INTEGRATION OF CLIMATE CHANGE ADAPTATION, ENERGYE TRANSITION AND HEALTHY URBANIZATION

WEBINAR FOR THE SUSTAINABLE FINANCE WORKING GROUP OF FUTURE EARTH

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Message of this webinar

- There’s no way to finance climate change adaptation without an idea of the business case of this adaptation.
- This business case is always integrated, for example with energy transition and healthy urbanization.
- For investors and funders it can be hard to handle an integrated business case, so it has to be deconstructed before they step in.

This presentation

1. Problem
2. Analysis
3. The integrated business case
4. Finance
5. Conclusion

1. Problem

1.1 Stockholm Resilience Centre (SRC)

- The June 28 Newsletter of the SRC started with an article on why sustainable finance risks undermining its own efforts:
  - https://mailchi.mp/stockholmresilience/newsletter-february-586227?e=b2b1bfe105

- The main answer is a disconnect between the short-term risks, that especially ESG's point out, and the long-term risks of climate change and large-scale environmental change.

- A remedy that the authors suggest is to develop impact accounting systems that account for actual impact.

1.2 …. another risk

- Impact accounting systems that account for actual impact; who wouldn't want those?
- Although the authors have a point of course, their approach has a risk also: to get stuck in endless accounting, like looking at all SDG's and the interference between these.
- Interesting is how many funds regarding Nature Based Solutions (NBS) have found a way out, while working with actual impact.

2. Analysis

2.1 Impact never stands alone

- The essence of NBS is that it accounts for a planned result, like flood defense, and at the same time for both positive and negative externalities (and internalities).
- Positive externalities of nature as a flood defense are for instance biodiversity and recreation.
- Negative externalities of NBS itself are low, except for space use, whereas NBS does mitigate negative externalities of others, like urbanization and of course climate change.

2.2 Short term accounting revisited

- NBS ‘do’ short-term accounting, looking at actual impact of the planned result and at externalities.
- However, NBS don’t take the short term risks the authors in het SRC’s Newsletter warn for.
- NBS don’t because they take long term externalities into account, and NBS manage to make these part of projects that are beneficial in the short and long term.

2.3 Not everything is NBS

- Of course, working on sustainable urban and rural environments does not only regard the green infrastructures of NBS, but also blue and grey infrastructures.
- What can we learn from NBS when it comes to other kinds of investment, in blue and grey infrastructures?
- Two lessons: 1) the integrated business case, and 2) finance thereof.

3. The integrated business case

Hondsbossche Seawall until 2012

Hondsbossche Seawall since 2015

Pol Education and Writing

3.1 Hondsbossche Seawall

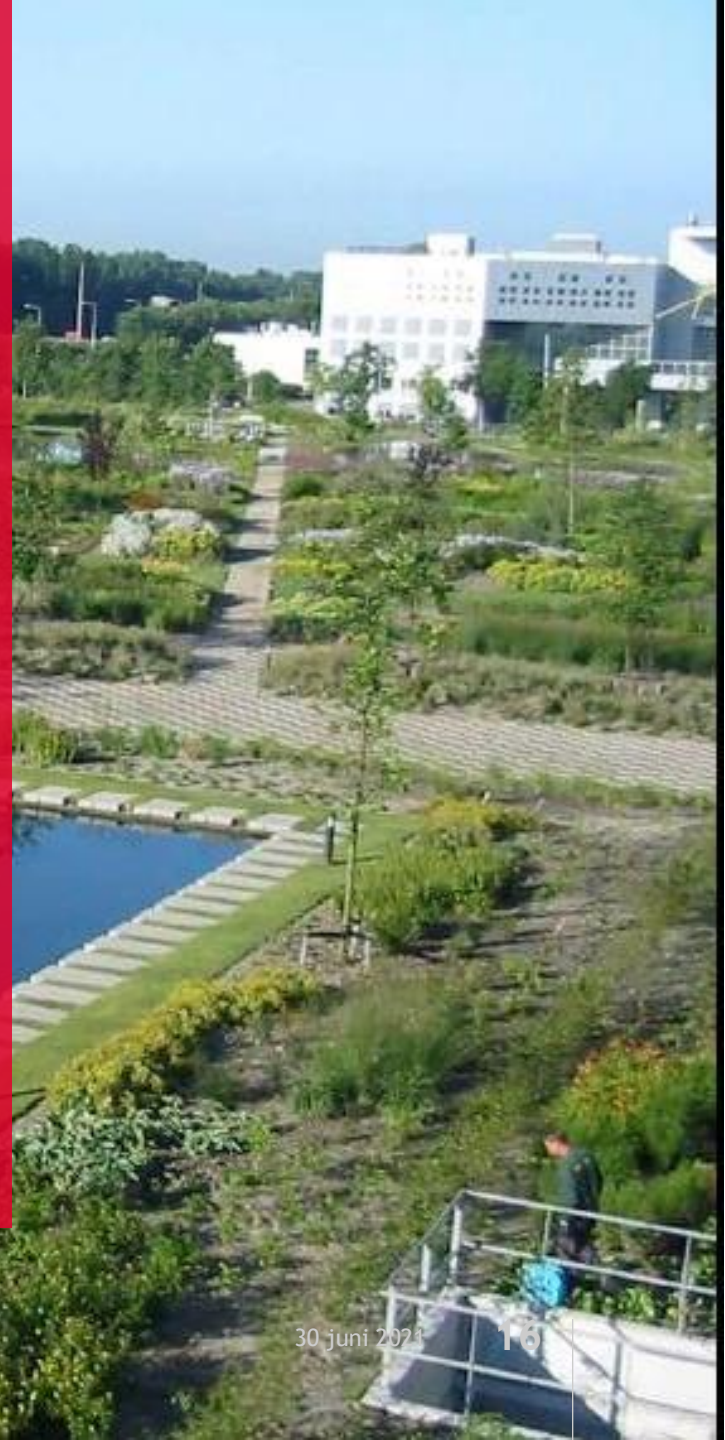
- All Dutch school children learn about the Hondsbossche Seawall, but this lesson has changed since 2015.
- Instead of a dike strengthened with stone, it’s now a nature reserve, recreation area, and agricultural area.
- The costs of flood defense have gone down, whereas the effect of flood defense has gone up, as have the benefits of nature, recreation and agriculture.

3.2 The business case of integration

- Integration is the combination of means.
- Combination of means brings costs down for each involved party, since all parties share the costs of the combination.
- Most combinations also increase benefits, since the combined means have more impact on the involved goals.
- Besides the planned impact, this consists of positive and negative externalities, and mitigation of negative externalities.

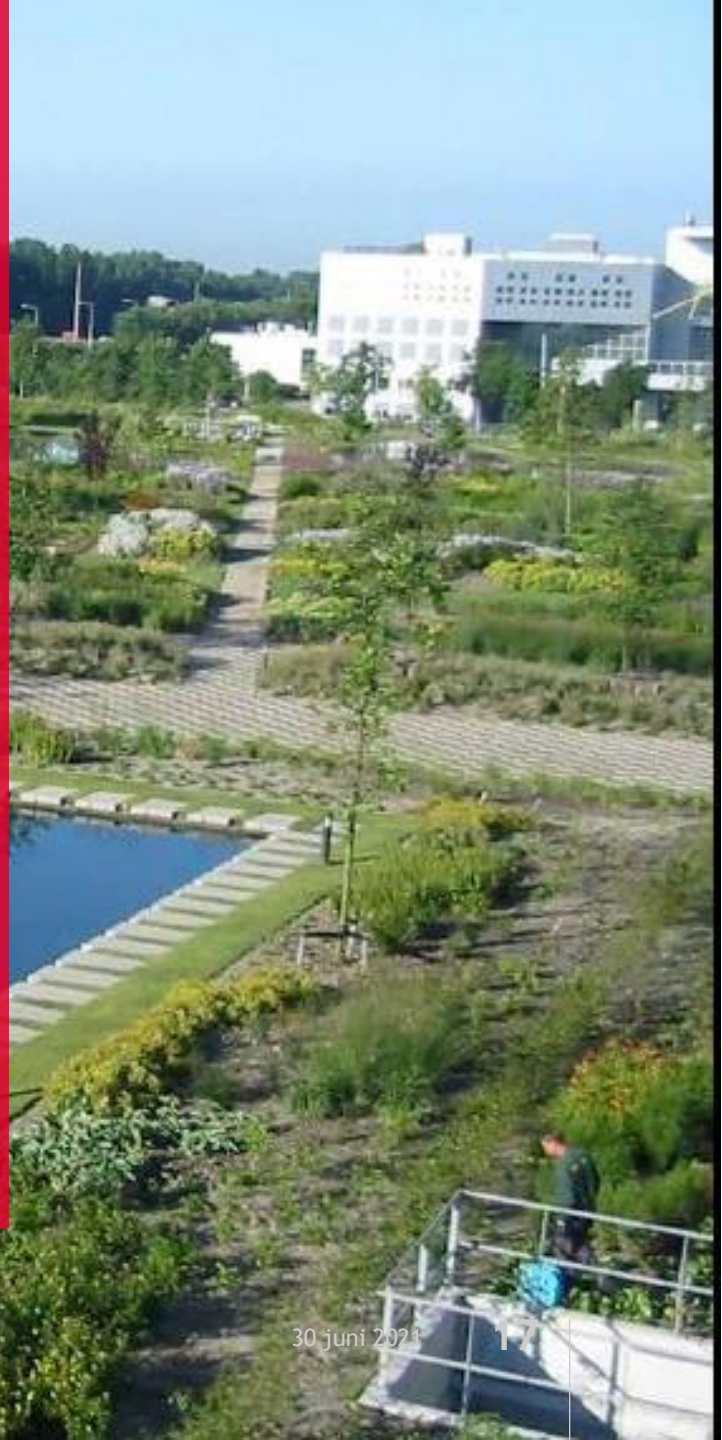
3.3 The impact of a green roof

- Less total costs of ownership than those of a black roof.
- The planned impact often is to store water.
- Positive externalities are a.o. biodiversity and clean air.
- There aren’t many negative externalities, whereas other negative externalities like noise and heat are mitigated.



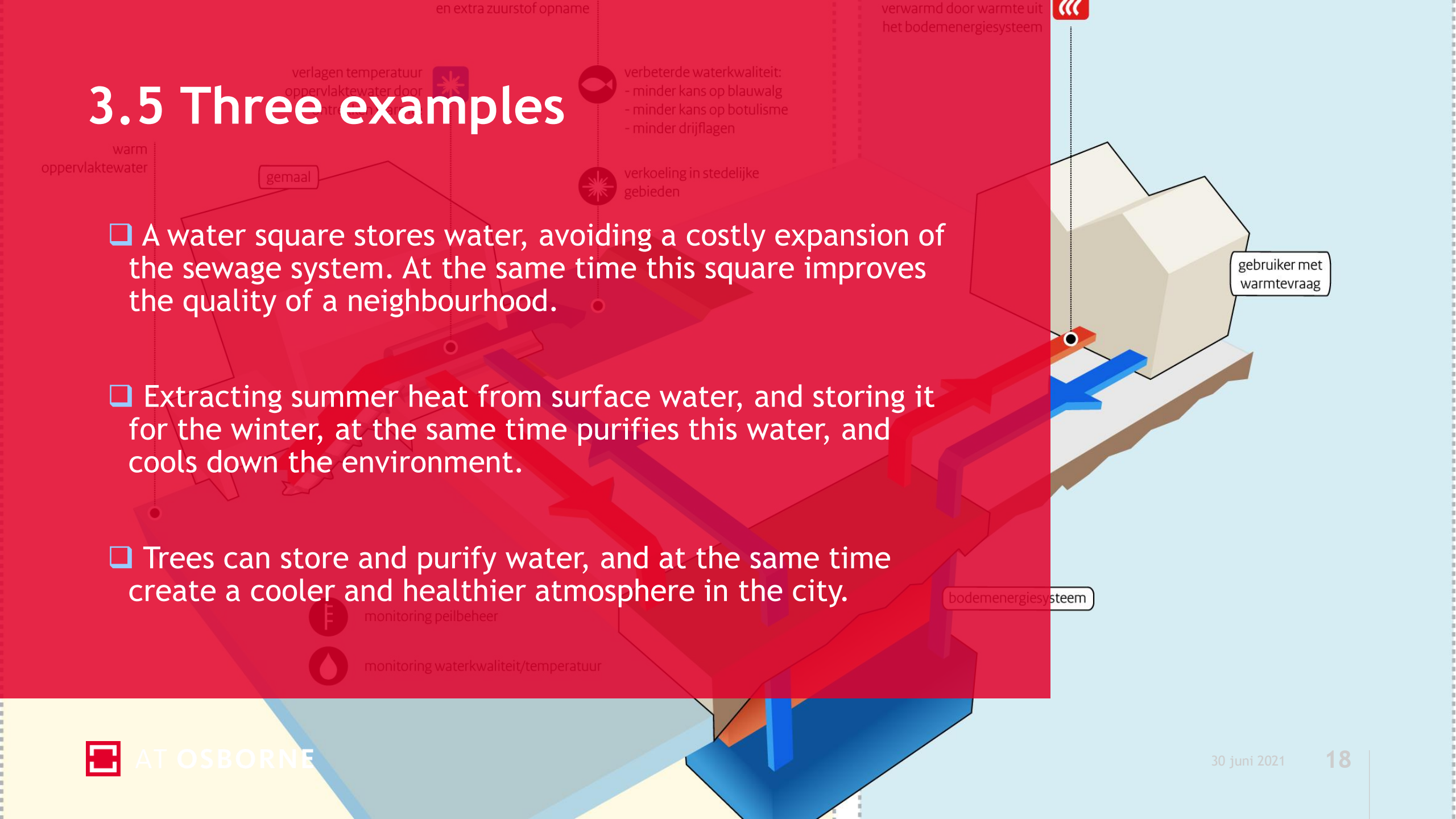
3.4 Analysis of the green roof

- The green roof can be analysed as a combination of green, blue and grey infrastructures.
- As a combination these infrastructures costs less and have more impact than other, stand alone infrastructures.
- This green roof is emblematic for other integrated approaches to problems like climate change, energy transition, healthy urbanization and many more.



3.5 Three examples

- A water square stores water, avoiding a costly expansion of the sewage system. At the same time this square improves the quality of a neighbourhood.
- Extracting summer heat from surface water, and storing it for the winter, at the same time purifies this water, and cools down the environment.
- Trees can store and purify water, and at the same time create a cooler and healthier atmosphere in the city.



3.6 Three examples, analysis

- All three examples combine two or three from the set green, blue and grey infrastructure
- New design of infrastructures, combining grey, green and blue infrastructures, can have significant impact on climate change adaptation, energy transition, healthy urbanization, and more.
- As explained before, costs go down and impact goes up.
- Finally, what does this mean for finance?

4. Finance

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4.1 Finance of integrated solutions

- The means change, not the goals.
- Sharing costs for means is done more often.
- Being accountable for one goal is preferable for finance.
- When the means change, and not the goals, it’s possible to ‘deconstruct’ the business case for investors and other funders.

4.2 Deconstruction

- A water storage area is also used for water purification, nature conservation, and recreation.
- Again a combination of infrastructures, but these four goals don’t change; for instance the water company is responsible for pure water like it always was.
- The board of the water company sees a new infrastructure, but the same goal as ever, pure water.

4.3 Impact accounting

- The authors in the SRC Newsletter look for accounting systems that account for actual impact.
- Changing, or better integrating the means, here infrastructures, results in actual impact.
- At the same time the goals stay the same, so impact can be measured as done before.
- Results can be compared, and no change is needed in the governance of accountability, financial and political.

4.4 Back to NBS

- Many funds are in place to finance NBS.
- Fund managers are not only used to fund more than one impact; they also know how to involve managers of other funds, interested in one or two of these impacts, goals (from IISD report).
- This regards only NBS i.e. green infrastructure, but what these managers do can be done of course when working with other infrastructures.

4.5 How can various funds finance integration?

- The manager of a fund can make an offer to the manager of another fund, that this other manager can't refuse, when costs go down and impact goes up.

- If both can prove to their board that financing a project together gives better results for each, than it's a deal.

- Necessary is to have a clear picture that the impact you have to make, i.e. the goal you have to achieve, is still the same.

5 Conclusion

- Finance of climate change adaptation has to start with a clear picture of the business case of projects; this business case is integrated.
- Deconstructing this business case shows actual impact, and makes investment and funding accountable.
- Without this view on the business case there's a disconnect between project and finance; NBS teaches to bridge this.