



## **Nutrient input bonds: Impact-based financing – the Archipelago Sea example**

**Pekka Salminen, Centre for Economic Development, Transport and the Environment (Ely-keskus), Southwest Finland**

## Connection to the HELCOM Baltic Sea Action Plan (BSAP)

### Segment

Horizontal topics: Hot spots

### BSAP Actions

- HT23 Renew the effort to eliminate remaining hot spots identified by the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP, 1992) by 2025.
- HT25 Prioritize inclusion of HELCOM hot spots into investment programmes (national or international) or establish alternative financial mechanisms by 2027 at the latest to eliminate hot spots from HELCOM list



## **Climate Change, Loss of Biodiversity, Eutrophication of the Baltic Sea**

**Systemic changes are expensive**

**Public sector's gap on economic sustainability is increasing**

**→ Need to find new funding mechanisms, that:**

- Increase cost-effectiveness of public financing**
- Mobilize private investment capital**

## Impact funding

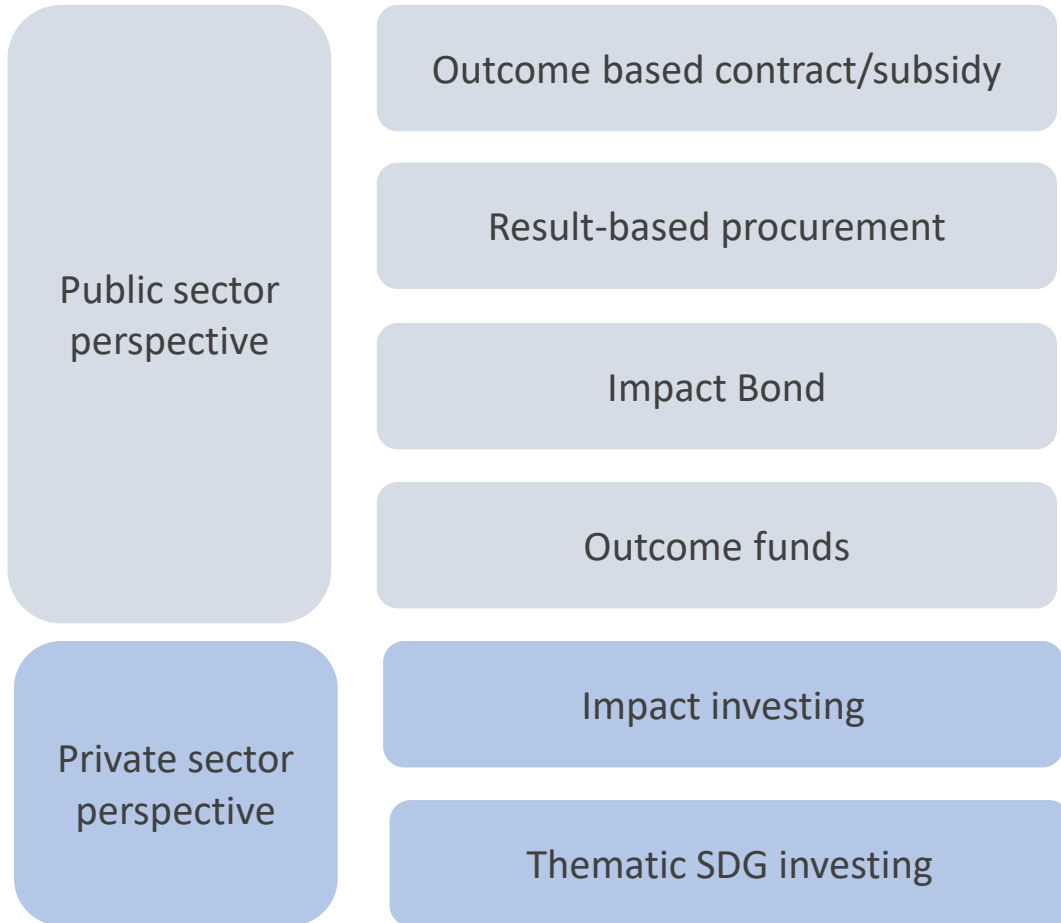
From procurement of measures and activities...

... to procurement of outcomes and impacts.

→ **Could the bad ecological state of the Sea be target for investments insted of being a problem?**

## Moving the focus from inputs towards impacts

### Perspectives and approaches



**PILOT 1: Nutrient recycling subsidy 2023-2025 for biogas plants that use manure and refines the digested manure to fertilising products.**  
**PILOT 2: Under negotiations - same as pilot 1, but as an technology independent version.**

- **Involvement of public sector can vary.**
  - **Systemic change → Free market economy**
- **Side benefits should be recognized:**
  - **Impact that we want:** Reduced P input
  - **Side benefits:** biodiversity, increased possibilities for aquaculture, grown potential for tourism, etc.



## A number of international initiatives launched and/or on-going

(below selected examples, covered in the Finnish study)

### Environmental Impact Bonds

- Chesapeake Bay Environmental Impact Bond Hampton (US)
- Chesapeake Bay Environmental Impact Bond Baltimore (US)
- Forest Resilience Bond (US)

### Public loan fund

- Sustainable Agriculture Invest Fund (Netherlands)

### Private equity funds

- Murray-Darling Basin Balanced Water Fund (Australia)
- Tiverton Agriculture Impact Fund (Australia)
- S-Bank Regenerative Agriculture (Finland)
- AgFunder Funds (US)

### Outcomes-based contract

- Peaks to People Water Fund - Sylvan Dale Guest Ranch (philatropic)

### Overall status

- Impact based investing approaches still rather few, however interest is rapidly increasing internationally.
- Social Impact Bonds have gained much more attention to date, with Finland being among the forerunners.
- Piloting on-going and initial experiences being gained among other in the US, Australia and the Netherlands.

# Case: Chesapeake Bay Environmental Impact Bonds (EIB)

**Summary:** Using Environmental Impact Bonds to Finance Green Stormwater Infrastructure in the Chesapeake Bay Watershed:

**Target area:** Chesapeake Bay, Hampton and Baltimore, USA

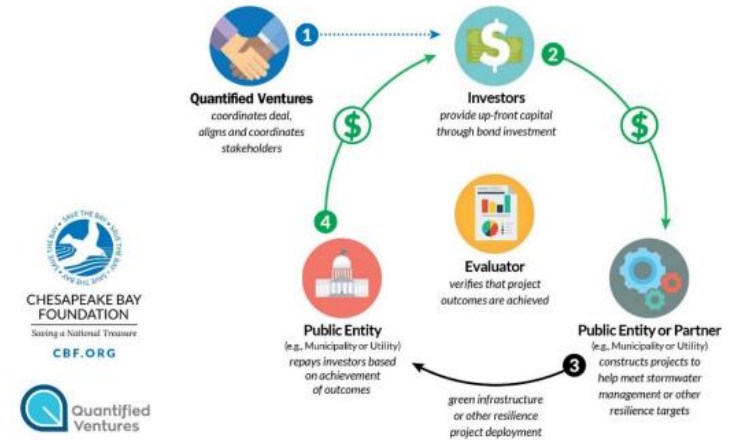
**Primary objective:** To improve flood control and control of water runoff to Chesapeake Bay hence reduce phosphorus; nitrogen and sediment flows to the bay

**Period:** started 2017, on-going

**Approach:** The City of Hampton closed on Virginia’s first EIB d in 2020, a creative outcomes-based tool to finance \$12 million in nature-based solutions to localized flooding as part of its Resilient Hampton initiative.

The bonds allow investors to support innovative projects with measurable and reportable benefits for communities and the environment and ensure the outcomes of the projects are reported back to the investors. The Chesapeake Bay Foundation and Quantified Ventures (see picture to the right), an outcomes-based capital firm, provided technical services with respect to developing the project, designing the outcome metric, impact measurement, and disclosure aspects of the EIB.

## The Pay-For-Success Model: ENVIRONMENTAL IMPACT BONDS



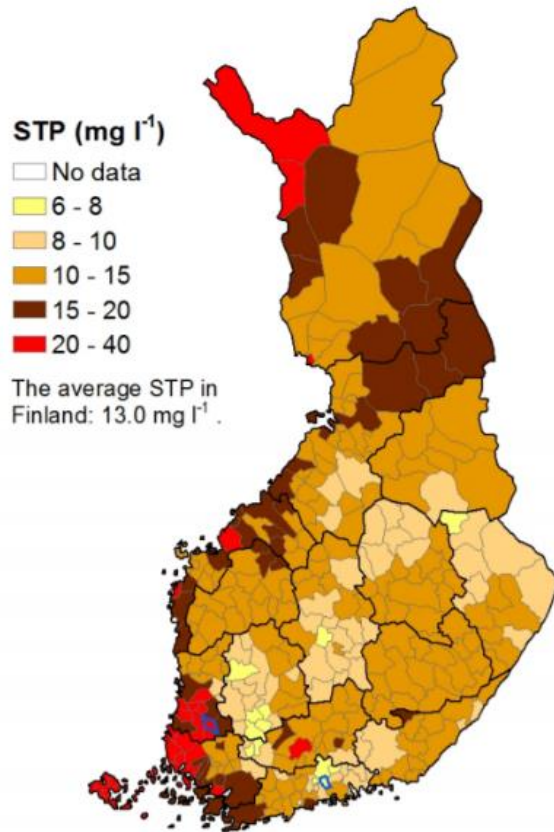
© Chesapeake Bay Foundation, Inc.



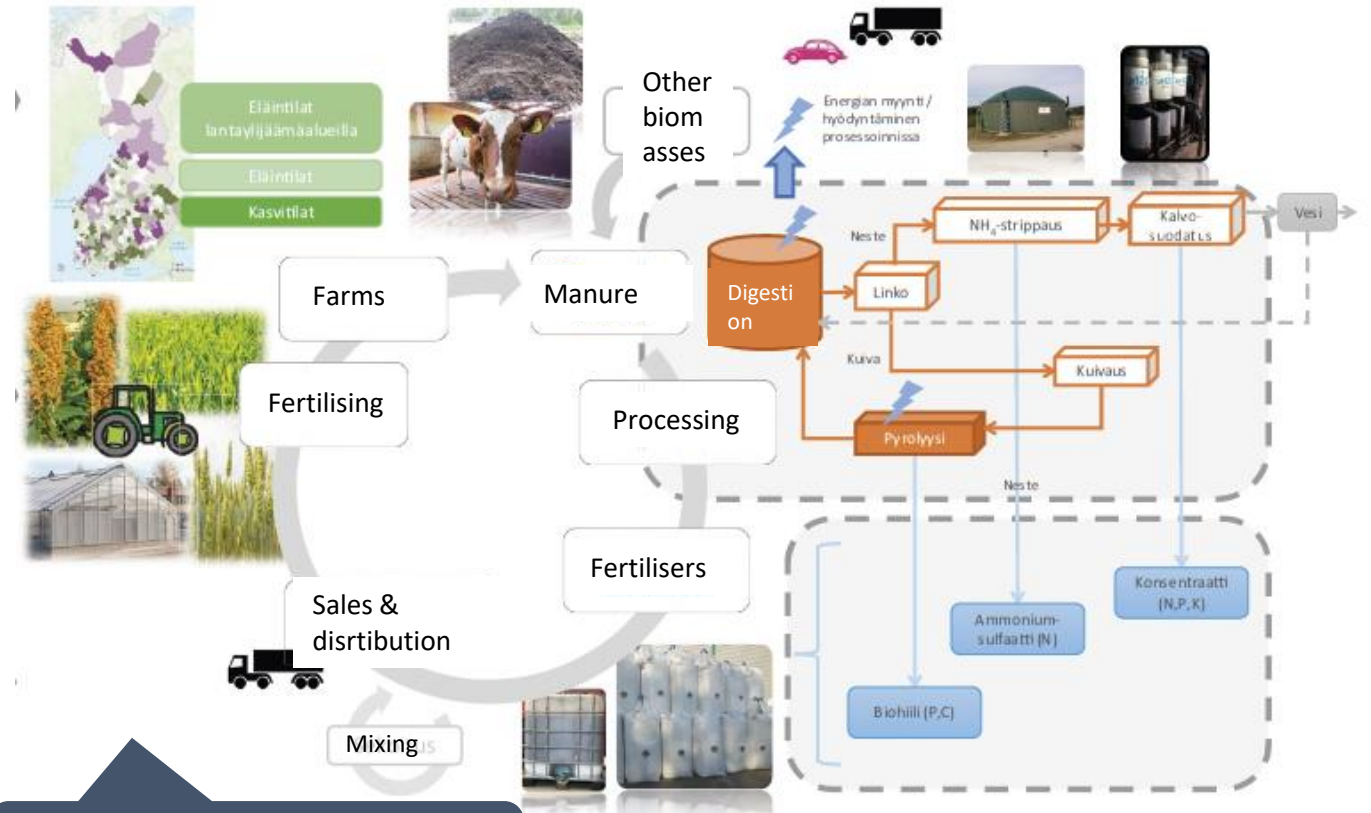
Big Bethel Blueway

# Case: "Nutrient – EIB (Nutrient impact bond) " aims to mobilise finance for more sustainable distribution of manure

## P-values in Finnish municipalities



## Potential solution



Planning initiated already 2017

Ylivainio, K., Sarvi, M., Lemola, R., Uusitalo, R. ja Turtola, E. (2014). Regional P stocks in soil and in animal manure as compared to P requirement of plants in Finland. MTT report 124

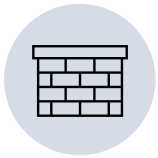
Luostarinen, S., Tampio, E., Berlin, T., Grönroos, J., Kauppila, J., Koikkalainen, K., Niskanen, O., Rasa, K., Salo, T., Turtola, E., Valve, H. ja Ylivainio, K. (2019). Keinoja orgaanisten lannoitevalmisteiden käytön edistämiseen. Maa- ja metsätalousministeriön julkaisuja 5/2019



## INSPIRING OTHERS

- **For example, to date, 11 social impact bond (SIB)-projects have been implemented in Finland and they have performed well.**
  - An employment-related impact bond, the “Koto-SIB”, has clearly outperformed traditional employment measures. Although the number of SIBs in Europe is growing and European Investment Bank is supporting the growth through the European Investment Advisory Hub, the markets in different countries are at different stages of maturity.
- **Similarly, impact investing approaches can help address complex environmental challenges,** bringing key stakeholders together to define the joint objectives and crystallize the focus on impacts.
  - The interplay between public and private sector is key, defining of roles and responsibilities, as well as transparent engagement of all other key stakeholders that actually make it “happen on the ground & in the waters”.
- **International and national green/sustainable finance initiatives and taxonomies are pushing in this direction.**
  - Within the finance sector there is a rapidly increasing readiness for private investing in SDG-aligned initiatives. The global market [for impact investing](#) has passed the level of 700 billion USD.

## CHALLENGES TO OVERCOME / LESSONS LEARNT on harnessing impact investing for solving environmental challenges



**Describe in detail key bottlenecks for solving the environmental problem currently**



Define the value-add of impact based financing approaches & models



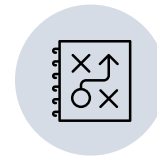
Link with existing/planned strategies and key policies



**Be prepared for a marathon and interactive development**



**Get going with smaller steps, piloting.**



Manage the risks proactively communicate well and be transparent about them



**Choose with care a limited number of key impact indicators**



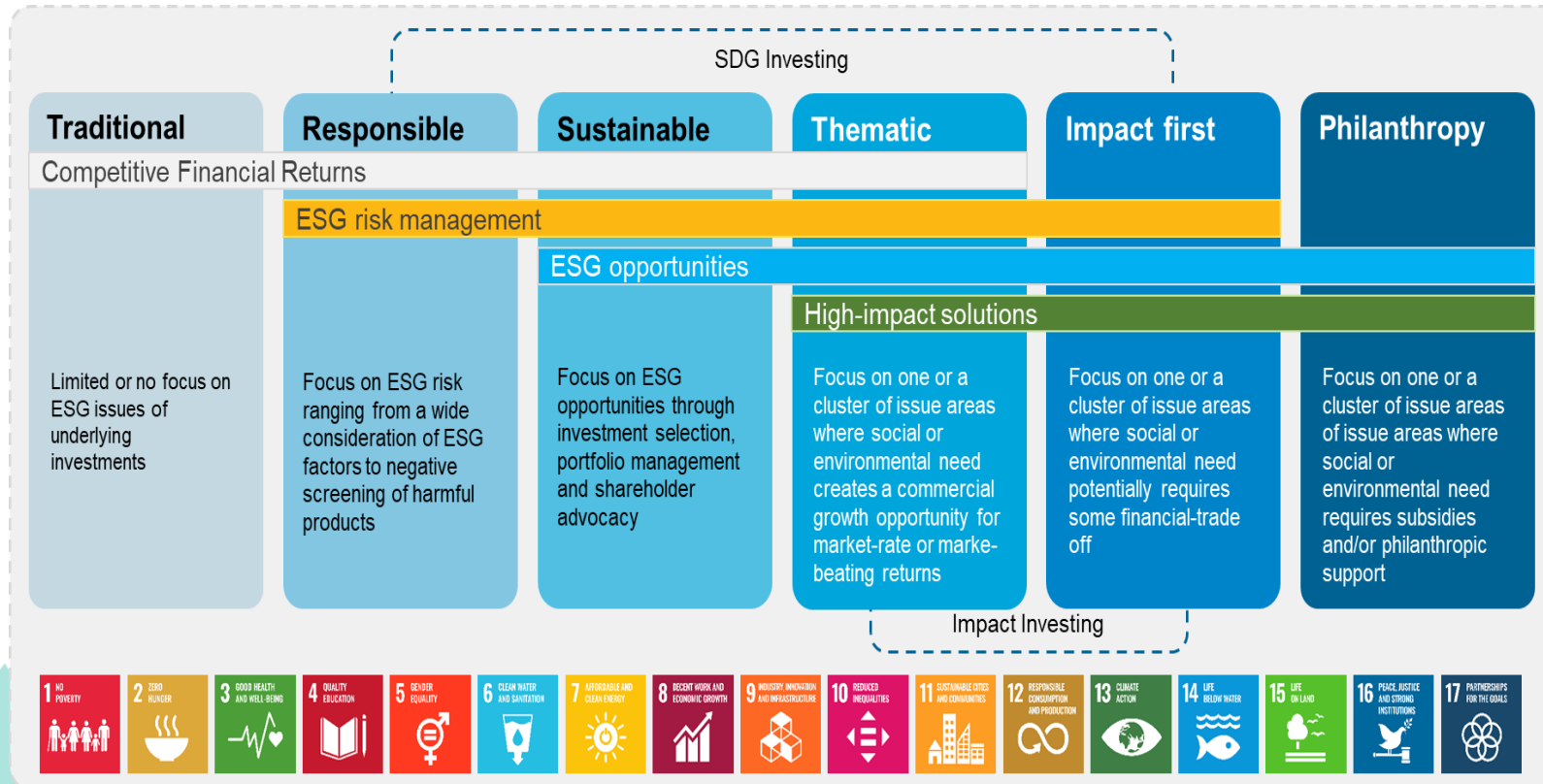
Identify a broader "dashboard" of indicators to monitor & communicate about co-benefits



Have a vision of how to scale your impacts, and remember that mobilising more (public and private) finance will require a track-record of successful initiatives.

# ALWAYS ROOM FOR IMPROVEMENT (1/2)

Improved readiness by finance sector to mobilise SDG aligned investments also accelerating BSAP implementation



While SDG-aligned investing is gaining momentum (i.e. the focus of finance moving to the right in the picture) the current finance flows do not allow reaching Agenda 2030 targets.

Figure: Adapted from European SRI Study 2012, Bridges Ventures 2016

## ALWAYS ROOM FOR IMPROVEMENT (2/2)

- **mobilising the necessary additional resources** for reaching a good environmental state for the Baltic Sea requires additional efforts by all key stakeholders, and **stronger collaboration between public and private and civil society players**
- the **finance sector** needs to rapidly **improve its understanding of biodiversity risks and opportunities, build awareness and expertise for developing, analysing, measuring and reporting on nature-positive investments** (taking into account sustainable finance taxonomies, such as the [EU taxonomy](#) on sustainable finance, and aligned e.g. with the [Taskforce on Nature-related Financial Disclosures](#))
- the **environmental experts** and more generally the sustainability advocates need to **better communicate the systemic risks** as well as social and economic **costs of environmental pollution** and biodiversity loss, and in particular **the social, cultural and economic benefits of reaching a good environmental status for the Baltic Sea**
- the **public sector** needs to better understand and more courageously **seize its role as enabler for sustainable finance mobilization**, through regulative measures and incentives but also through its own funding decisions that jointly have major potential to remove investment barriers, highlight priorities and hence help define desired impacts
- an increasing number of forerunners and **inspiring examples are already available, for testing, piloting and scaling up, and could serve the BSAP community in accelerating priority actions**



# Thank you!



- **Pekka Salminen**, [pekka.salminen@ely-keskus.fi](mailto:pekka.salminen@ely-keskus.fi)  
Development Manager, SW Finland Centre for Economic Development, Traffic and the Environment
- **Mikko Halonen**, [mikko.halonen@gaia.fi](mailto:mikko.halonen@gaia.fi)  
Leading consultant, Gaia Consulting Ltd.

