

*III Workshop Internacional de Inovações Tecnológicas na Irrigação
II Simpósio Brasileiro sobre Uso Múltiplo da Água*

Fortaleza, Brasil, 8-11 June, 2010

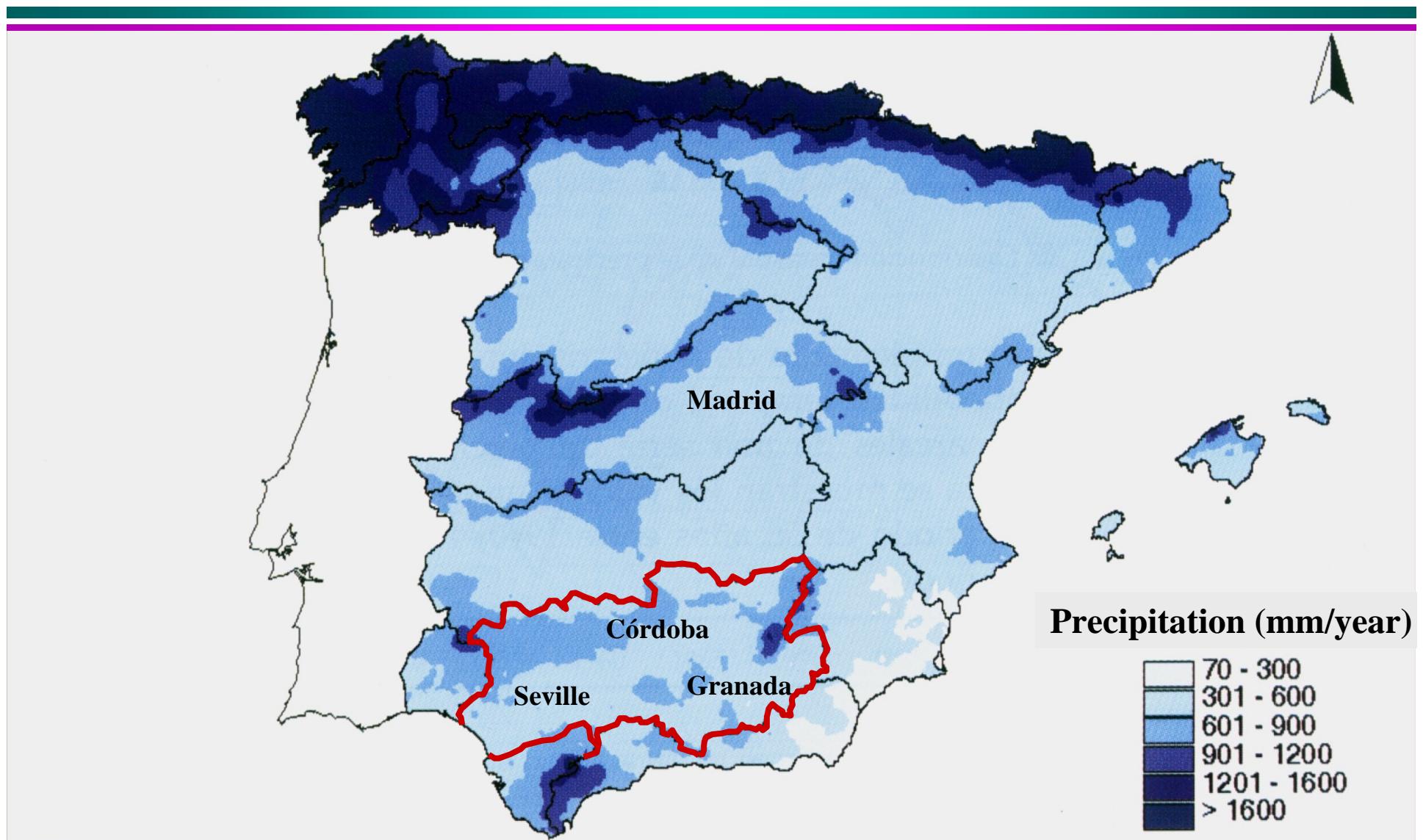
**Irrigation management:
farmer's behaviour and technology**

Luciano Mateos

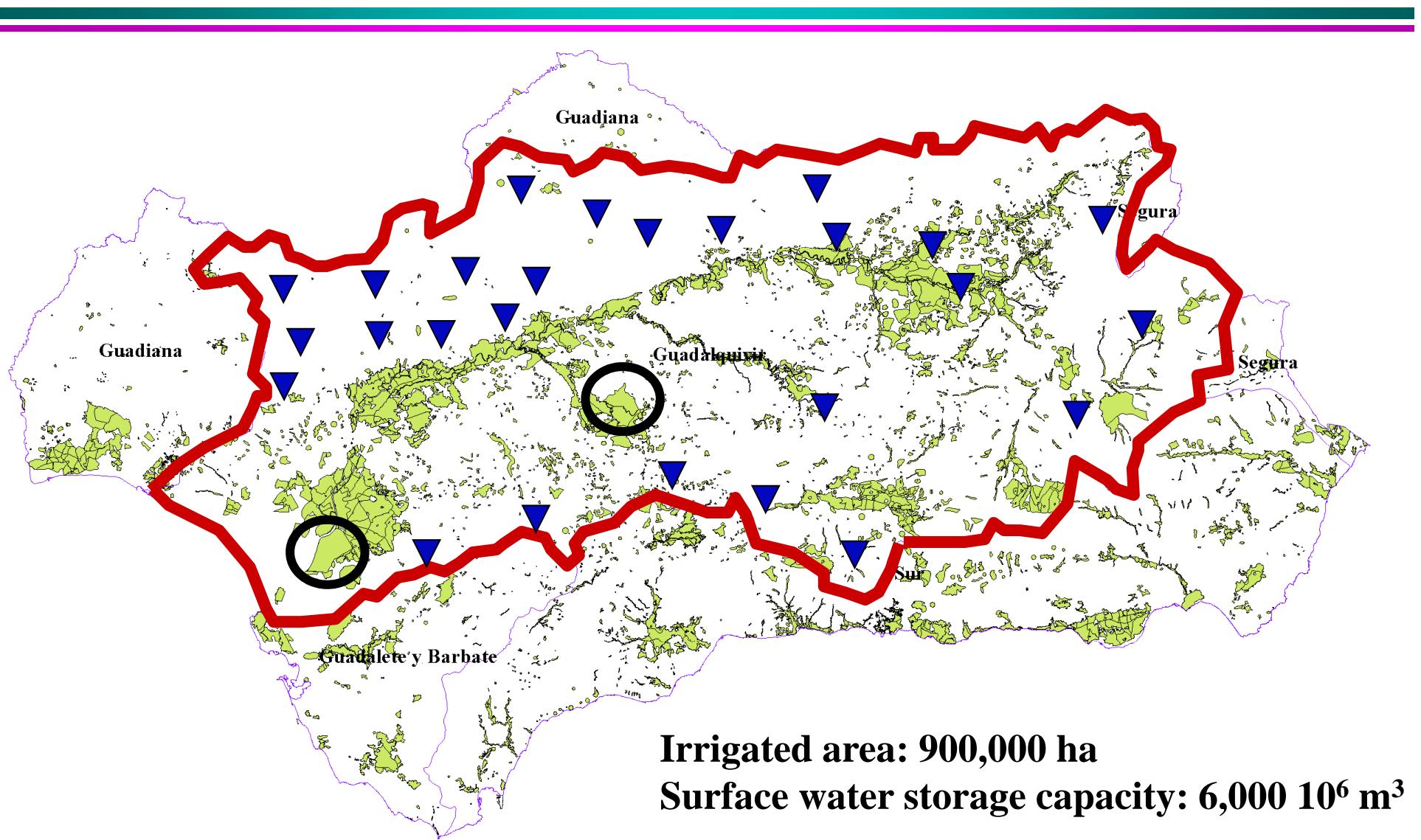


***Instituto de Agricultura Sostenible, CSIC
Córdoba, Spain***

Spain, Andalucía, Guadalquivir Basin



Spain, Andalucía, Guadalquivir Basin



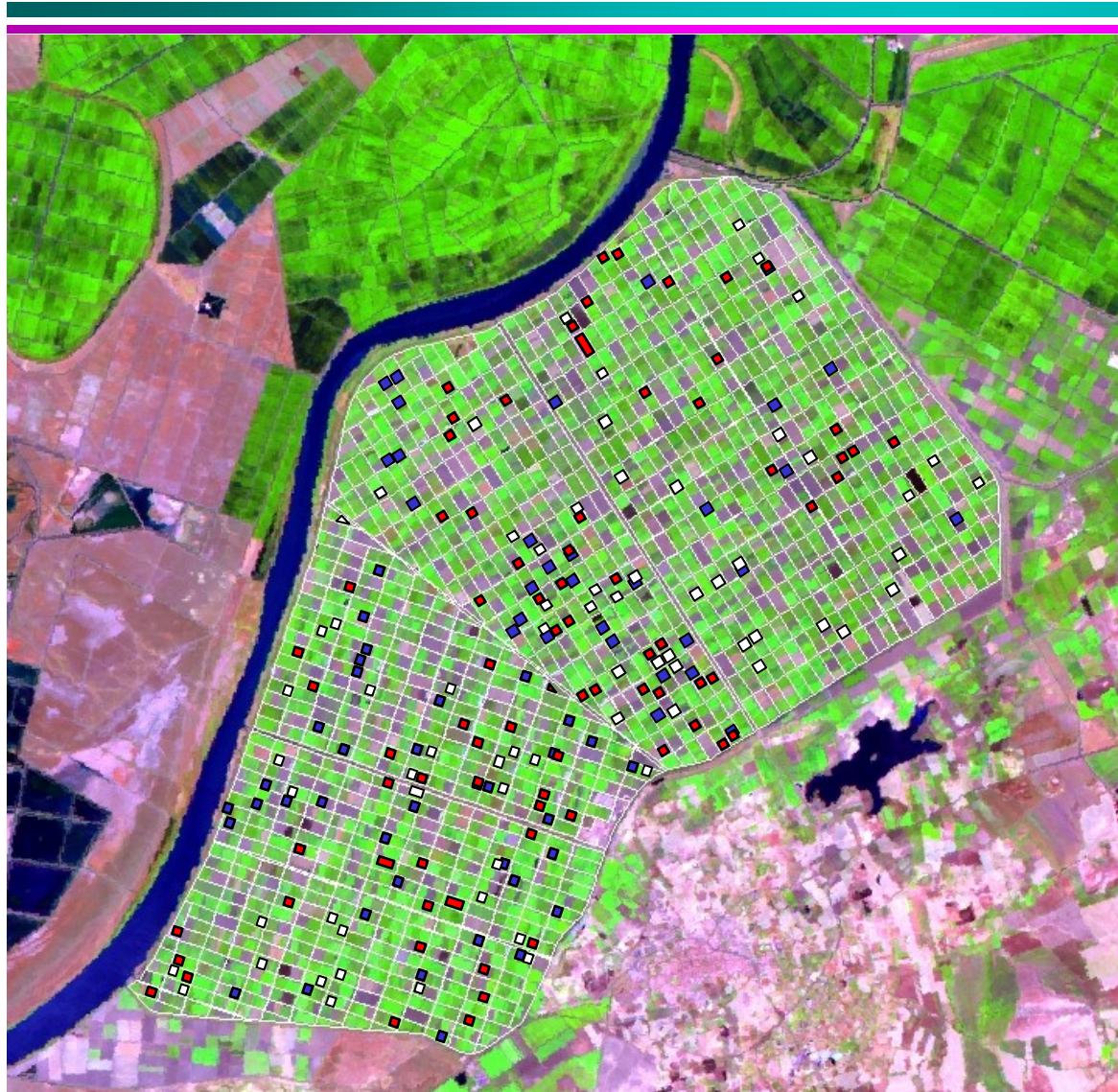
Presentation outline

- 1. Irrigation water use variability**
- 2. Irrigation economics and uncertainty**
- 3. Technology at irrigation district management level**
- 4. More simple, more complex: study case in Africa**

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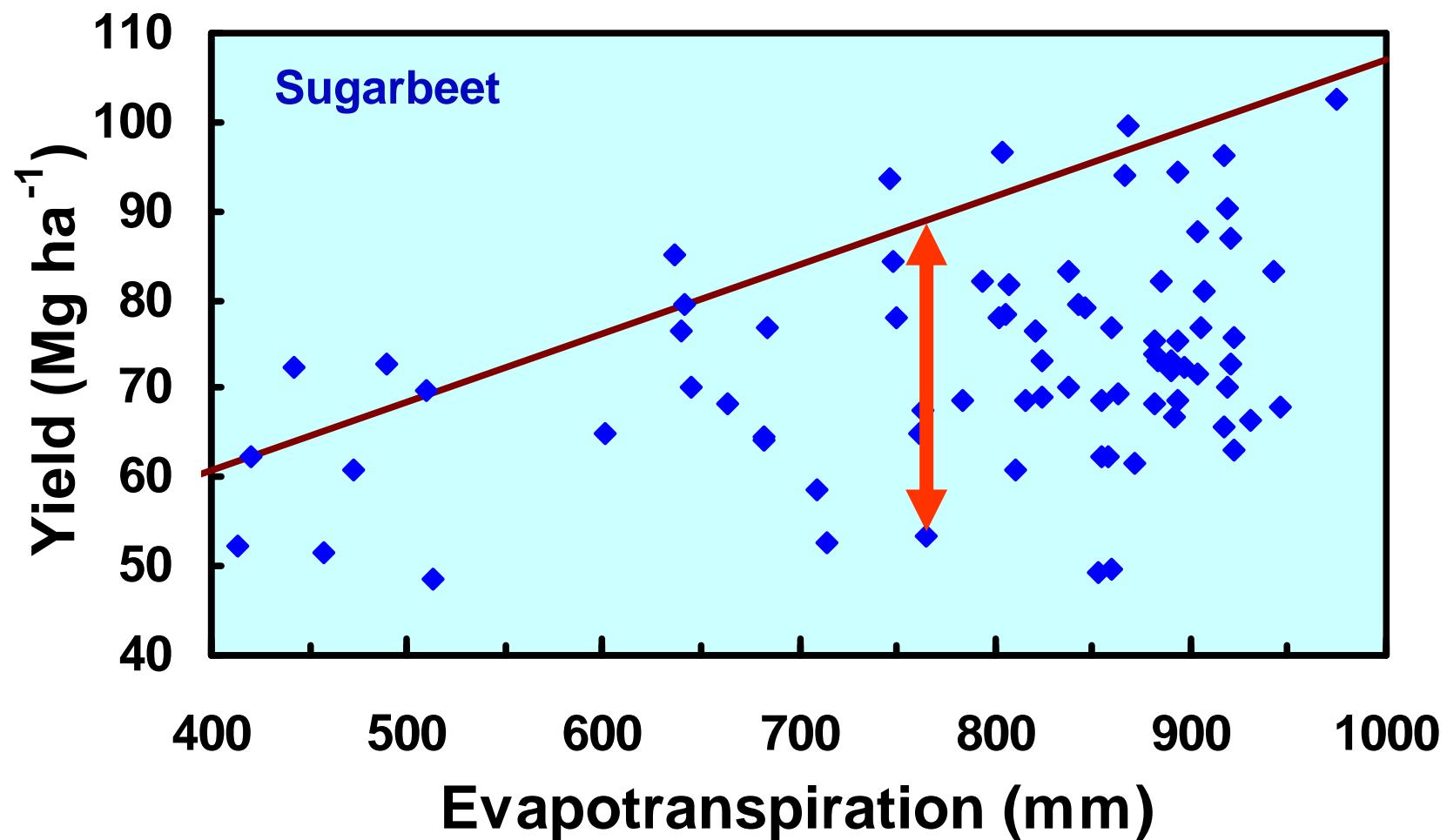
1. Irrigation water use variability



B-XII
Irrigation Scheme

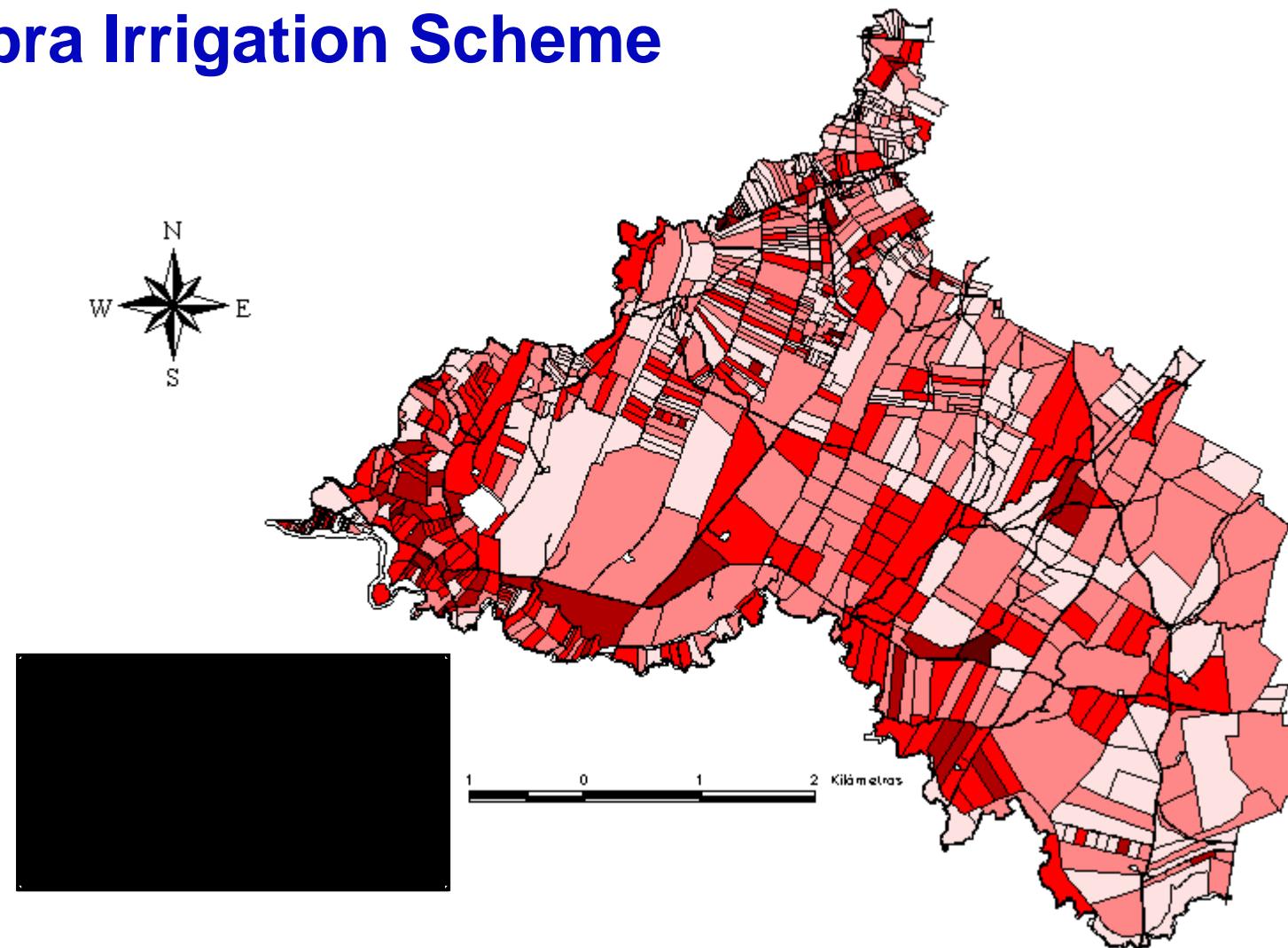
- Cotton
- Sugarbeet
- Tomato

1. Irrigation water use variability

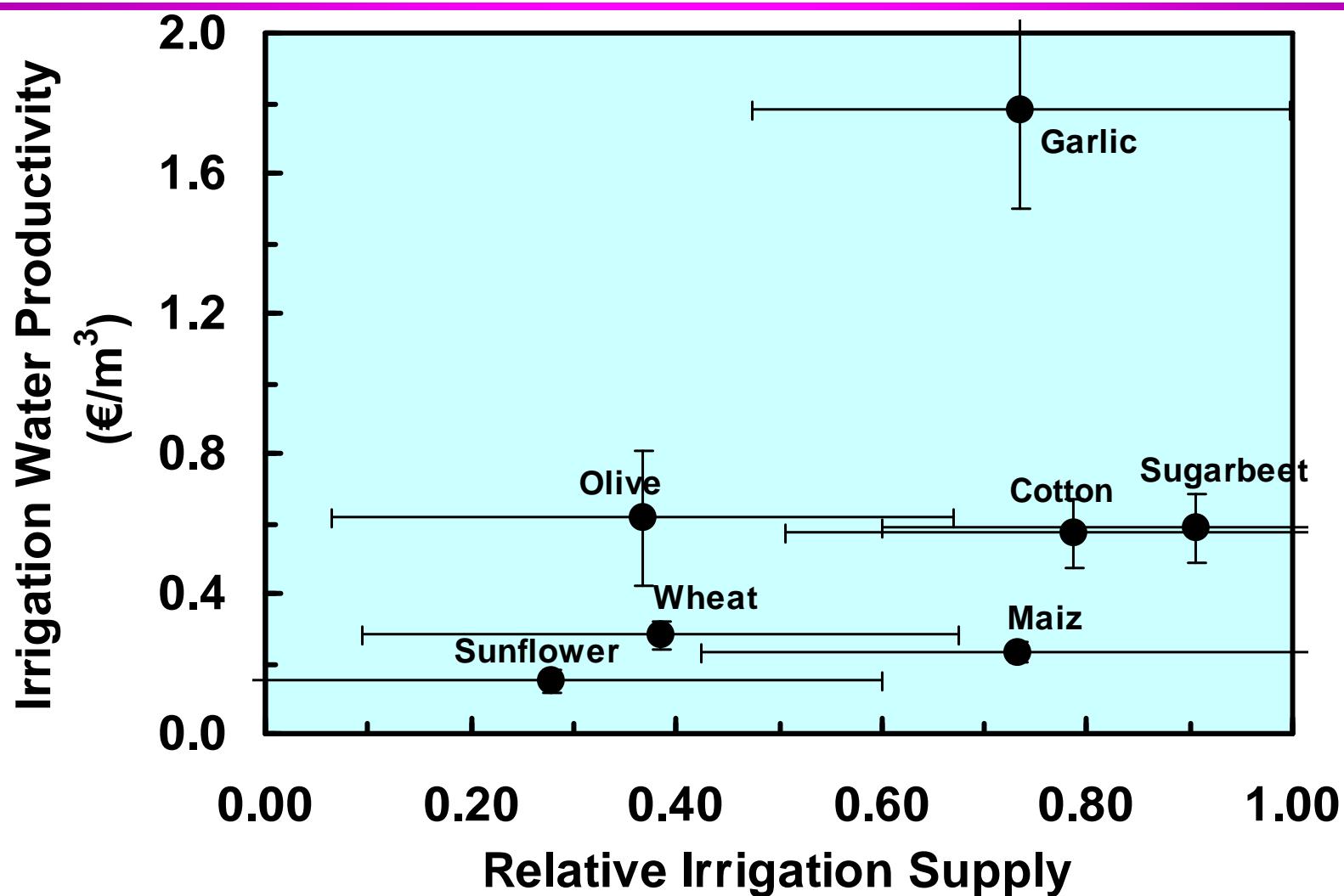


1. Irrigation water use variability

Genil-Cabra Irrigation Scheme



1. Irrigation water use variability



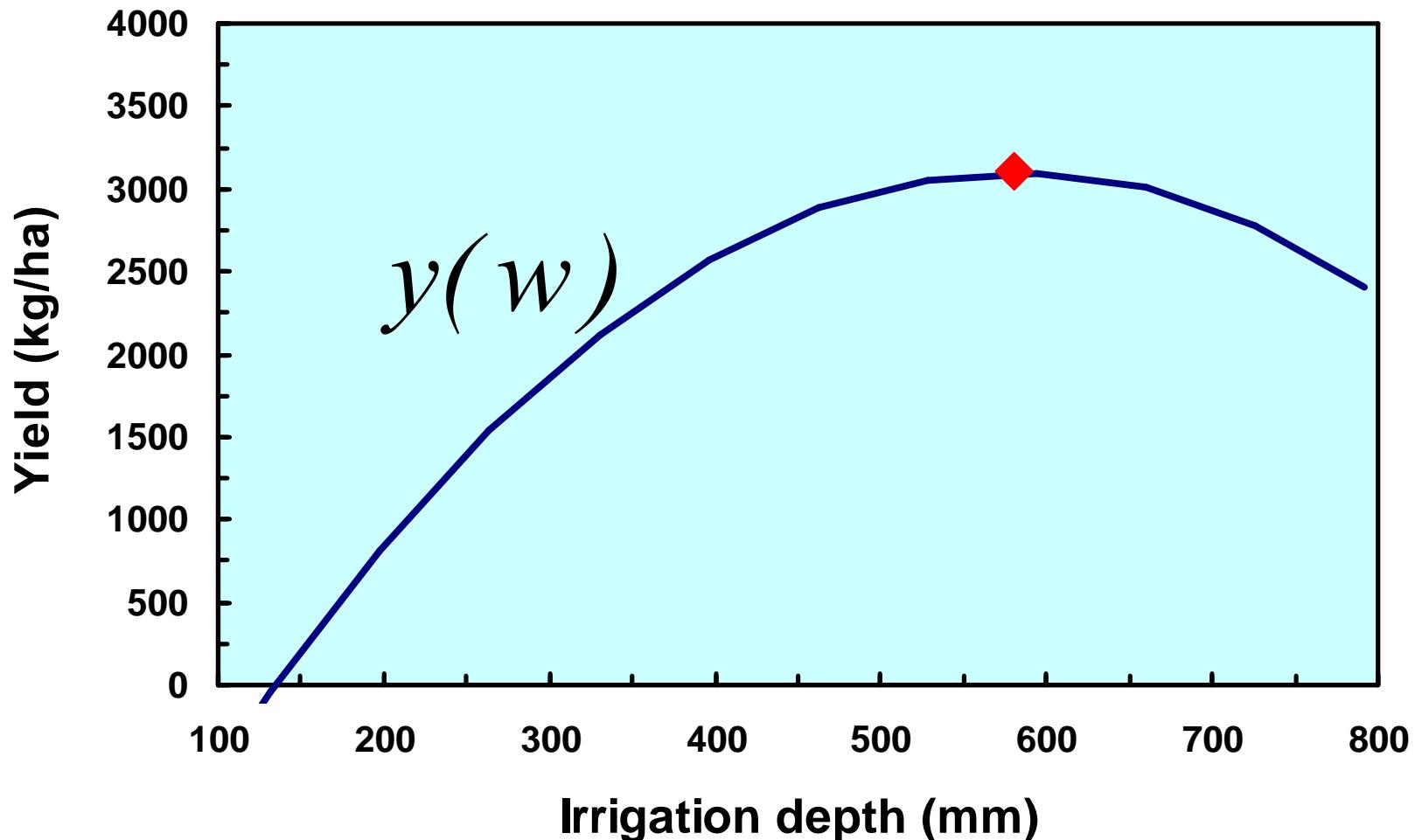
Lorite, Mateos, Fereres (2004)

Presentation outline

1. Irrigation water use variability
2. **Irrigation economics and uncertainty**
3. Technology at irrigation district management level
4. More simple, more complex: study case in Africa

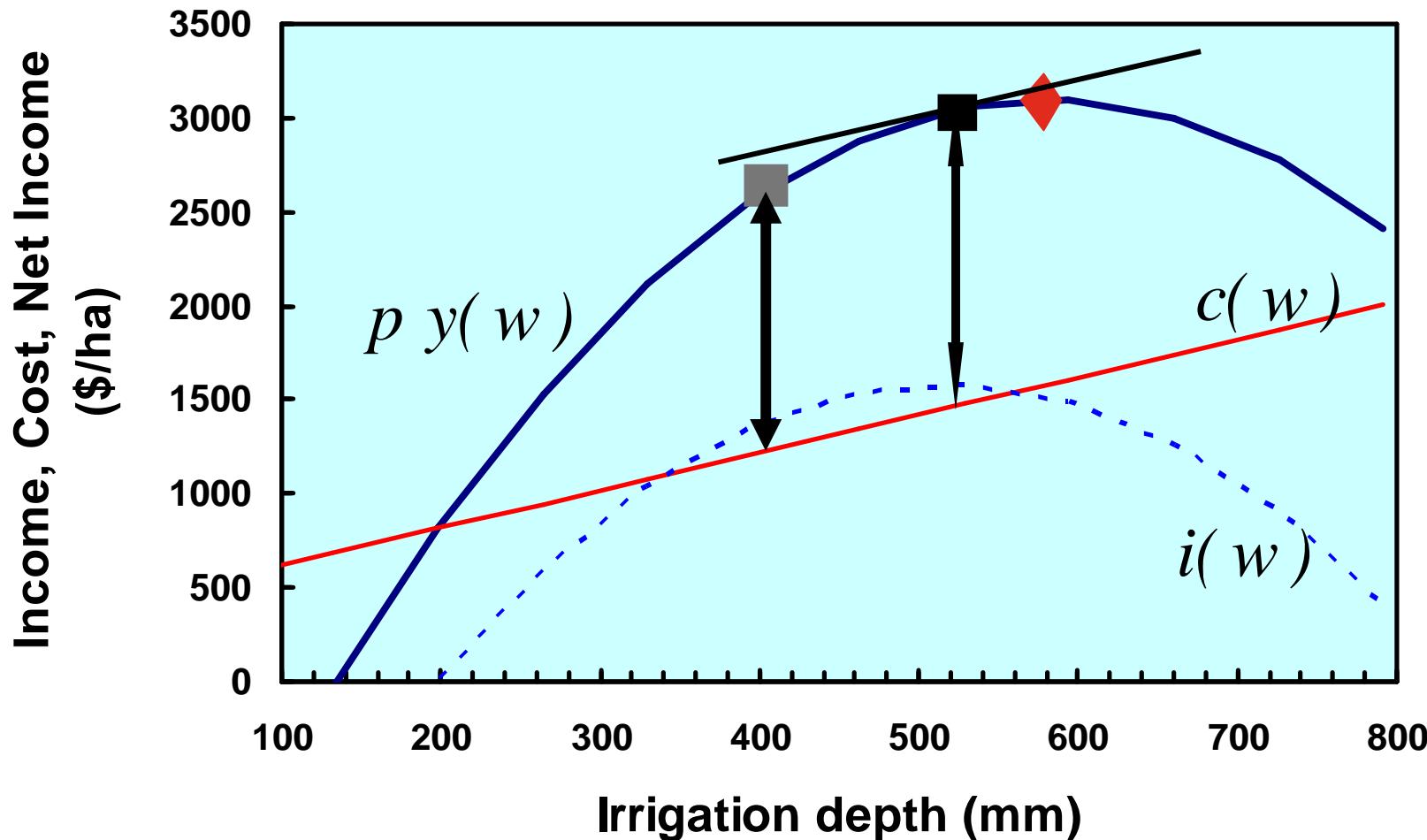
2. Irrigation economics and uncertainty (concepts)

Yield function



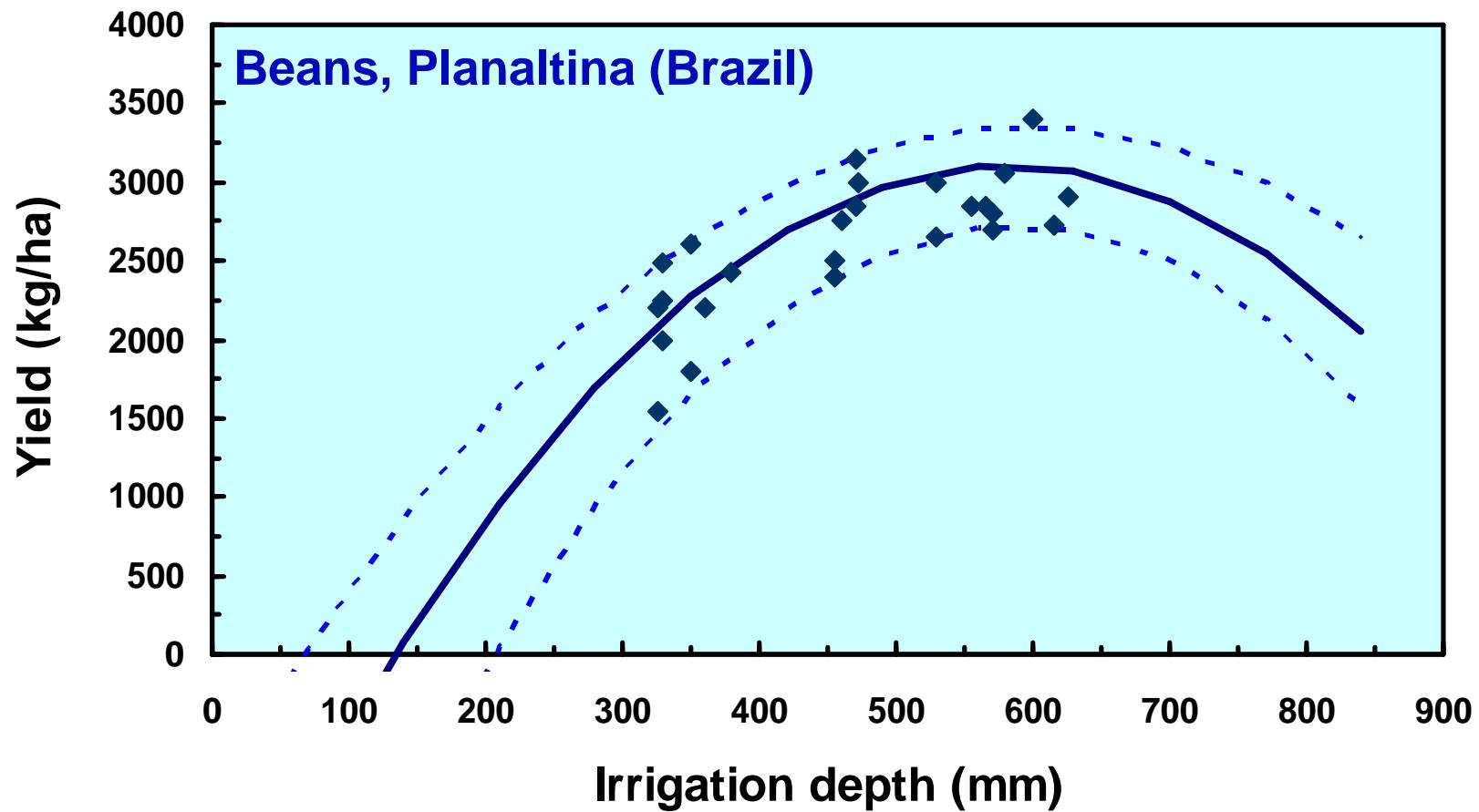
2. Irrigation economics and uncertainty (concepts)

1) land is limiting 2) water is limiting



2. Irrigation economics and uncertainty (concepts)

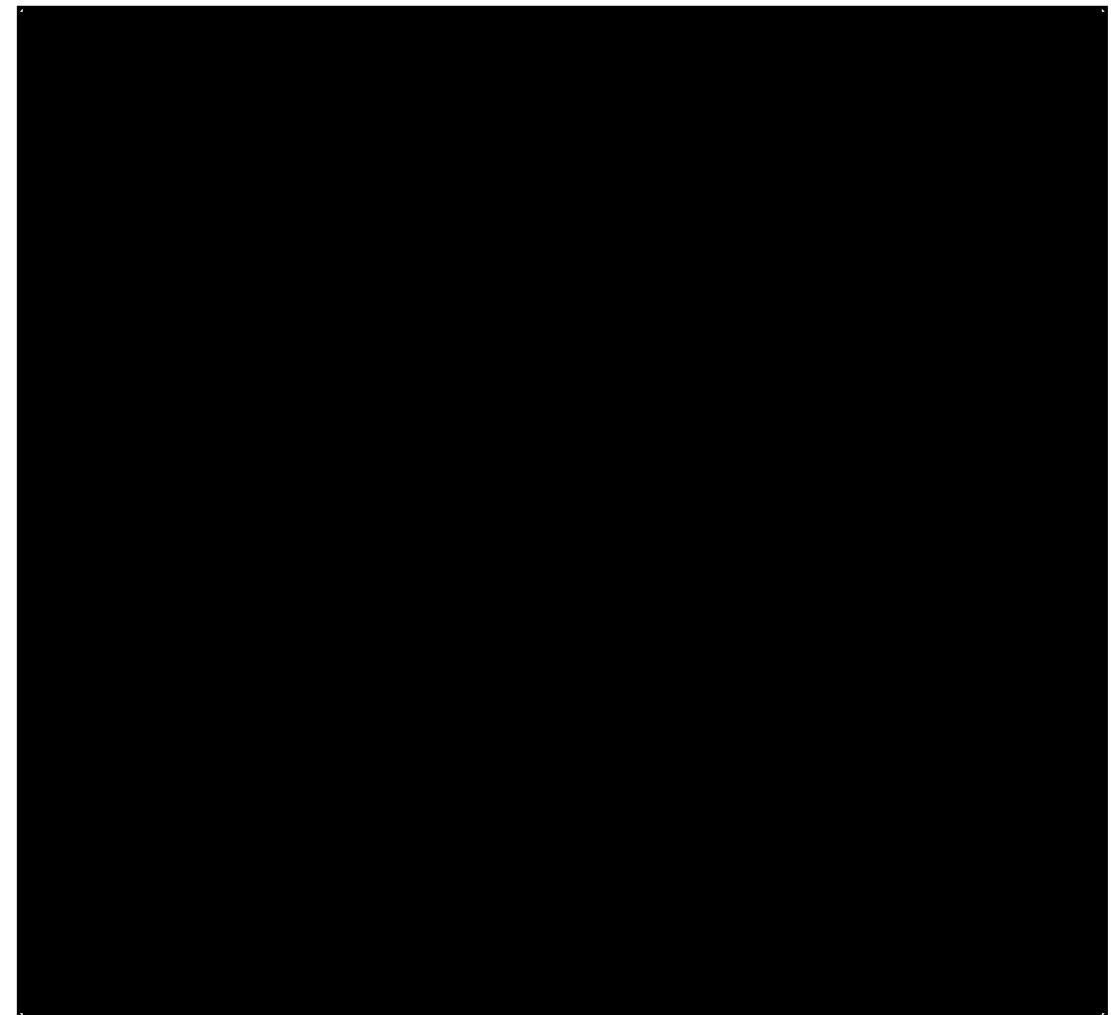
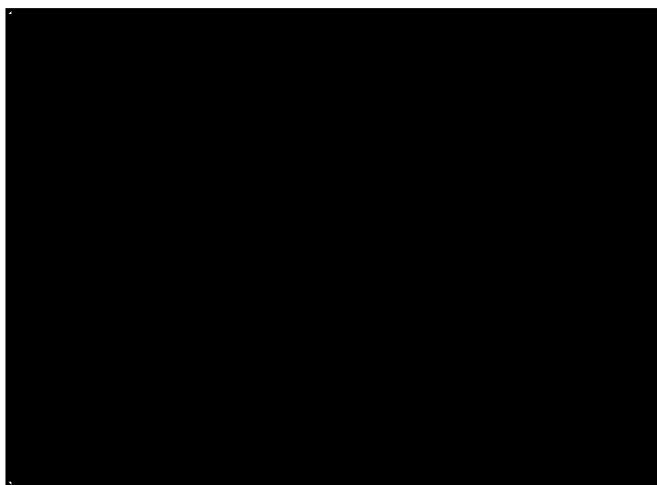
Uncertainty



Figuerêdo et. al. (1998)

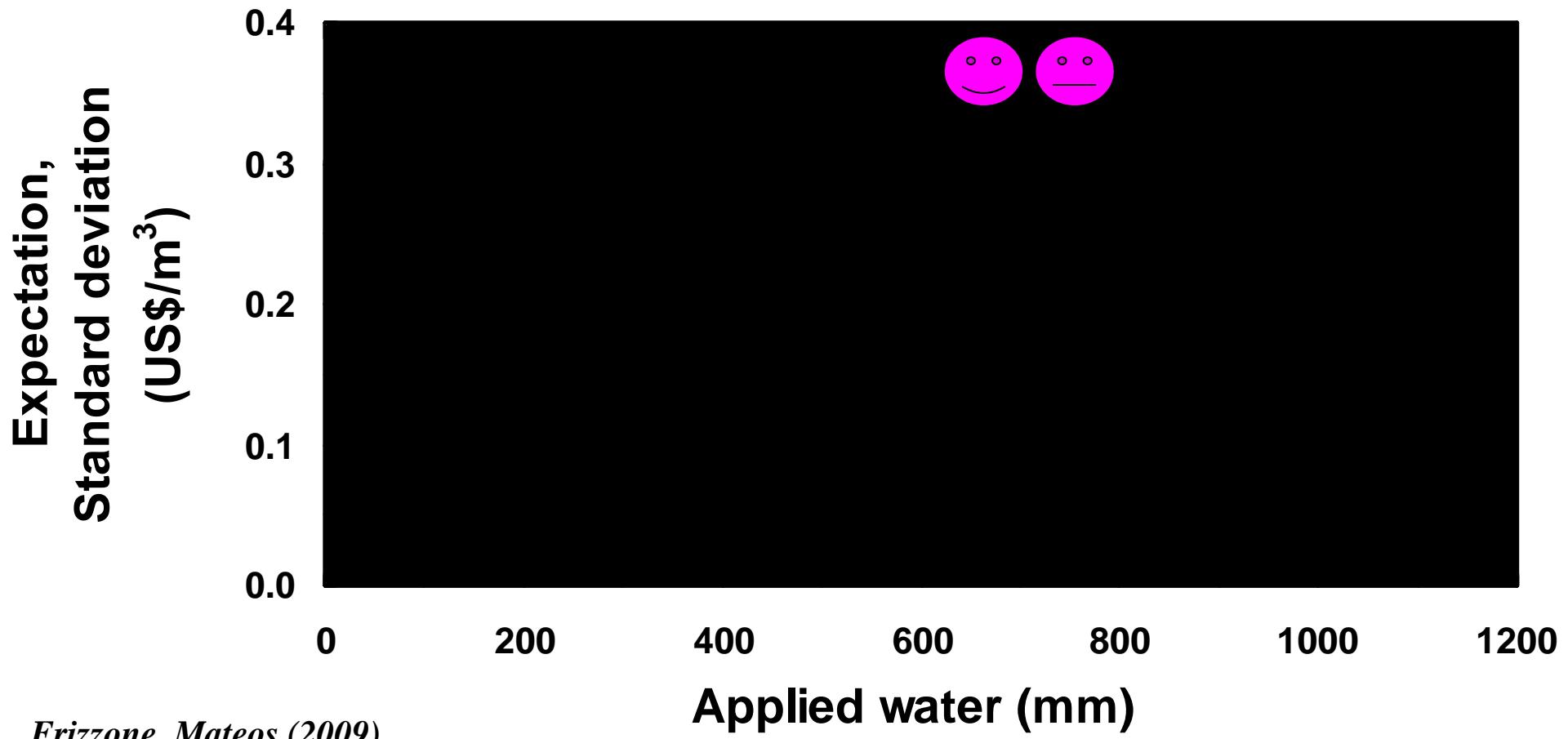
2. Irrigation economics and uncertainty (concepts)

Uncertainty



2. Irrigation economics and uncertainty (concepts)

Net income, uncertainty

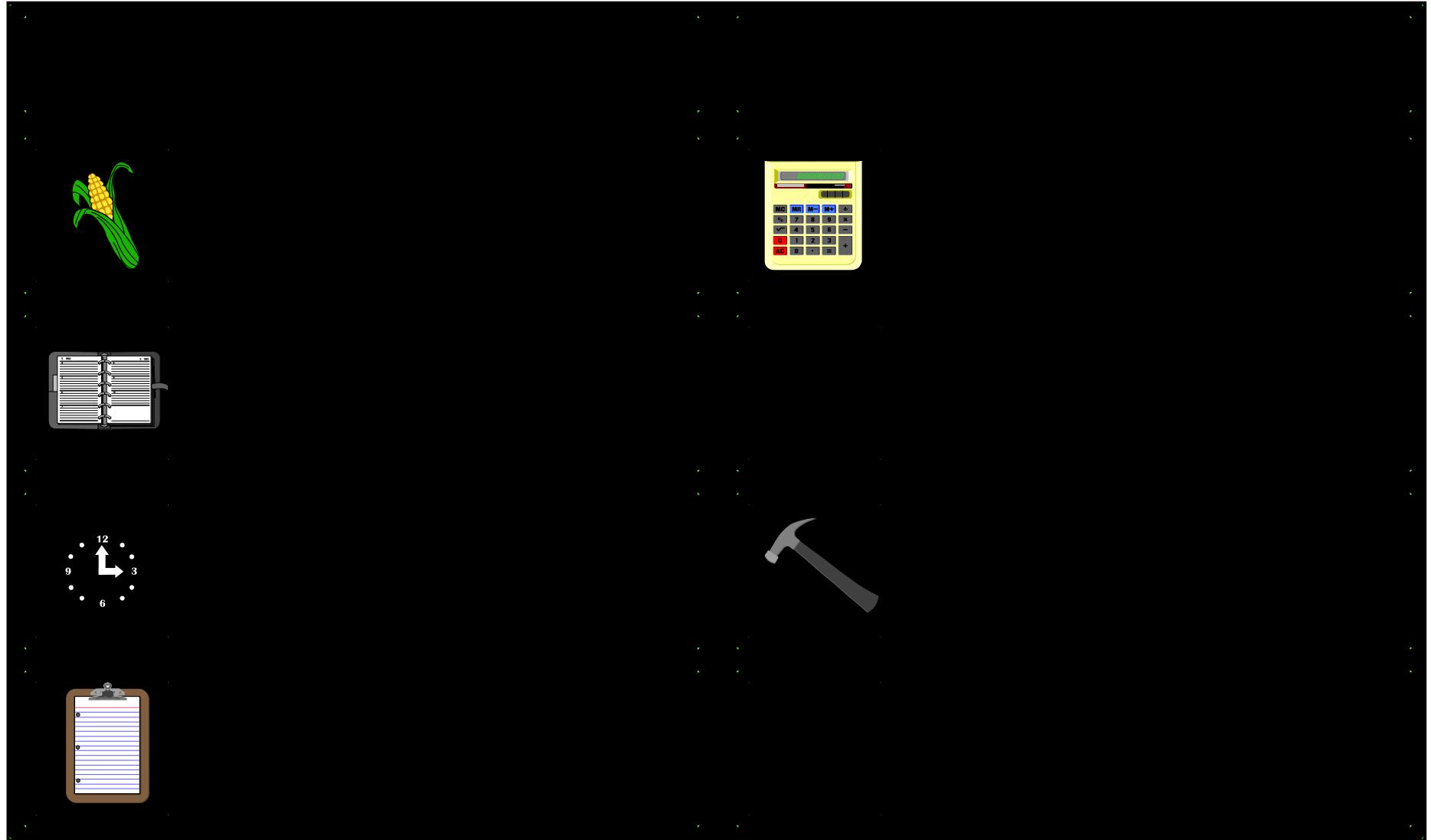


Frizzzone, Mateos (2009)

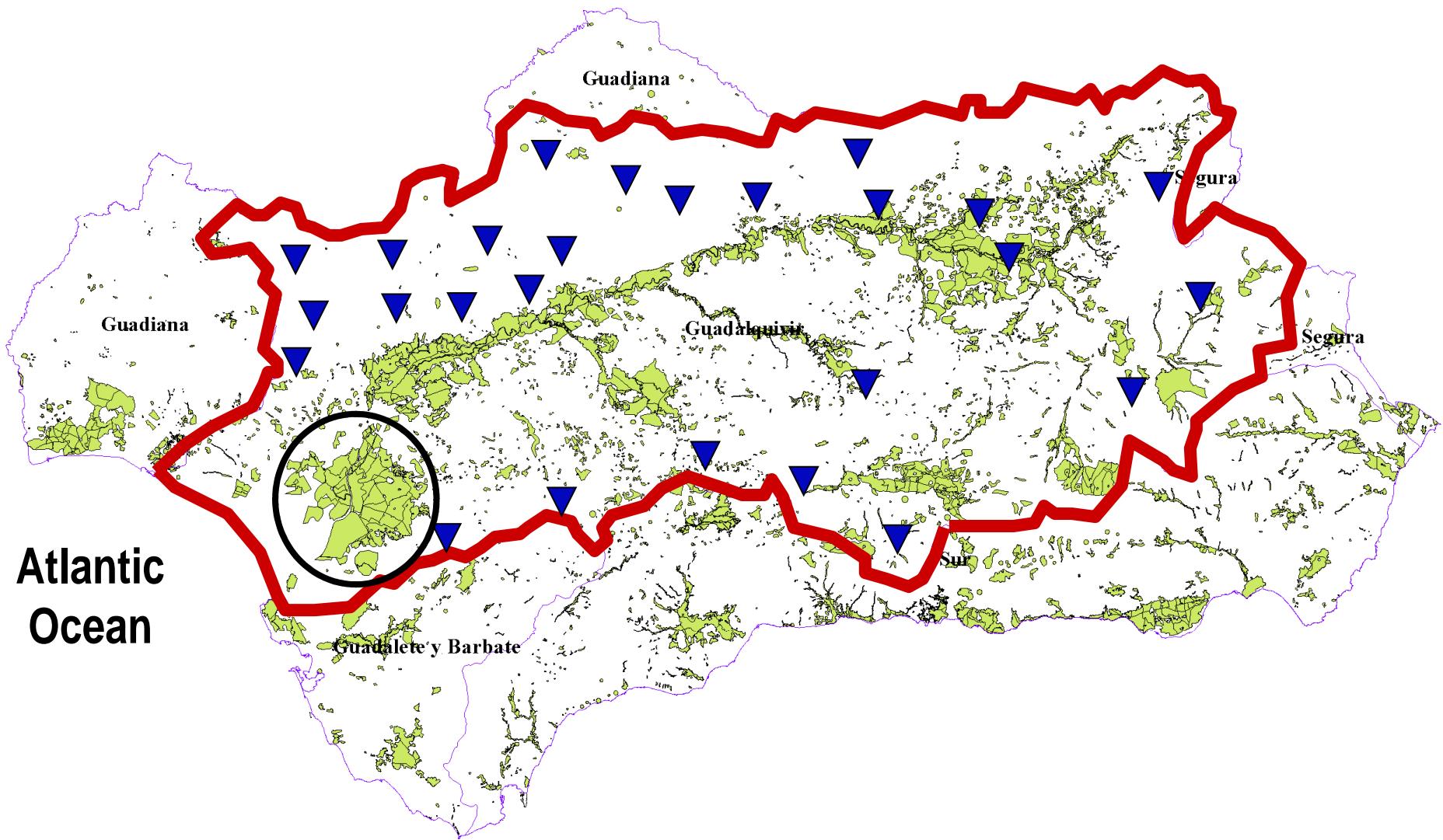
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1. Irrigation water use variability
2. Irrigation economics and uncertainty
3. **Technology at irrigation district management level**
 - ✓ **Information and decision support systems**
 - ✓ **Distribution system operation**
 - ✓ **Irrigation district hydrology**
4. More simple, more complex: study case in Africa

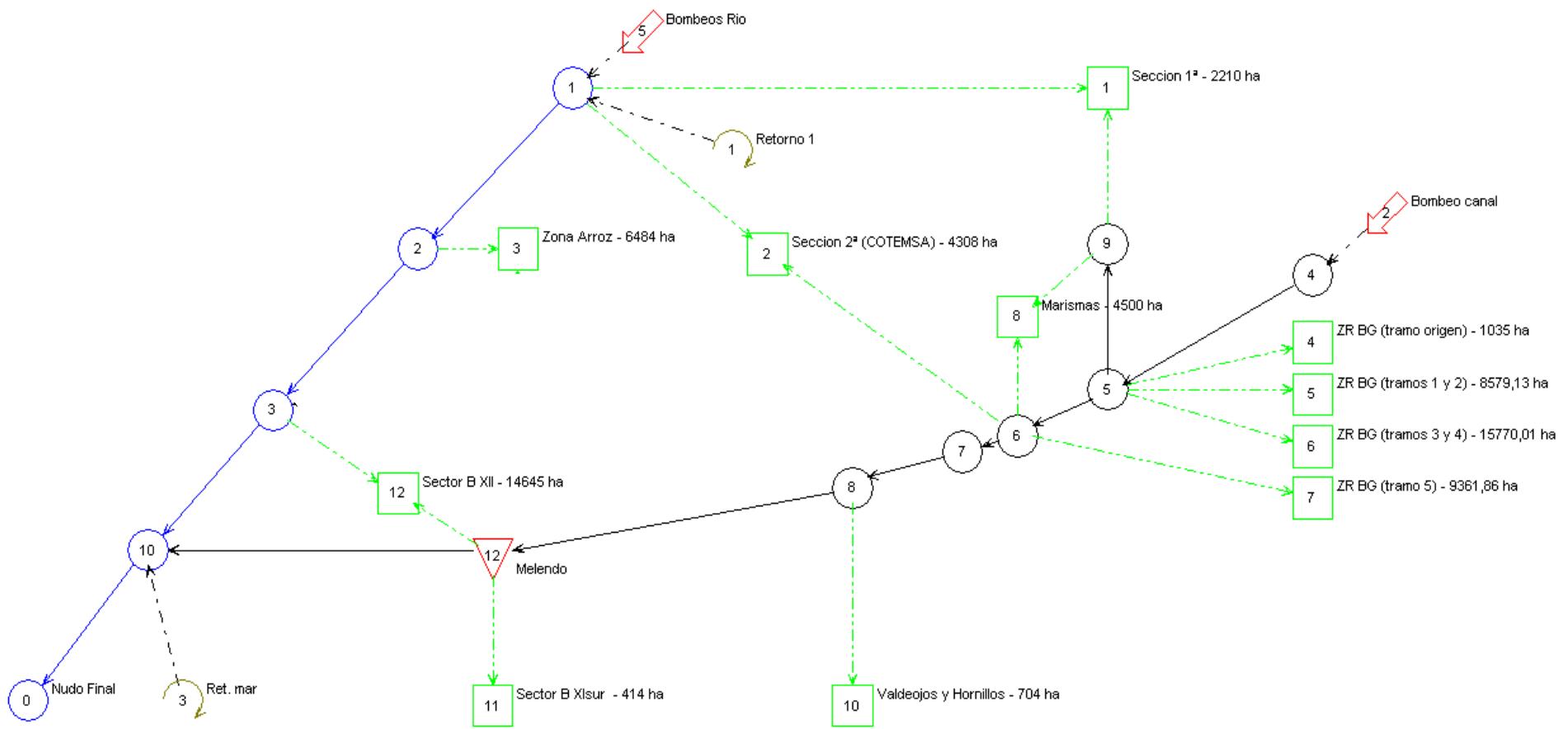
3. Technology and knowledge at irrigation district management level: DSS



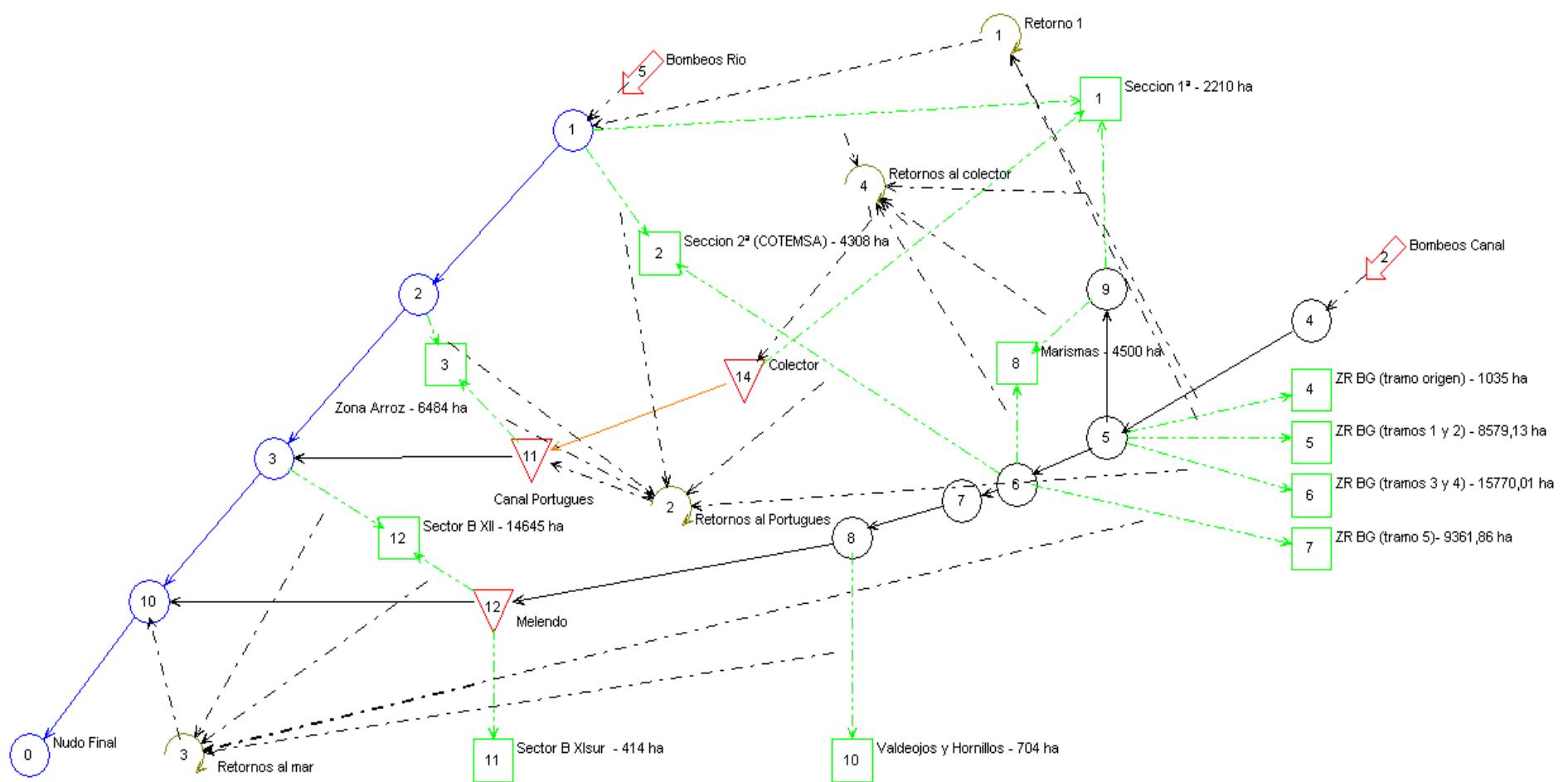
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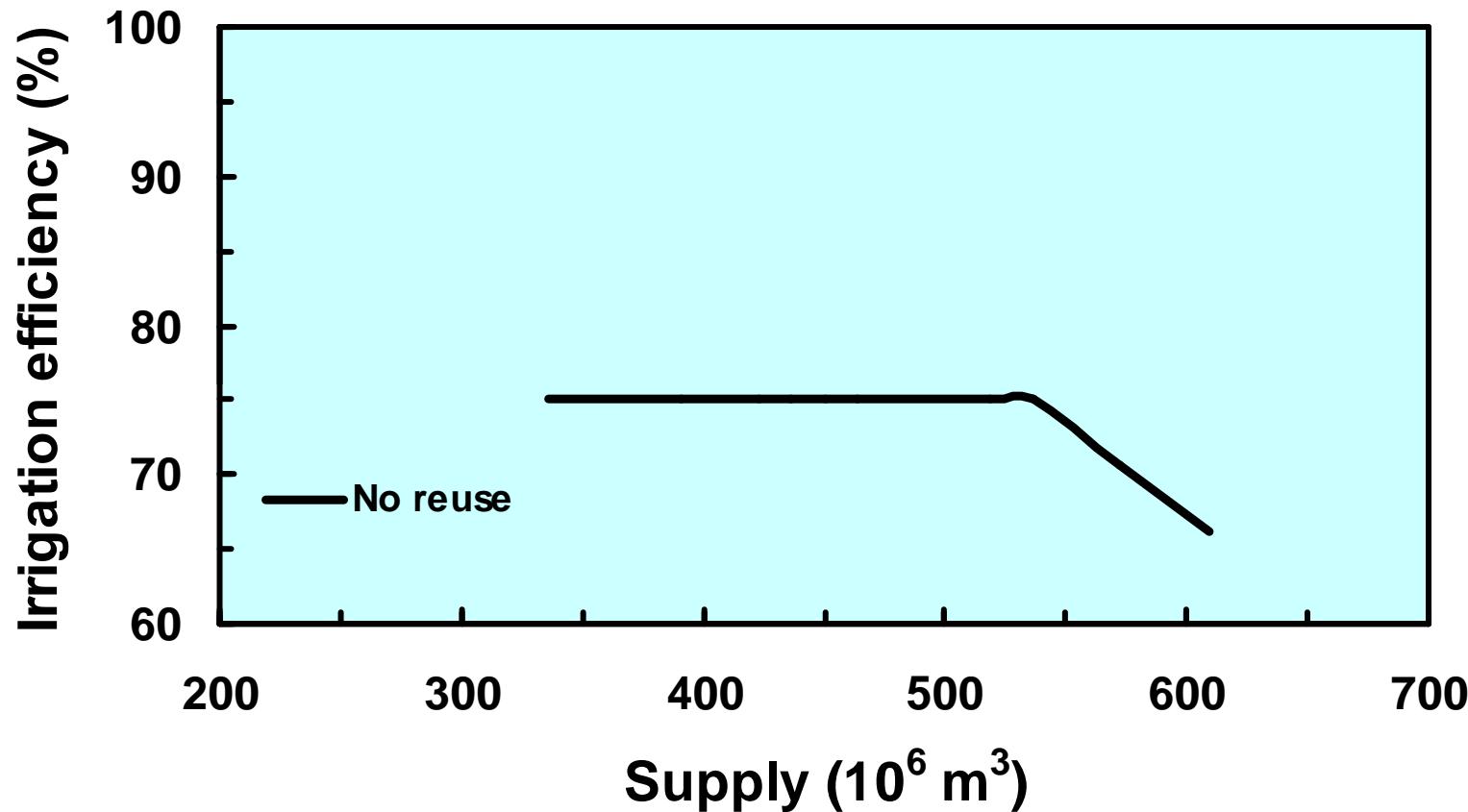
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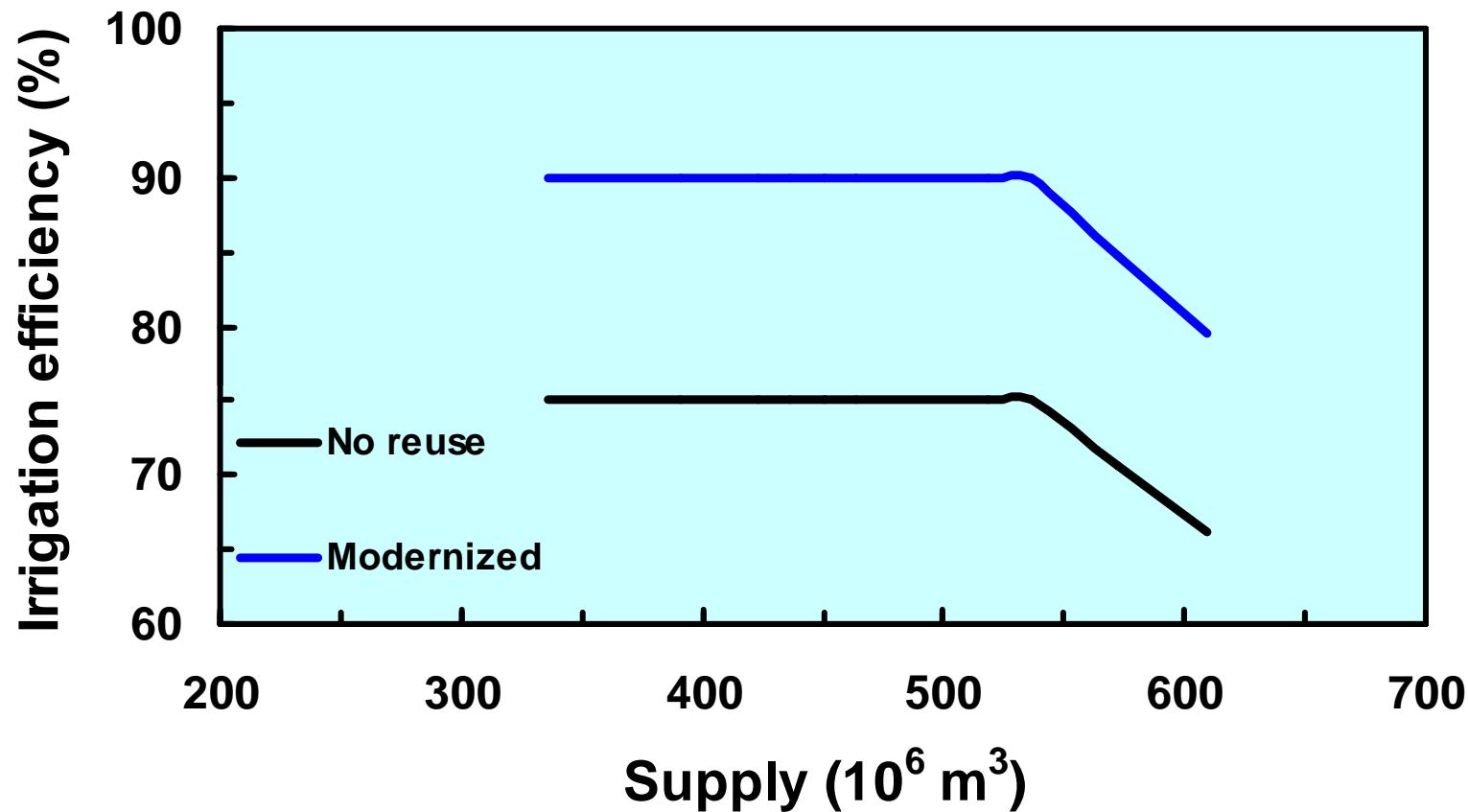
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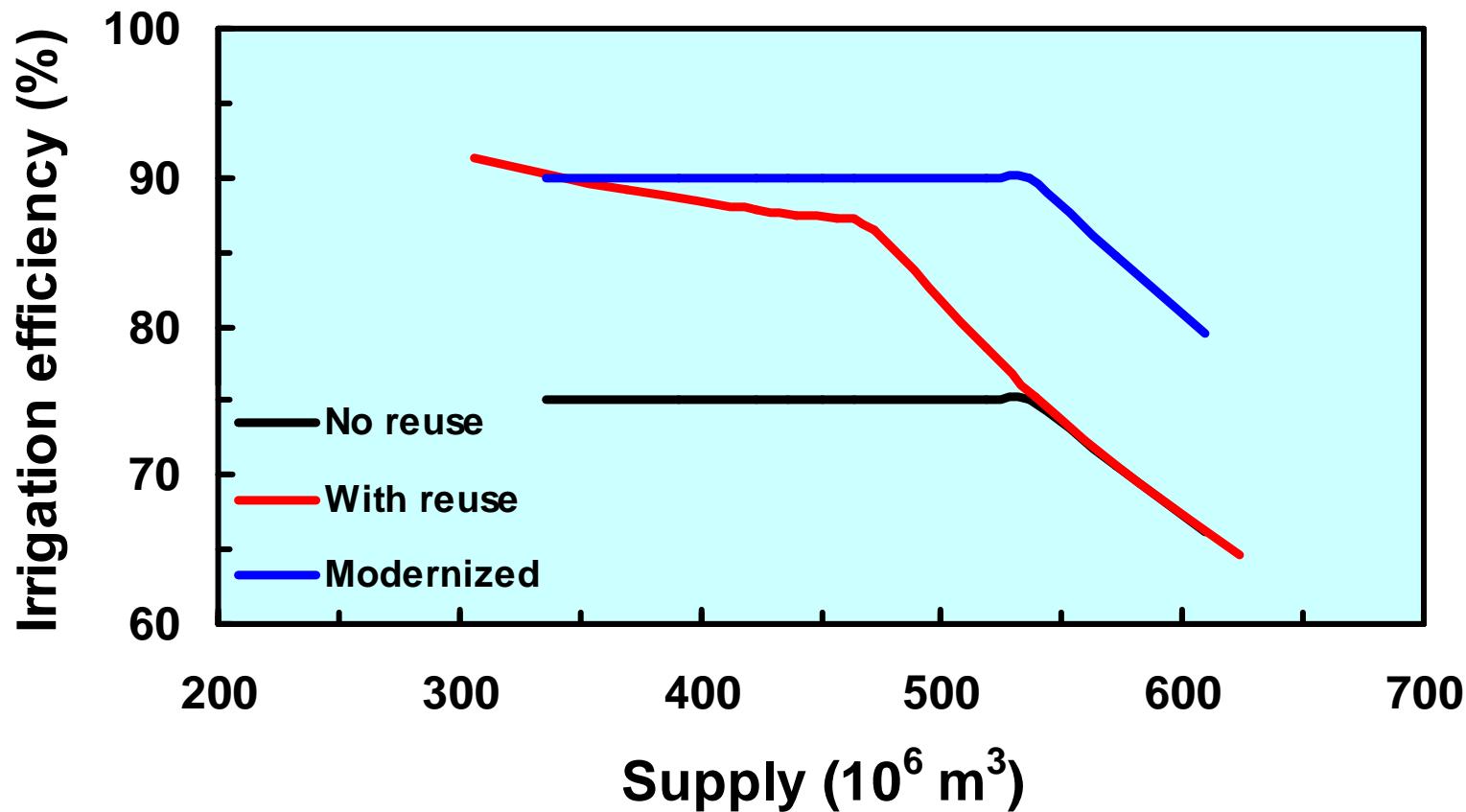
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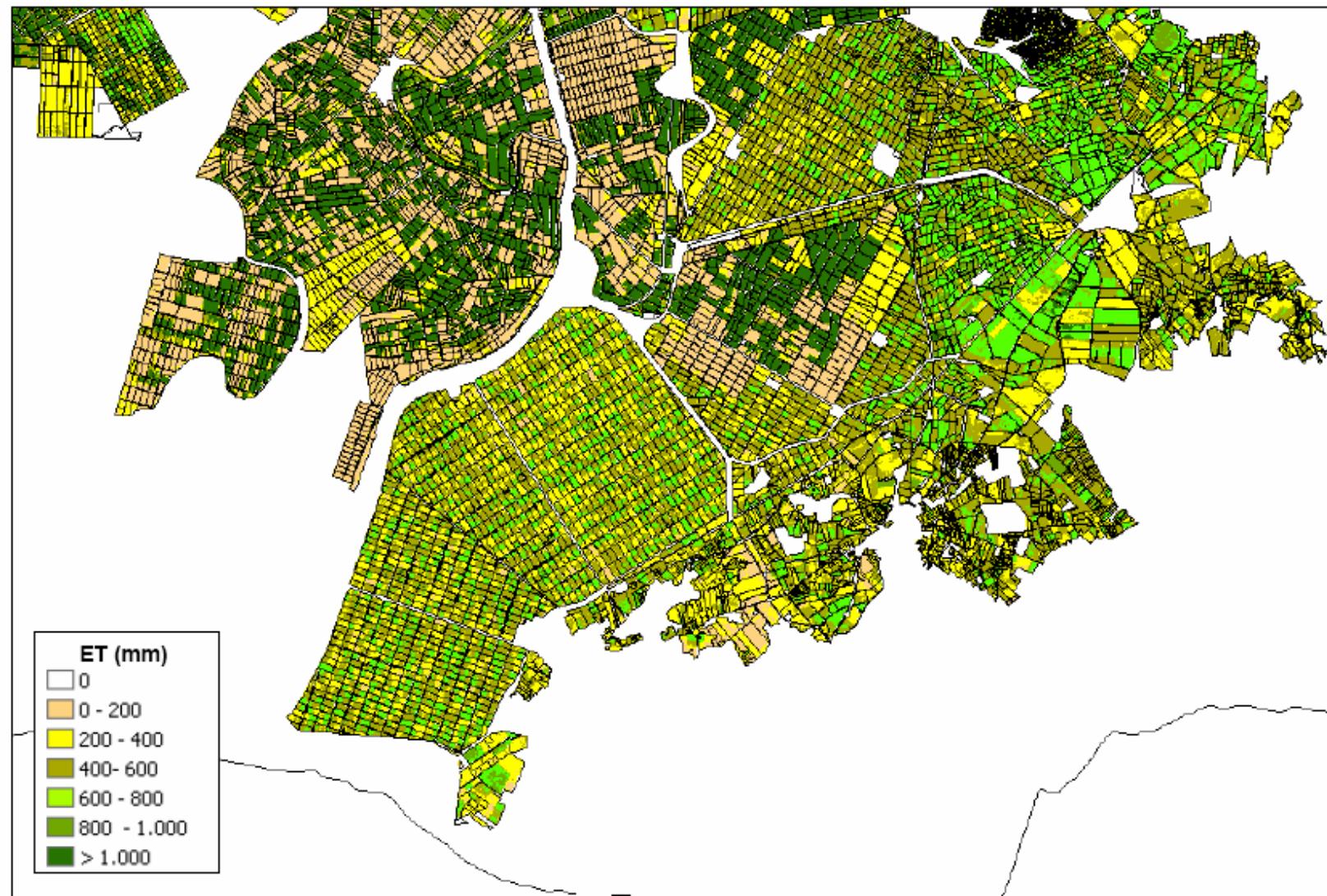
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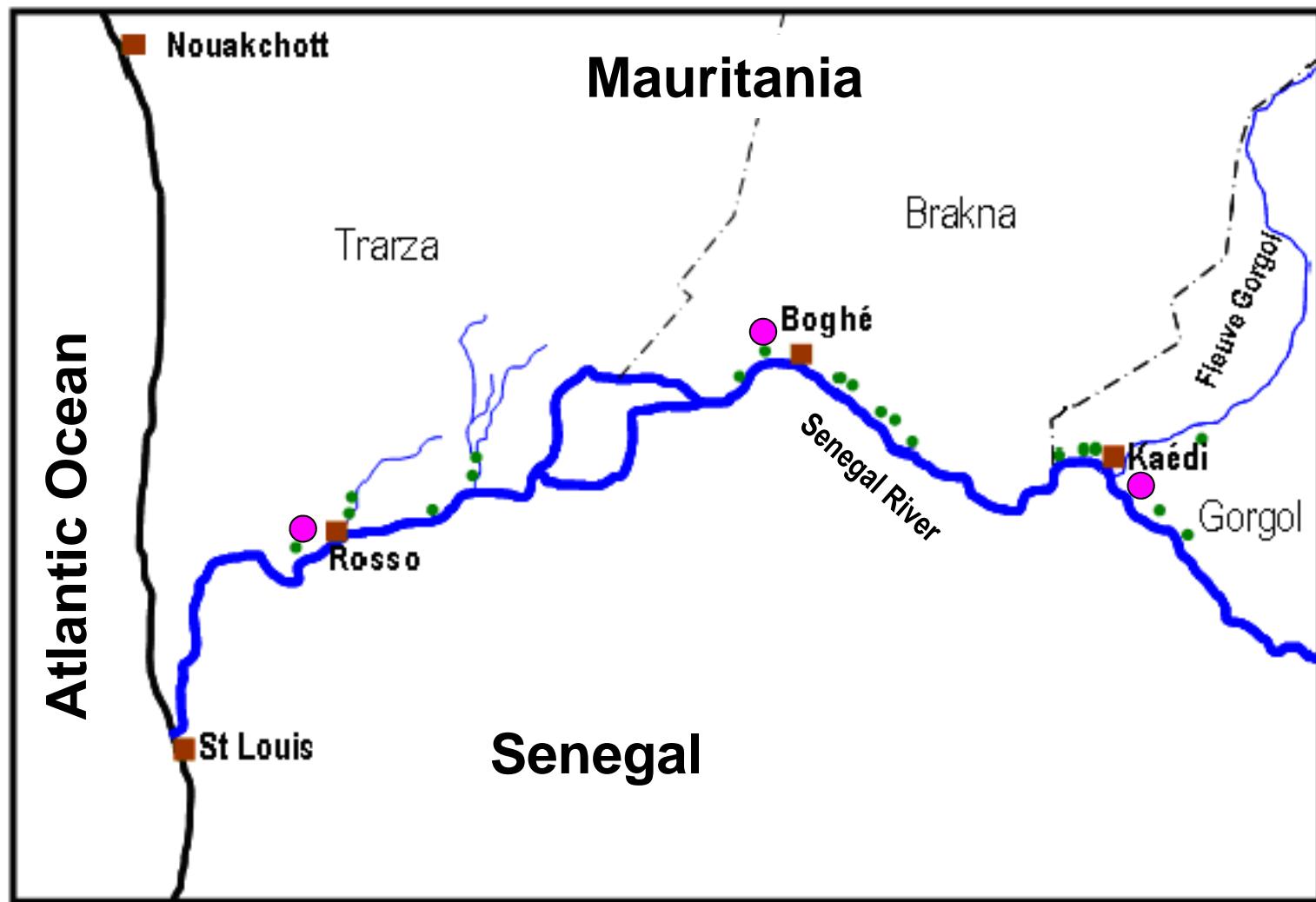
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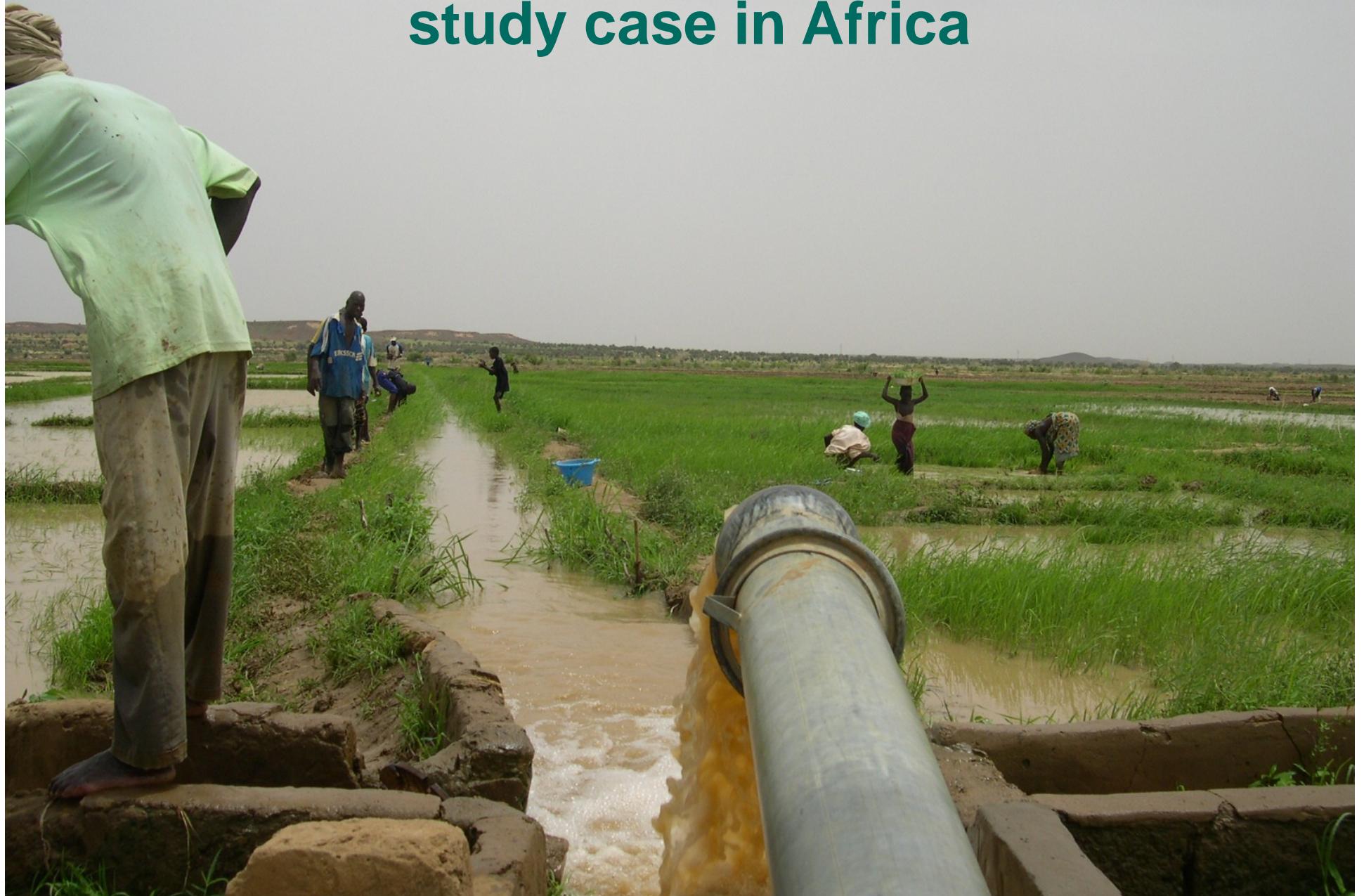
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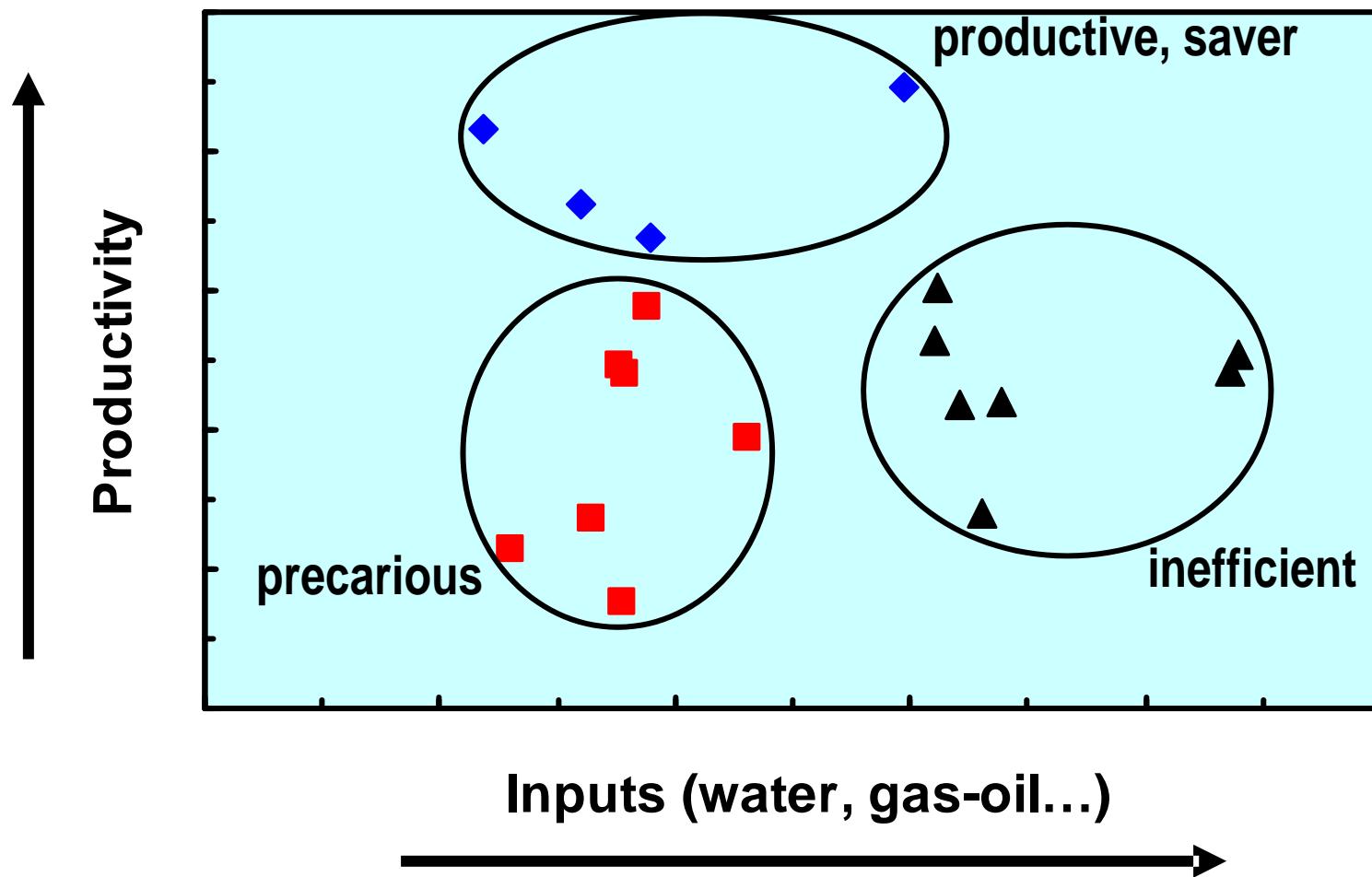


4. More simple, more complex: study case in Africa



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Benchmarking (cluster analysis)



4. More simple, more complex: study case in Africa

dégradation

new scheme

maintenance insufficient

system deterioration

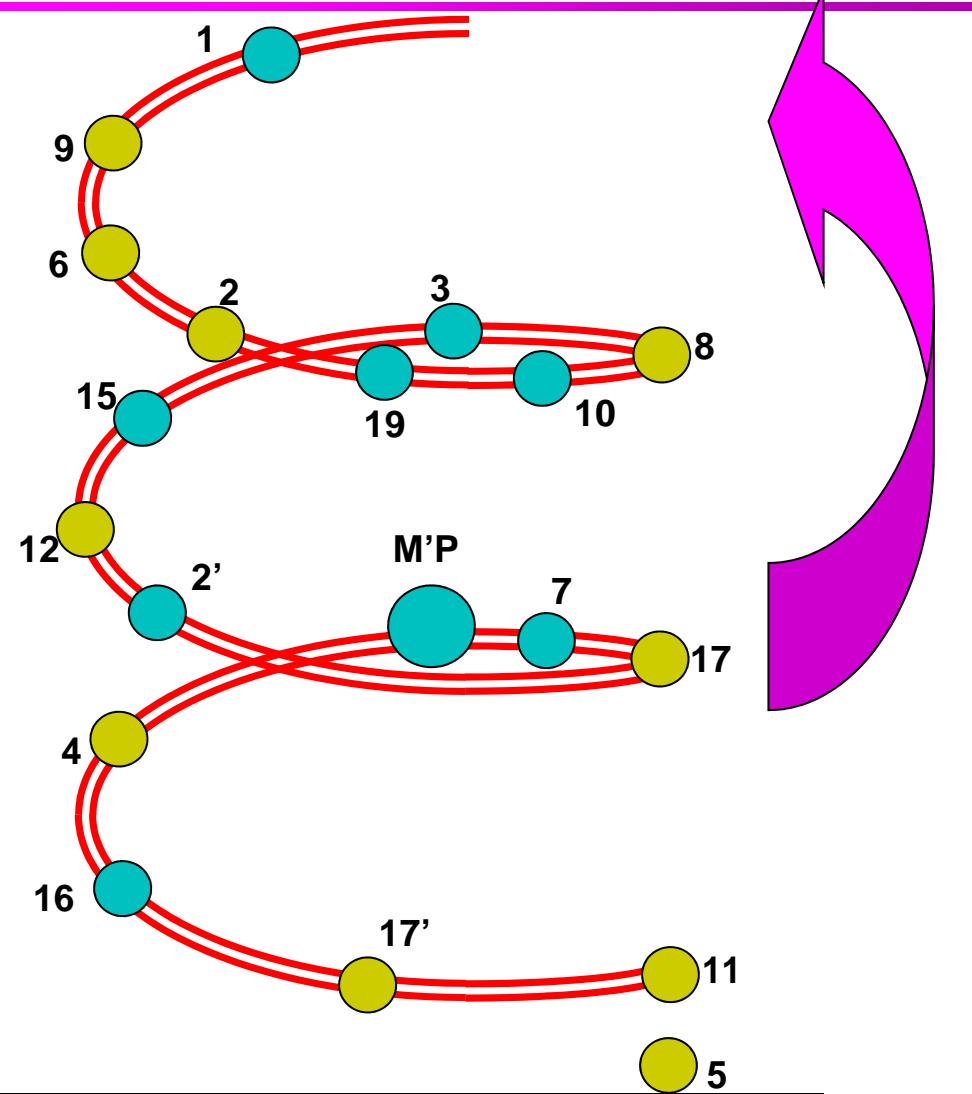
operation more difficult

weak service

farmers unsatisfied

poorer maintenance

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Obrigado!

