

**NIRÁS** Dansk Kystkonference 09

Hvordan tilpasser vi de danske kyster og havne til fremtidens klimaforandringer ?

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Metoder til praktisk oversvømmelsesbeskyttelse med udgangspunkt i

- Marmormolen / Københavns Havn
- Kulturhavn Kronborg / Helsingør Havn
- Vilufushi / Maldiverne

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Principrit af kanalrønt fra hotel område til bolig-ø 1:400

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Udviklingsplan af Helsingør  
2008

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Helsingør – Kulturhavn Kronborg

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Helsingør – Kulturhavn Kronborg

Nyt Kulturområde i Helsingør  
Fremtveder Kronborg  
Nye uderum og kajlanlæg  
Byen og borgen bindes sammen  
Nyt kulturområde i værdifulde grunde  
Nyt Søfartsmuseum til højre for værftet

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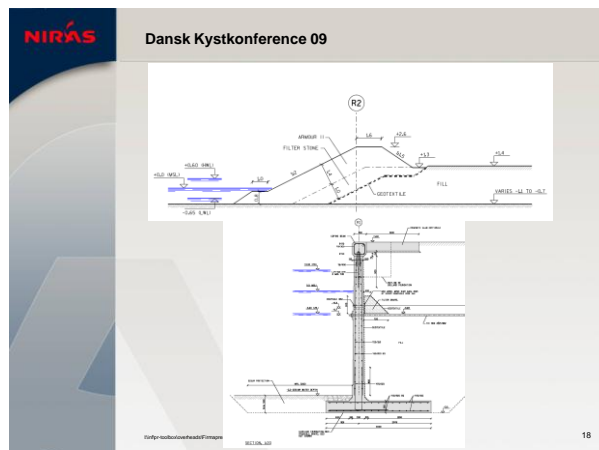
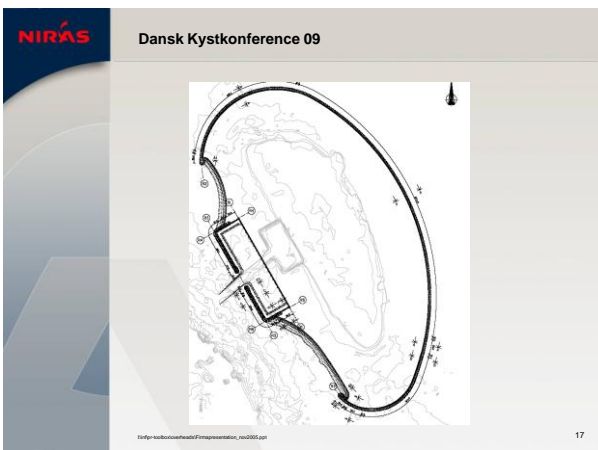
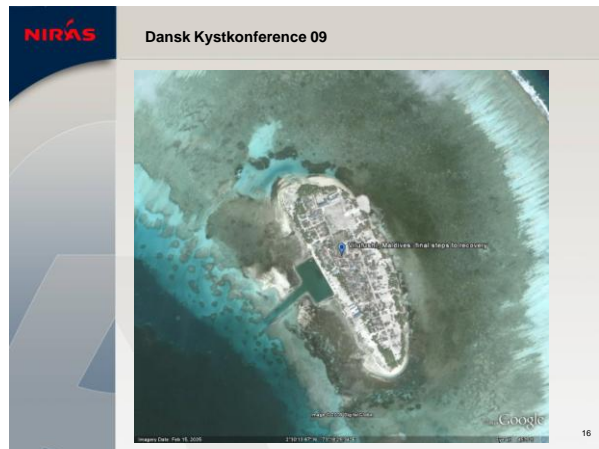
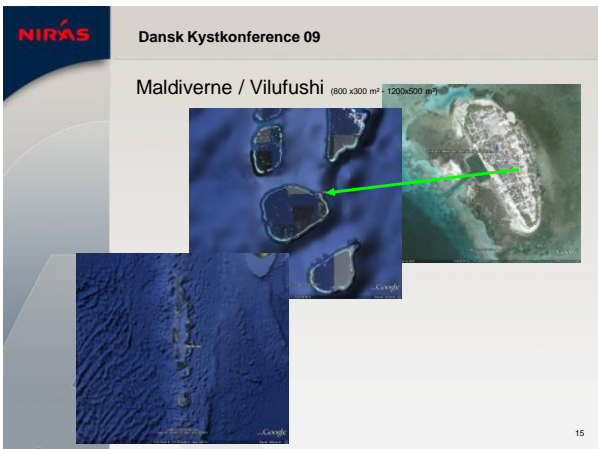
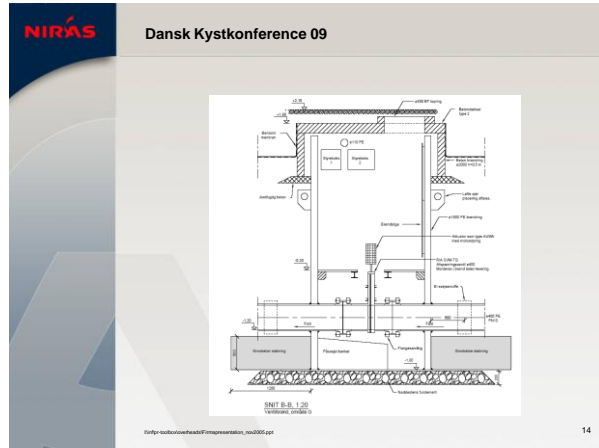
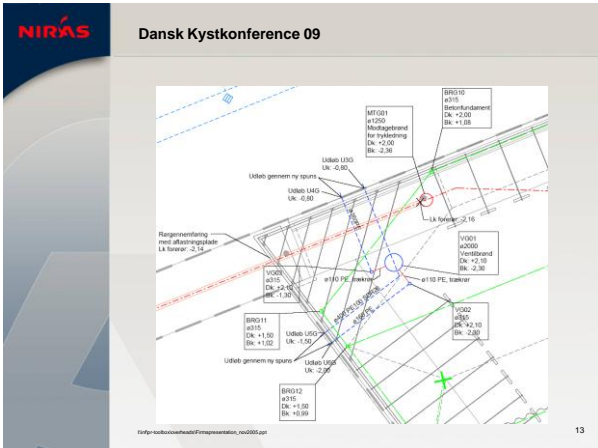
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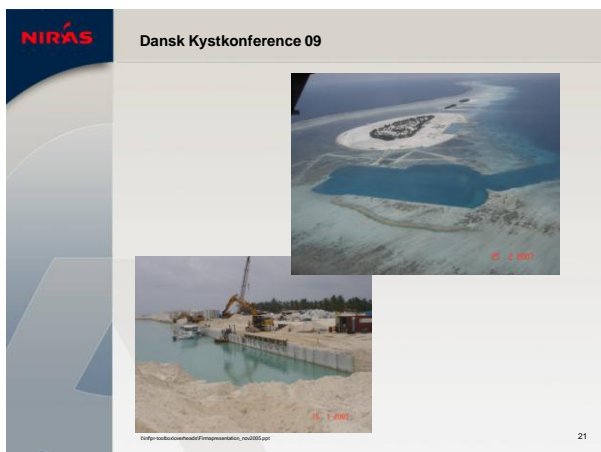
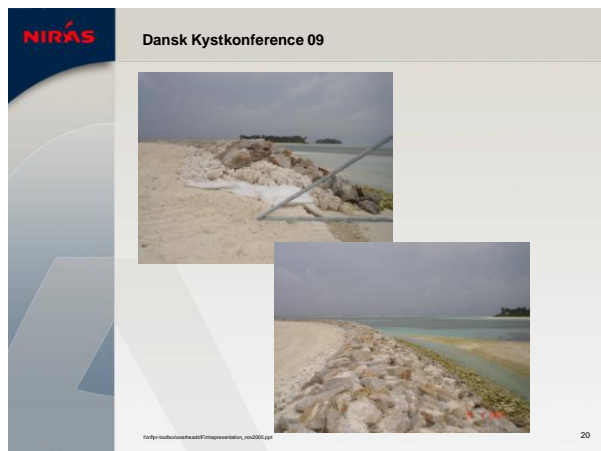
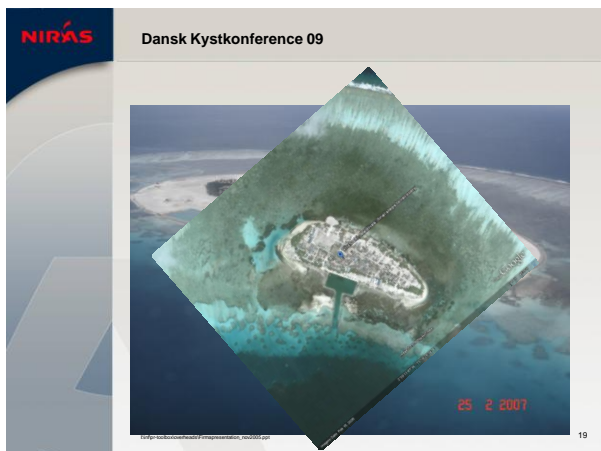
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PIANC

Envicom - Task Group 3  
Climate Change and Navigation

Waterborne transport, ports and waterways:  
A review of climate change drivers,  
impacts, responses and mitigation

3.1.1 Sea level

IPCC (Wadalet et al., 2007) concludes that the global mean sea level rose at an average rate of about 1.7 mm per year during the twentieth century and that this rate has been slightly higher over the period 1993 to 2003. Climate model projections (IPCC, 2007) suggest that the global average rate of sea level rise in the twenty-first century will be 2.8 mm per year, implying that mean sea level will be 0.2 to 0.5 m higher in 2100 than in 2000 (see Figure 3.1). However, there is significant uncertainty in the thermal expansion of the oceans, including tidal distortion, changes such as melting of the Greenland and Antarctic ice sheets. The additional sea level rise corresponding to thermal expansion of melting would increase mean sea level by the end of the century by 0.5 to 1.0 m (see also, e.g., Hansen et al., 2008). This would appear to be the most conservative estimate of the effect of ice melt and that we could be looking at 1 m or more by the end of the century if our fears are realized.

Figure 3.1. Observed and projected (SRES A1B scenario) sea level rise (reproduced from IPCC, Wadalet et al., 2007)

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