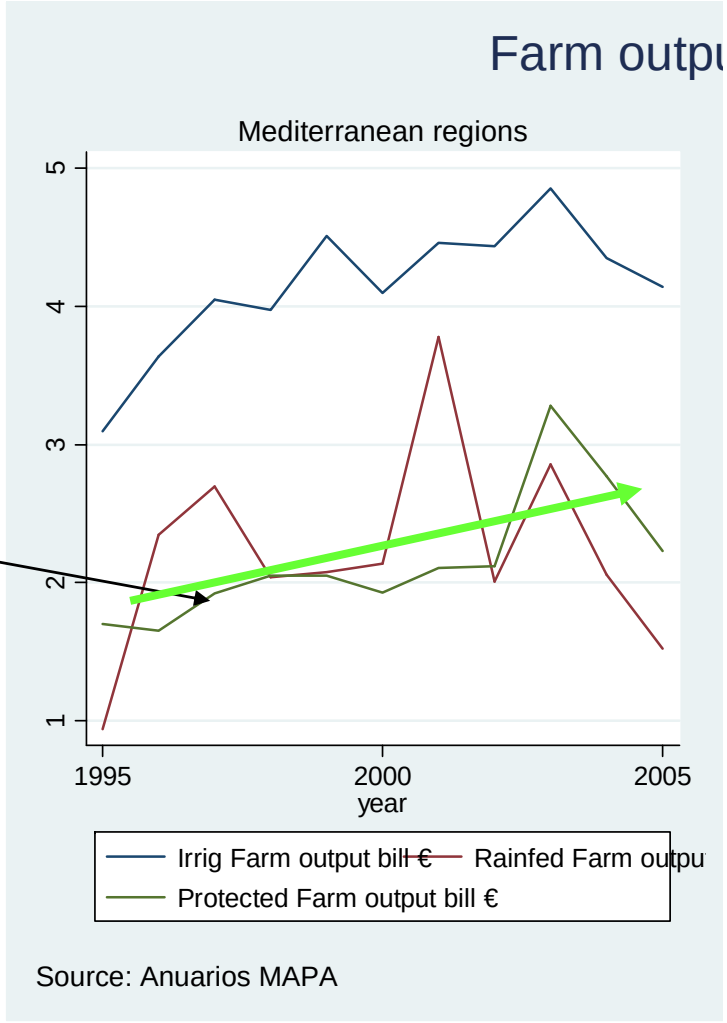
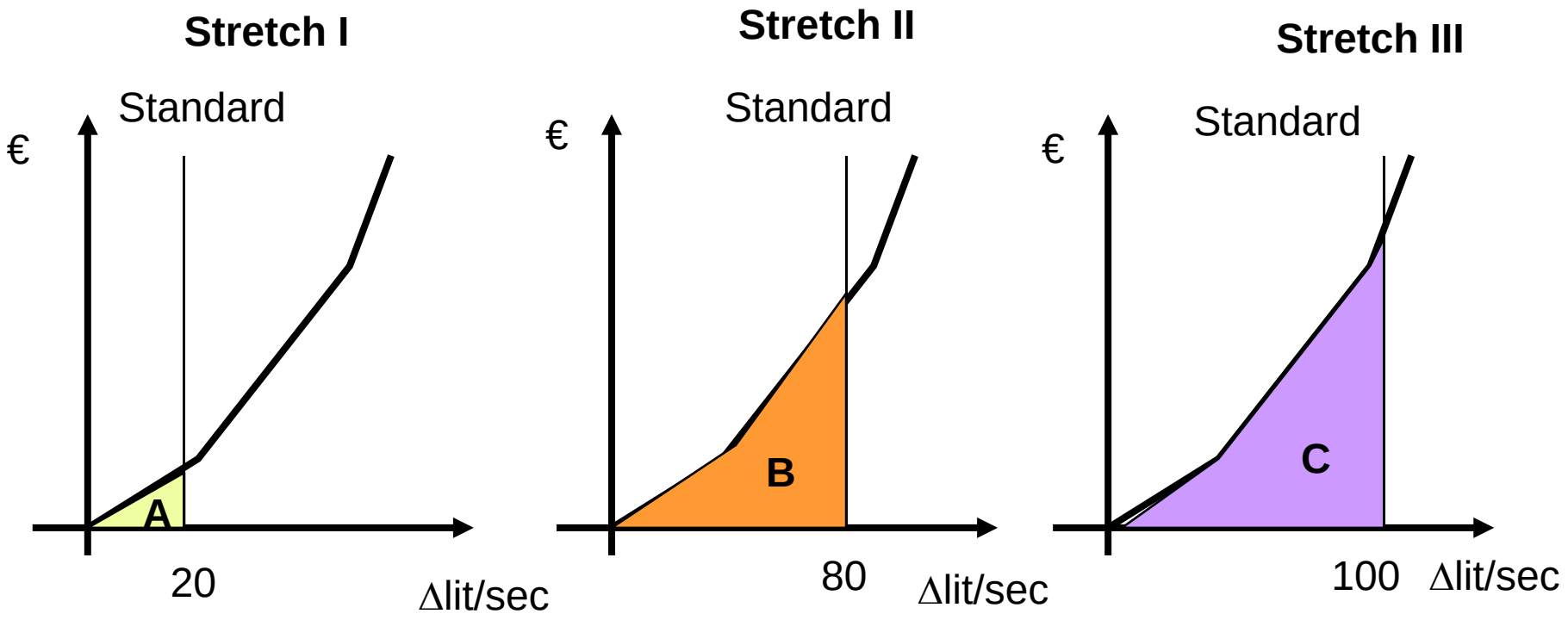


3. Examples of changing paradigms

- **Example 2 – Drafting water plans under the 'integrated management' paradigm**
  - Seeking cost-effective measures of bridging water quality gaps
  - Requires:
    - Modeling integration across, regions, sectors
    - Finding the least cost-effective measures for achieving good ecological status
    - Integrating economic instruments:
      - Pricing
      - Buy-outs
      - Water markets

Example 2 – Integrated management

Seeking cost-effective measures of bridging water quality gaps

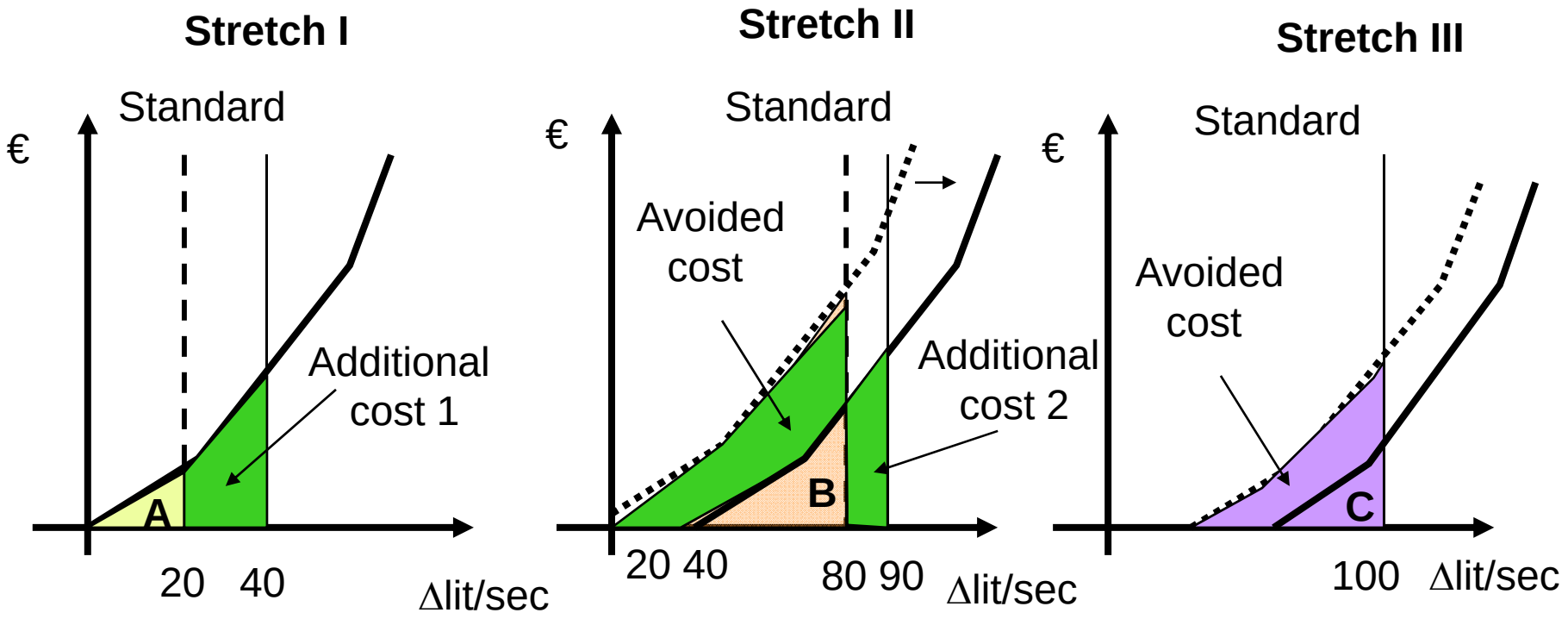


Overall costs = A + B+ C

3. Examples of changing paradigms

Example 2 – Integrated management

Seeking cost-effective measures of bridging water quality gaps



Overall costs = A +Addit.Cost 1+ B +Addit Cost 2 + C< A+B+C

3. Examples of changing paradigms

- **Example 3 – The new federalism**
  - The political structure in Spain is undergoing the second wave of political reform (first in 1978-81)
  - New Statues for the Autonomous Communities statutes (Andalusia, Valencia, Catalonia, Aragón, Extremadura…), redefining water jurisdictions
  - All claim new competencies on water:
    - A new notion of regional sovereignty is being claimed
    - Enable active local and regional policies

4. Looking into the future

4. Looking into the future

- **Hypothesis 1: "The farm sector will retain its favourable position"**
  - Increasing food prices
  - Serious profits' squeezing in the farm sector
  - Rural areas depend on farm income generated in irrigated areas

- Option to sell, timid WFD pricing, conditional farm support mechanisms, freedom to farm.

4. Looking into the future

- **Hypothesis 2: "The water footprint and virtual water trade will make their way to the minds of ordinary people"**
  - Clever concept: easy to understand
  - Farm production in the global context
  - Spatial and temporal dimensions: what is harvested and when

- Farm policy and water policy will become more integrated, and globalised

4. Looking into the future

Hypothesis 3: “The technology revolution”

- Half-way on the run
- Precission farming / deficit irrigation
- Control and monitoring of nitrates / peticides pollution
- Water markets’ participation (option contracts, electronic markets)

- Farmers will need significant technical support

4. Looking into the future

Hypothesis 4: "The environmental revolution"

- Voluntary agreements
- Local / regional initiatives
- Increasingly important constraint for users and agencies
- Risk-environmental management in water management; dealing with highly non-linear processes

- Science-based decision-making, coupled with 'simplifiers' + public participation, will reign in water agencies.

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Gracias – Thank you

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