

## **Grundvattenöversvämningar i Juelsminde, Danmark**

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## What will (we) take you through?

- Background for why Juelsminde is specially designated
- What we started, back in 2014 – 2017
- Then came C2C CC and what did it do
- The experiences with the data loggers, the model and knowledge about it
- What else have we started, citizen involvement to a great extent !!
- Experiences with the involvement and learning from it
- What can the municipality/citizens use the model for? 1 at the individual house. 2 in the city. 3 in the municipality, including an App

The background was the EU's flood directive from 2013, where Juelsminde was designated, partly because of elevations but also because of the possible damage that a given incident will cause (> DKK 2.5 billion).

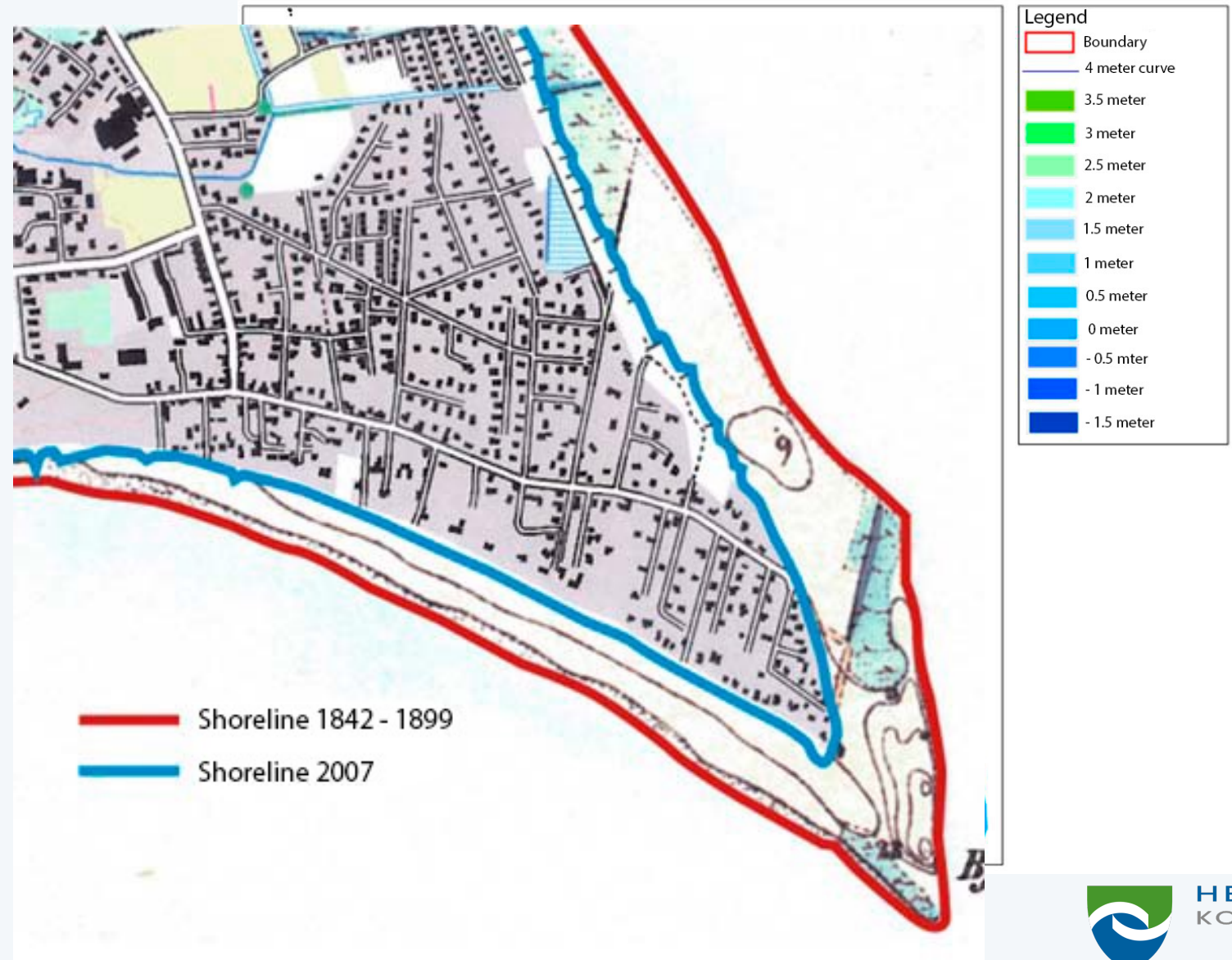
But where are we in Denmark?



At least 1300 properties

4000 inhabitants, within the area.

Old seabed



**As you can see, the elevations are in many places zero or below and once the water gets in, it is very difficult to get out, = pumped**

- EU flood directive, RCP 8.5 and 4.5
- Event 50 years or **100 years = 2,5 m level of rising see**
- Risk management plan is created and now the second edition (2021), revised per 6th year
- The focus was initially the sea and the upcoming climbs here, nothing else ????

**Revurdering og ajourføring af  
risikostyringsplan for oversvømmelse,  
Juelsminde**

Oversvømmelsesdirektivet  
Anden planperiode  
2021-2027





A detailed contingency plan has been drawn up especially for Juelsminde

Bilag 3 - Oversigt over linjeføringer for udlægning af de mobile højvandsspærringer



**And then it was that the EU Life project C2C CC gave us some opportunities**



**C2C**  
Coast to Coast  
Climate Challenge

**Why citizen driven partnership makes sense, C 18**

## **With the C2C CC project, we could ask ourselves the question:**

- Is the sea the only factor we have to look at or are there also other issues, eg groundwater

We were very curious at the start (2017) without too much knowledge about what it was we were looking for.

And in that way over to Ronja



# RONJAS PPT

# Hedensted municipality continued

Now you have got an impression of what knowledge the data has given us and what they may be used for

And as you can see, groundwater is a parameter we **MUST** focus on and not just here, in general in DK the level is rising (some places 1 – 2,5 below ground level)

But a very important parameter is to have the locals **involved**.

In DK, the citizens who benefit from a protection e.g. Dyke (private property) must also help/contribute with the payment, and this gave rise to the idea of real citizen involvement

So in this way back to the C18 mentioned above

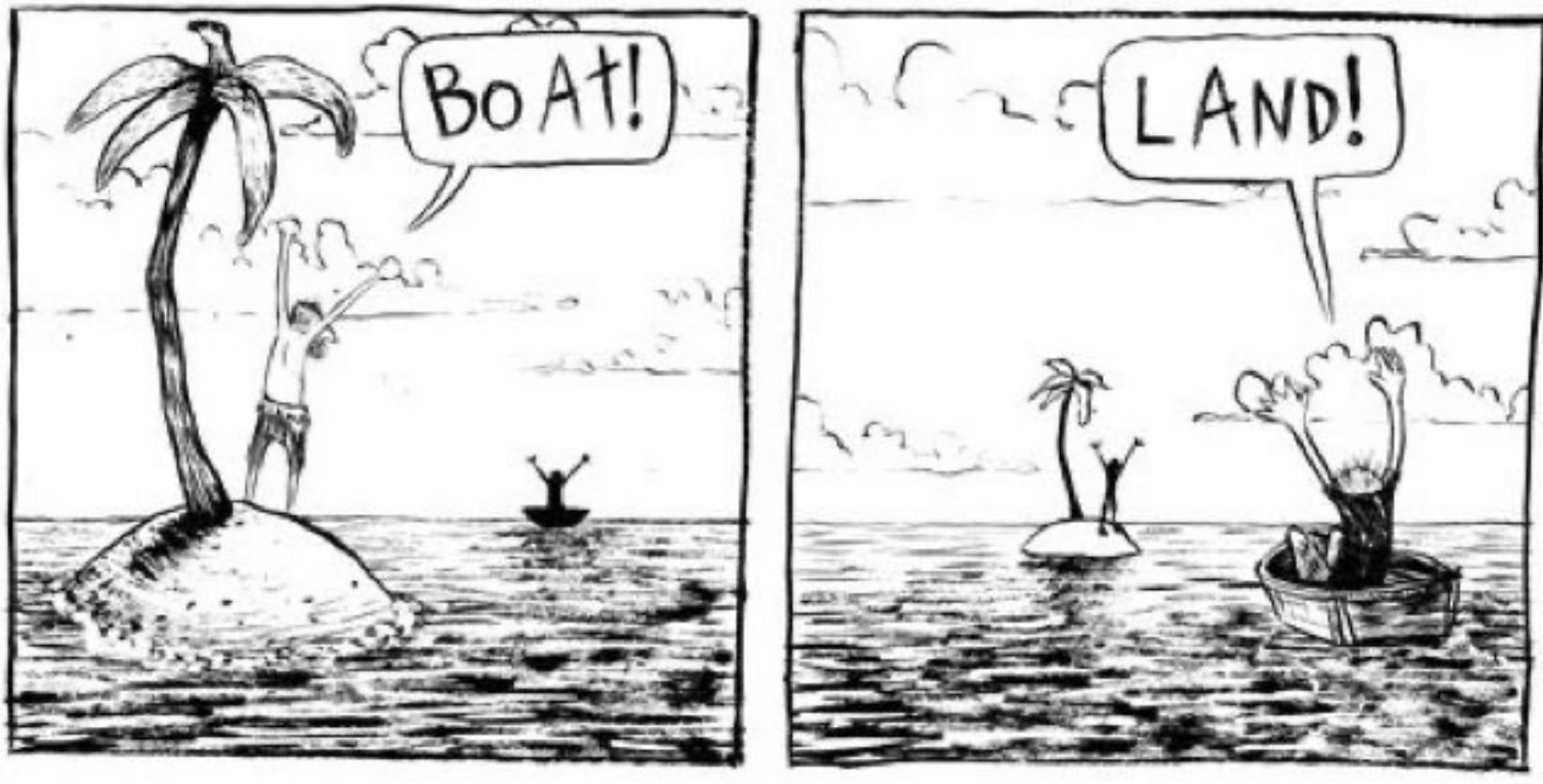
## Main ideas in C18

- Let citizens and companies take ownership by inviting them into the planning, decisions and projects.
- The citizen will be the main driving factor, and it requires political and administrative focus, discipline and courage.
- The politicians must let the citizens work for in the end to be able to support with a political decision
- the theoretical basis is MGA and/or CON, (a method of thinking, a mindset)

THE START, an invitation from the politicians  
- the property owners decide, 600 to a meeting decision







The way you look at a subject depends on the angle you look at it



Remember the shared knowledge, agree on what you know and what you don't know

Cultural knowledge or local history is not necessarily perceived the same way and depends on who you are and what history you have in the area, e.g. difference between a farmer and a summer house owner



Talk TO/with people and listen to their story/telling and response to it, remember that conversation is together

## Recap | the 5 Essences of connective negotiation



1. Focus on interests, not positions



2. Create value (enlarge the pie)



3. Know your BATNA (Best Alternative to a Negotiated Agreement)



4. Work on sustainable relationships, building trust



5. Joint fact finding



Bioscape C



Competing  
for your  
slice.



Working together for a bigger pie.

## Some main points

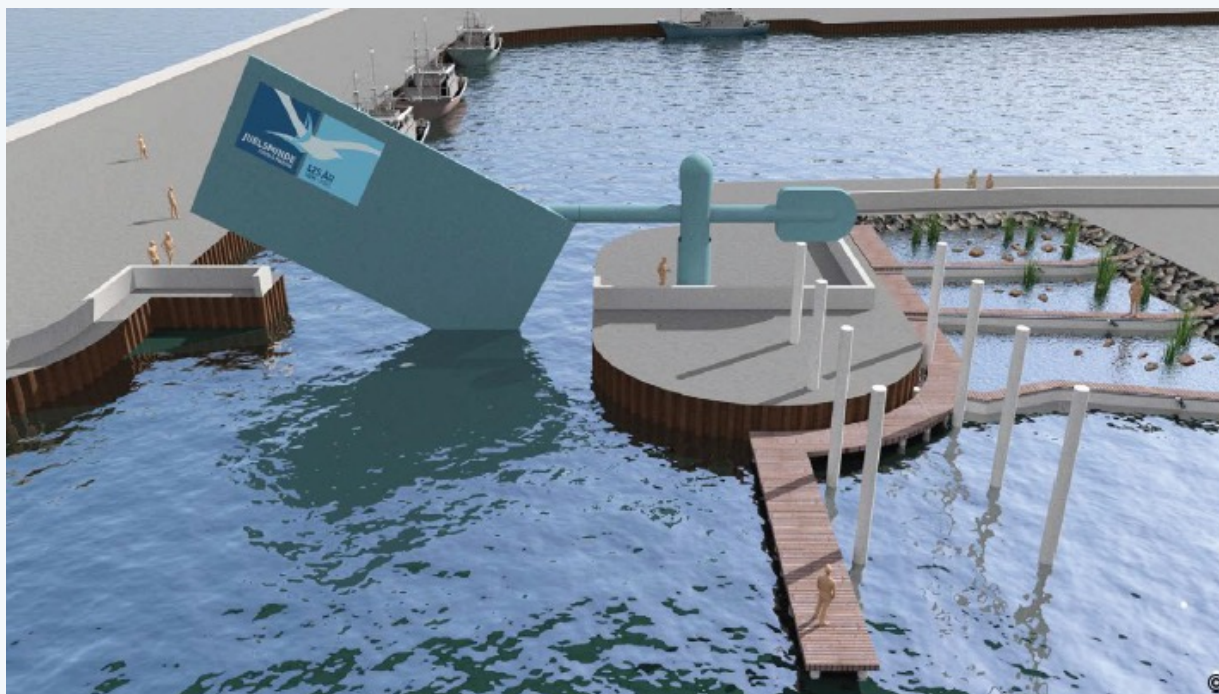
Remember the blacksmith and the talk over the hedge, be present in the "room"

- The framework is not set in advance, the white paper and it is often about more than one thing, be prepared to change
- Agreements where everyone can see themselves, but it is not win – win for everyone
- Relationships are important

Talk to everyone, including those you don't agree with, they should feel heard, but remember it's not the same as adjusting to them.



Some new ideas have come up in the work





And now back to what we as a municipality can use the new knowledge for

We can now say that it is not only the seawater that you have to look at (current dyke, water is coming below already, included?)

In relation to the emergency plan and what is written there, we think that an App gives the individual citizen an opportunity to do something, sandbag and/or move (because we have to talk about that too). We think a lot about local involvement, citizen knowledge, and not just in Juelsminde, we started close to the sea. But e.g. VIA also works inland and what can be said here about the rising groundwater = probably an increasing planning issue)

We get an extra parameter in the discussion of whether the houses should be protected, moved or ? Is a 30-year time horizon not ok? (also relevant elsewhere in the municipality and in DK, mentioned previously)

Our planning (Municipal plan) which sets out the general overall framework, we are beginning to take the groundwater into account)

And then there is the designation of risk areas for flooding, so far only with a background in the sea and streams, but as we can see here, the rising groundwater is also a parameter we must take into account

And last but not least, see the rising groundwater as a resource and not a problem, Termonet e.g.