



TNO

Deltares
Enabling Delta Life

Social learning for dealing with climate change
An approach for developing feasible scenarios for future fresh water supply for agriculture in the Dutch Delta

Stephanie Janssen (Deltares), Saskia Hommes (Deltares), Geiske Bouma (TNO)

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Content of presentation

1. Introduction
Challenges for the future fresh water supply for agriculture in the Dutch south-western Delta
2. Concept:
Social learning as an approach
3. Practice
Social learning for future fresh water supply for agriculture in the Dutch south-western Delta
4. Lessons learned

Introduction – Concept – Practice – Lessons

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Agriculture in the Dutch South-Western Delta

The map displays the South-Western part of the Dutch delta, divided into several colored regions representing different agricultural areas. Labeled regions include Voorn, Goeree, Putten, Hoekse Waard, Biesbosch, Schouwen, Duiveland, Overflakkee, Noordwesthoek, Westelijke Langstraat, Noord-Beveland, Tholen, Walcheren, Zuid-Beveland, and Zeeuws-Vlaanderen. A small inset map in the top right corner shows the location of this region within the broader context of the Netherlands.

Source: Stuyt, L.C.P.M., P.J.T. v. Bakel, et al. (2005). "Transitie en toekomst van de deltalandbouw: indicatoren voor de ontwikkeling van de land- en tuinbouw in de Zuidwestelijke."

[Introduction](#) – [Concept](#) – [Practice](#) – [Lessons](#)

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Challenges for future fresh water supply South-Western Delta (I)

- Climate change
 - Excess of water
 - Shortage of water
 - Salinization
- Water Quality
 - Less fresh water available due to deterioration
- Water demand
 - Agriculture, drinking water and industry

[Introduction](#) – [Concept](#) – [Practice](#) – [Lessons](#)

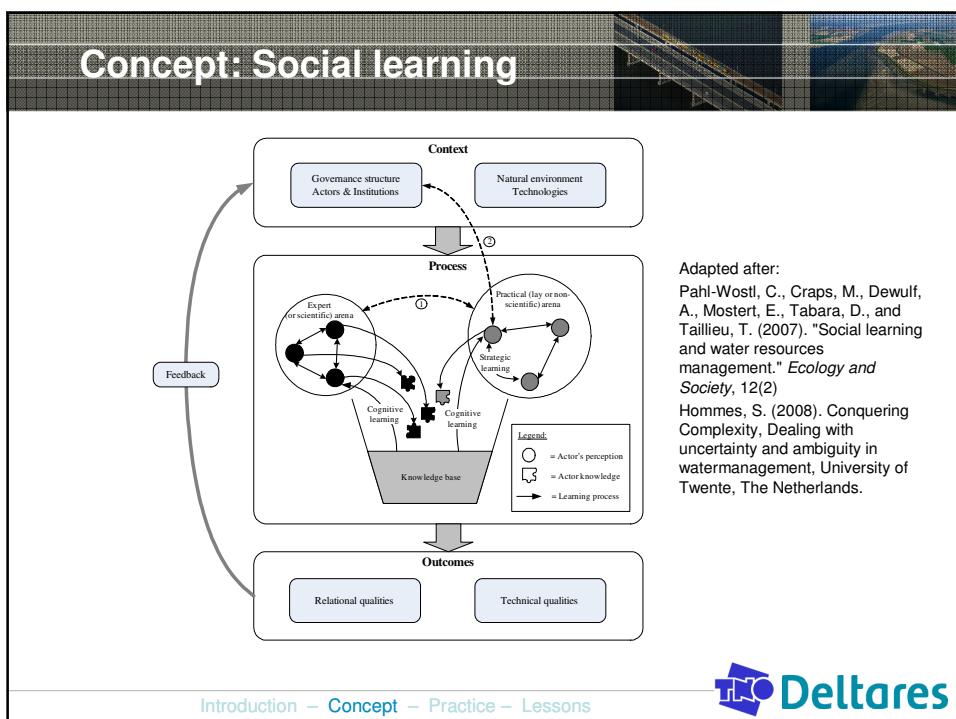
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Challenges for future fresh water supply South-Western Delta (II)

Complex decision making:

- Multiple parties involved: governments on regional, local and national level, farmers, water boards, nature organizations etc.
- Multiple stakes and interests
- Decision making on multiple levels

TNO Deltarès



Social learning in practice

Feasible and robust solutions for fresh water supply for agriculture in 2030 in the south-western Delta

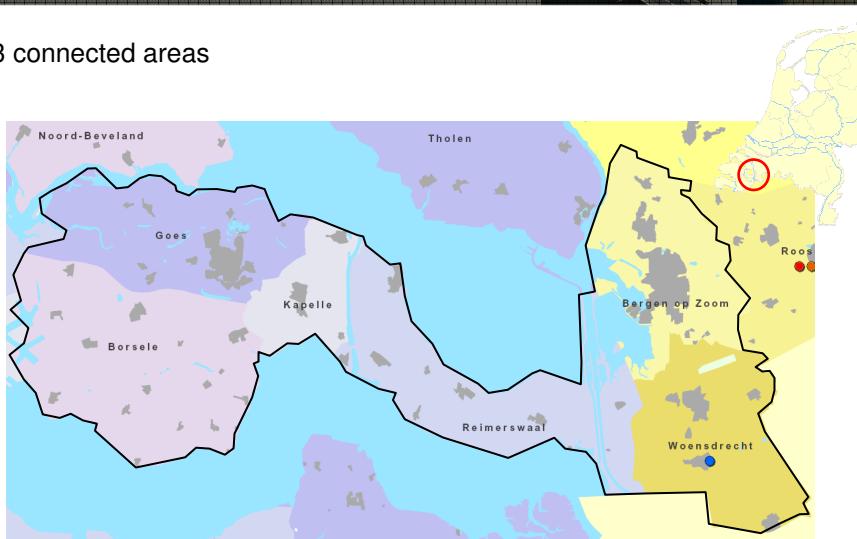
1. Tholen – St. Philipsland
2. West-Brabant
3. Zuidwest-Brabant, Reigersbergsche polder and Zuid-Beveland
4. Zuid-Holland Zuid

Introduction – Concept – Practice – Lessons

 TNO Deltires

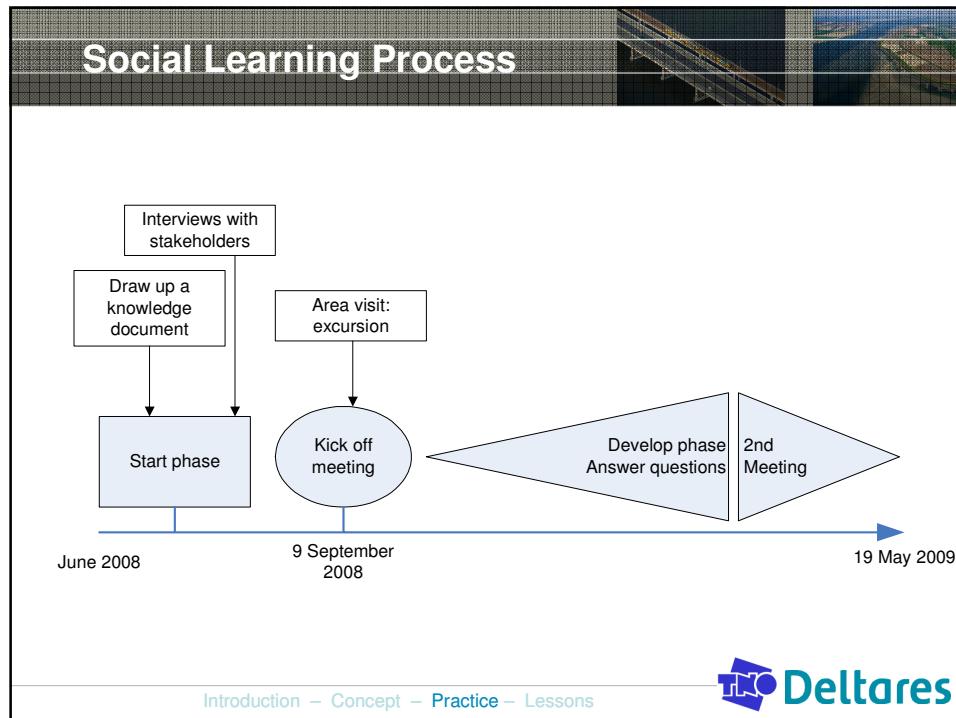
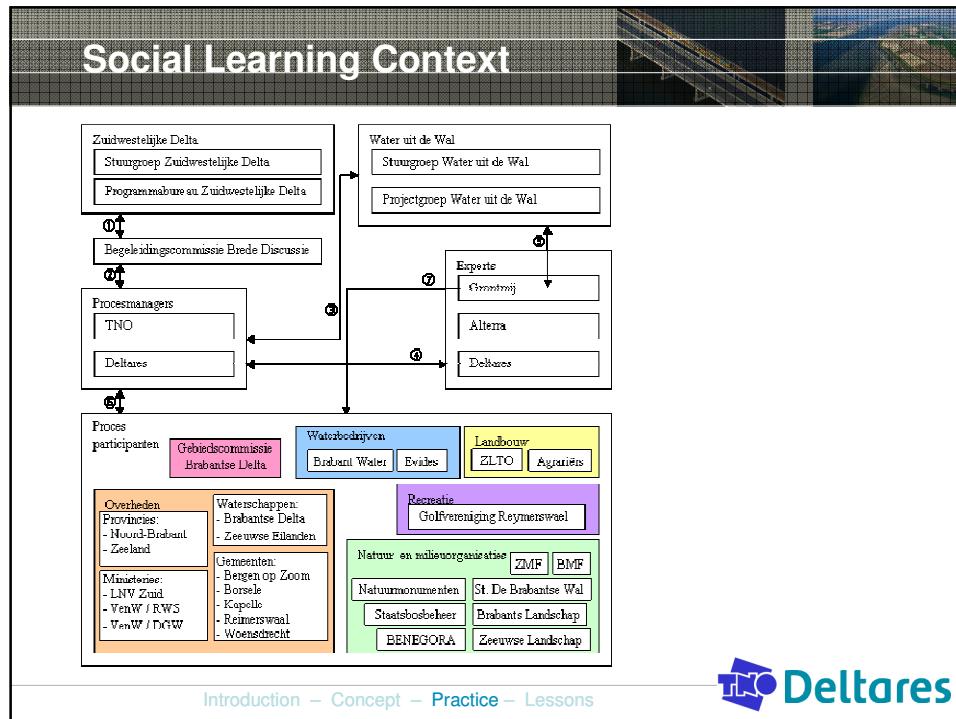
Social Learning Context

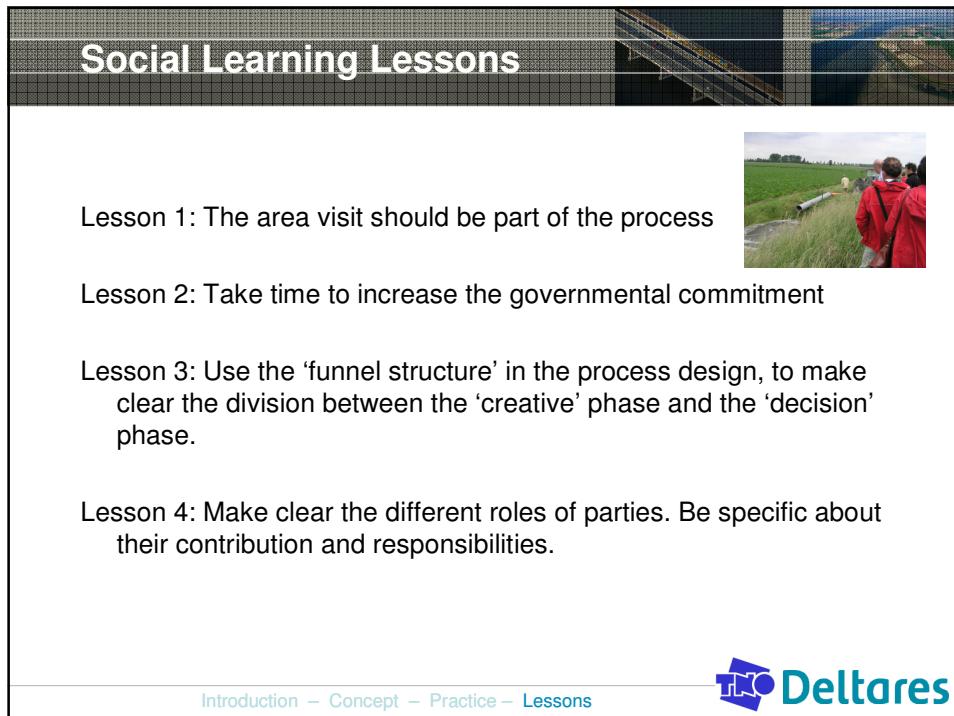
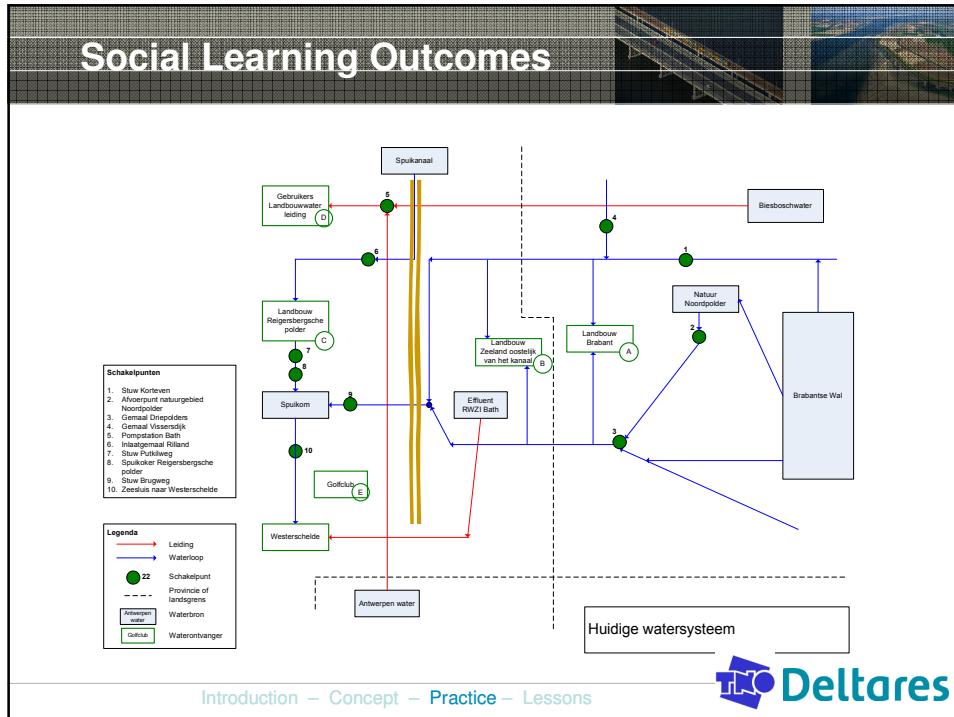
3 connected areas

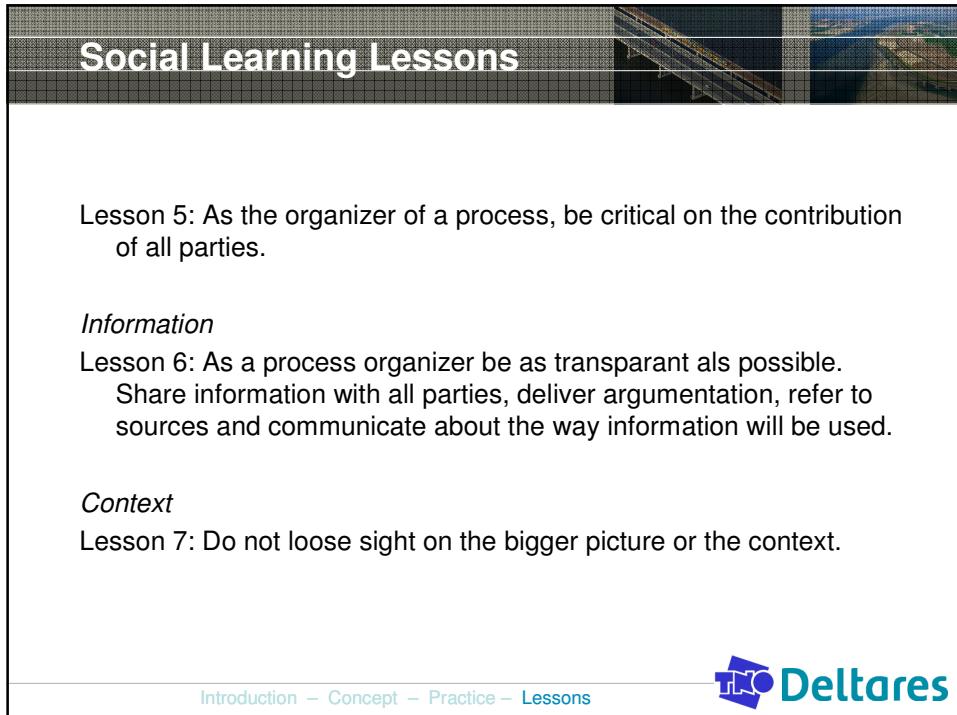


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Social Learning Lessons

Lesson 5: As the organizer of a process, be critical on the contribution of all parties.

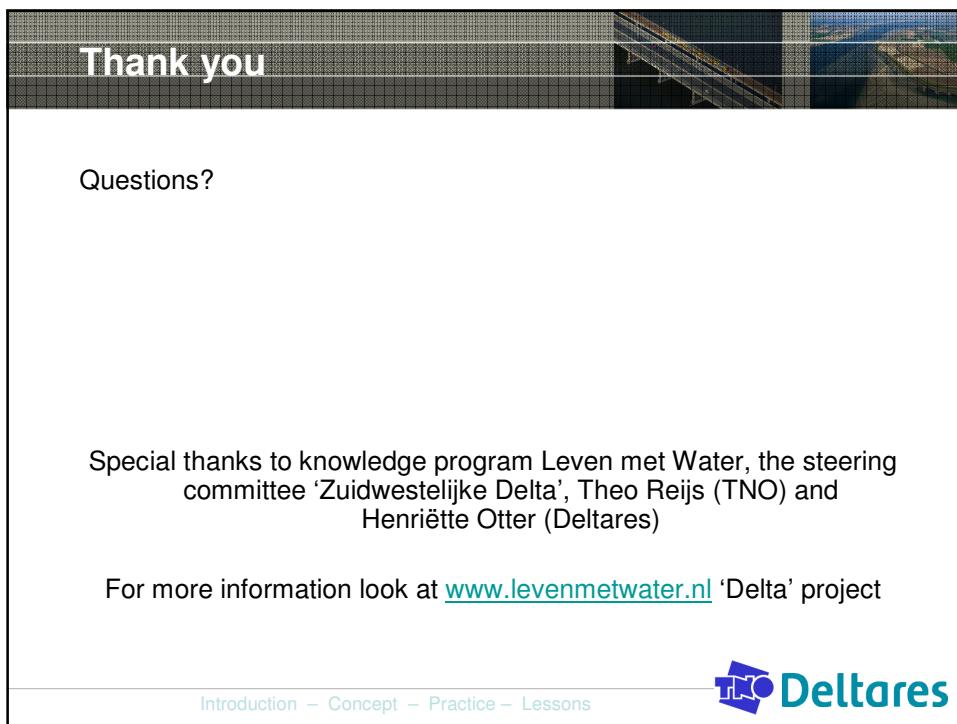
Information

Lesson 6: As a process organizer be as transparent as possible.
Share information with all parties, deliver argumentation, refer to sources and communicate about the way information will be used.

Context

Lesson 7: Do not lose sight on the bigger picture or the context.

Introduction – Concept – Practice – **Lessons** 



Thank you

Questions?

Special thanks to knowledge program Leven met Water, the steering committee 'Zuidwestelijke Delta', Theo Reijs (TNO) and Henriëtte Otter (Deltarès)

For more information look at www.levenmetwater.nl 'Delta' project

Introduction – Concept – Practice – **Lessons** 

Social Learning Outcomes

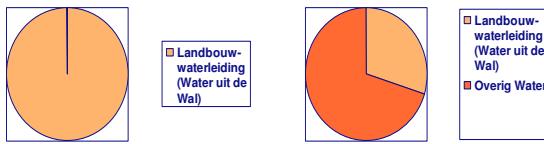
- Building blocks for fresh water supply
- Scenario's for fresh water distribution
- Protocol for fresh water distribution
- Content of solutions was supported by parties

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Social Learning Outcomes

Zuid-Beveland – Scenario's 2030



Scenario	Landbouwwaterleiding (Water uit de Wal)	Overig Water
2030 (Left Chart)	100%	0%
2030 (Right Chart)	30%	70%

- 2030
- Gemiddeld (nat/droog) seizoen
- Extra water t.o.v. Huidige situatie a.g.v. landbouwontwikkelingen, neerslagtekort en verzilting
- Start seizoen:bekkens gevuld

100% Landbouwwaterleiding (Water uit de Wal)

- 2030
- 10% Droog seizoen
- Extra water t.o.v. Huidige situatie a.g.v. landbouwontwikkelingen, neerslagtekort en verzilting
- Start seizoen: bekvens gevuld

30% Landbouwwaterleiding (Water uit de Wal)
70% Overig Water

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Social learning in practice

Feasible and robust solutions for fresh water supply for agriculture 2030:

Shared insight and agreement on one or more supported scenario's in the area.

By means of a **participatory process**, all different stakeholders together aim for good and supported decisions.

The **scenario's are tested** for effectiveness, feasibility, affordability and possible side effects. The solutions will be related to other areas in the Delta.

Introduction – Concept – Practice – Lessons

