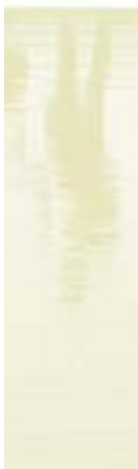




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Developing a carbon footprint Port of Oslo Port of Rotterdam

WPCC
9-10-11 July, 2008
Rotterdam



What is a carbon footprint?

- The carbon footprint of an organisation is the amount of greenhouse gases (GHG) that it emits over the reporting period
- The international standard for developing carbon footprints is ISO 14064-1 (greenhouse gas protocol)



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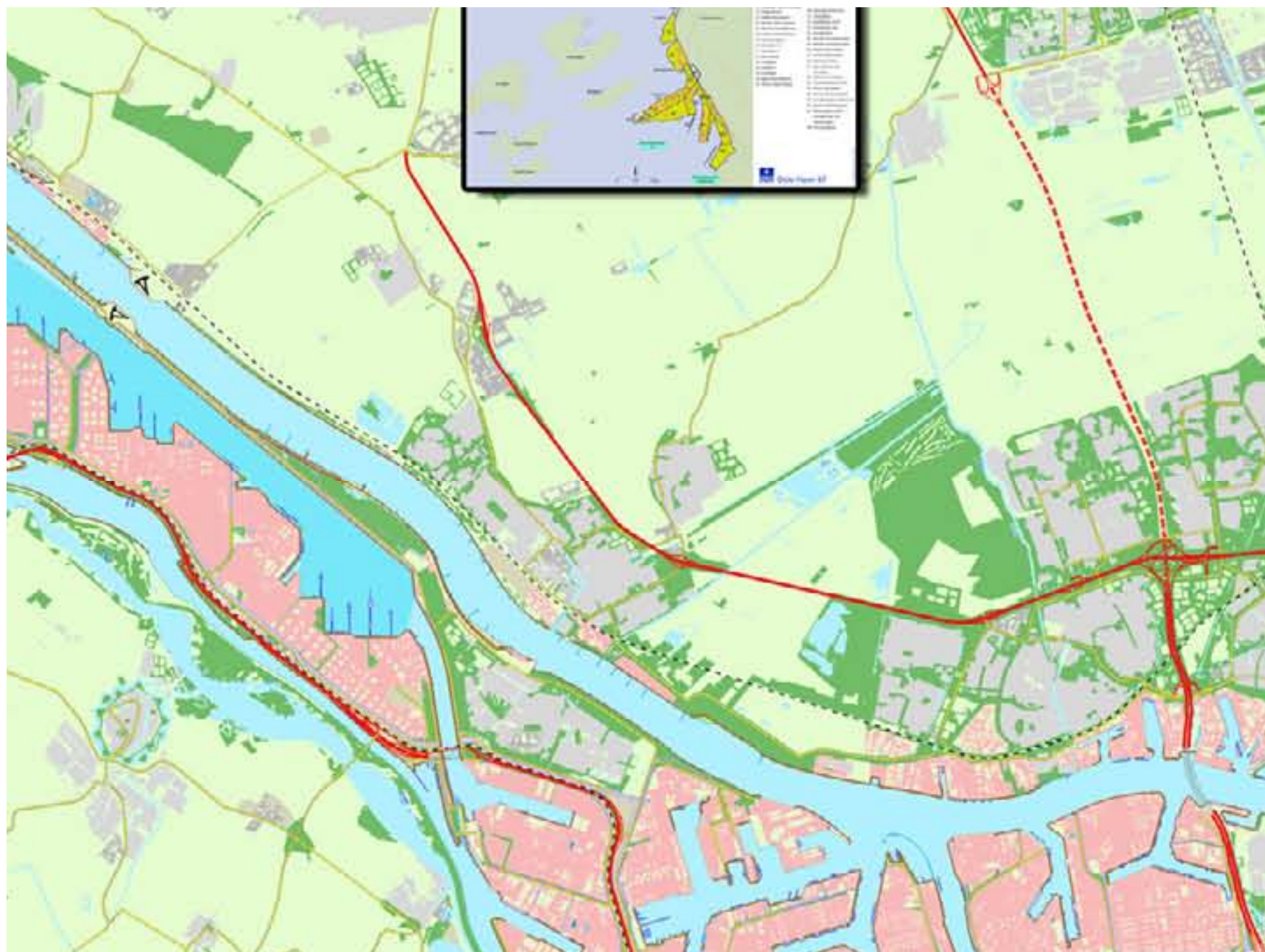
**It's time to stop
debating
and start acting**





Why this project?

- To prove that the carbon footprint can be used for all type of ports (complex, small, big)
- We have chosen two ports, Rotterdam and Oslo, as examples for the methodology





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Oslo and Rotterdam, compared

Rotterdam

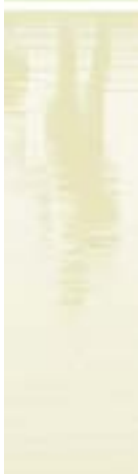
- 10 500 hectar
- 407,000,000 tonnes
- 11,000,000 TEUs
- (not registered) pax
- 1200 employees

Oslo

- 120 hectar
- 6,400,000 tonnes
- 185 000 TEUs
- 6,300,000 pax
- 165 employees

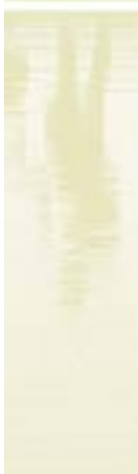


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Small and complex





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Port Of Rotterdam, large





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Elements of a carbon management strategy



Management
decisions



Carbon
accounting



Emission
reductions



Step 1 Management decisions

- What do we want a carbon management strategy for? Which methodology do we use?
- What do our stakeholders want and which policies are relevant for us?
- What are the objectives, risks and opportunities?
- What is our communication strategy?
- What is our emission reduction target



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Port of Oslo Board decision

Oslo Havn KF
Havnefullmakt

Havnestyrmak nr. HV-15/2008

Saksbehandler: Teknisk utviklings/miljøseksjonen
Saksbehandler: Hilde Sigrid Gilmanes

Dato: 14.02.2008

Saksnummer: 2007/084

SAK: Orientering om deltakelse i C40 World Ports Climate Conference og kartlegging av CO₂ uttrykk for Oslo havn

Saken gjelder:

Oslo Havn KF (HAV) er invitert til å delta under Klimakonferansen "World ports for a better climate" i Rotterdam i juli 2008. HAV er også invitert til å være en av 3 havner som kartlegger sitt CO₂ uttrykk og delta i samarbeid med Port of Rotterdam i prosjektet "Carbon-Footprinting Port of Rotterdam and Oslo".

Transport gjennom havnet, havneoperasjoner og industriaktiviteter i havnet bidrar til økt CO₂ utslipp. Hensikten med Klimakonferansen er å fokusere på tiltak for å redusere havnens klimabelastning og muligheter for å bedre luftkvaliteten. Basert på et initiativ fra representanter fra 16 av verdens store havner er det laget en erklæring som skal resultere i en klimadeklarasjon som skal signeres under konferansen. Målet er at havnet og havnebyen sammen med sine forretningspartnere kan bli enige om en samlet tilnærming for å redusere klimabelastning. Konferansen er støttet av C40 Large Cities Climate Leadership Group og Climate Change Initiative.

Saken behandles i Havnestyret (Hv):

Som orienteringssak.

Økonomiske konsekvenser for Oslo Havn KF:

-

Budsjettmessige forhold:

-

Havnefullmaktens vurderinger:

Deltakelse i C40 World Ports Climate Conference og prosjektet "Kartlegging av CO₂ uttrykk" gir Oslo Havn KF mulighet til å bidra i arbeidet med å lage retningslinjer og handlingsplaner for reduksjon av klimabelastning for havnevirksomheten. I tillegg vil en kartlegging av Oslo havn sitt CO₂ uttrykk kunne brukes aktivt i den interne miljøpolitikken.

Havnet har en sentral plass og en nøkkelrolle i globale handels- og transportkjeder. De har derfor mulighet til å påvirke og fremme økt bærekraftighet gjennom hele kjeden. Gjennom dette



Step 2 Carbon accounting

Establish a carbon footprint, making relevant choices

- **Ownership:** who owns the emission? The owner of the shares or the operator of the installation?
- **Baseline:** what is the baseline year, and when are emissions recalculated? Recalculation is necessary when new operations are included or when the calculation methodology improves or changes.



Step 2 Carbon accounting II

Reported emissions:

- mandatory reporting of **scope 1** (direct emissions) and **scope 2** (energy indirect emissions).
- Stakeholders may be interested in certain **scope 3** emissions (other indirect emissions). This can include the greenhouse gas emissions related to subcontractors (e.g. dredging) or business travel and commuting



Step 3 Implementing the footprint

- Develop a greenhouse gas manual (protocol and emission report)
- Educate and organize people
- Emission reduction considerations:

How much can be reduced?

Different ways of reducing emissions

Against which costs?

When and how?



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Port of Oslo by night





Carbon footprint of Port of Oslo

- **Why making a footprint?**

A starting point in developing a carbon programme

- **Which approach chosen?**

The control approach

- **Which emissions reported?**

Scope 1 (direct emissions), scope 2 (indirect emissions) and scope 3 (other indirect emissions)



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Important environmental issues in Port of Oslo

- Environmental management system (ISO 14001 certificate)
- Noise control
- Local air pollution (NO_x)
- Esthetical considerations (Architectural standard)
- Oslo Fjord Clean Up (dredging project)





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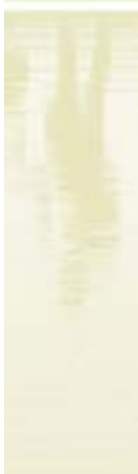
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Architectural standard





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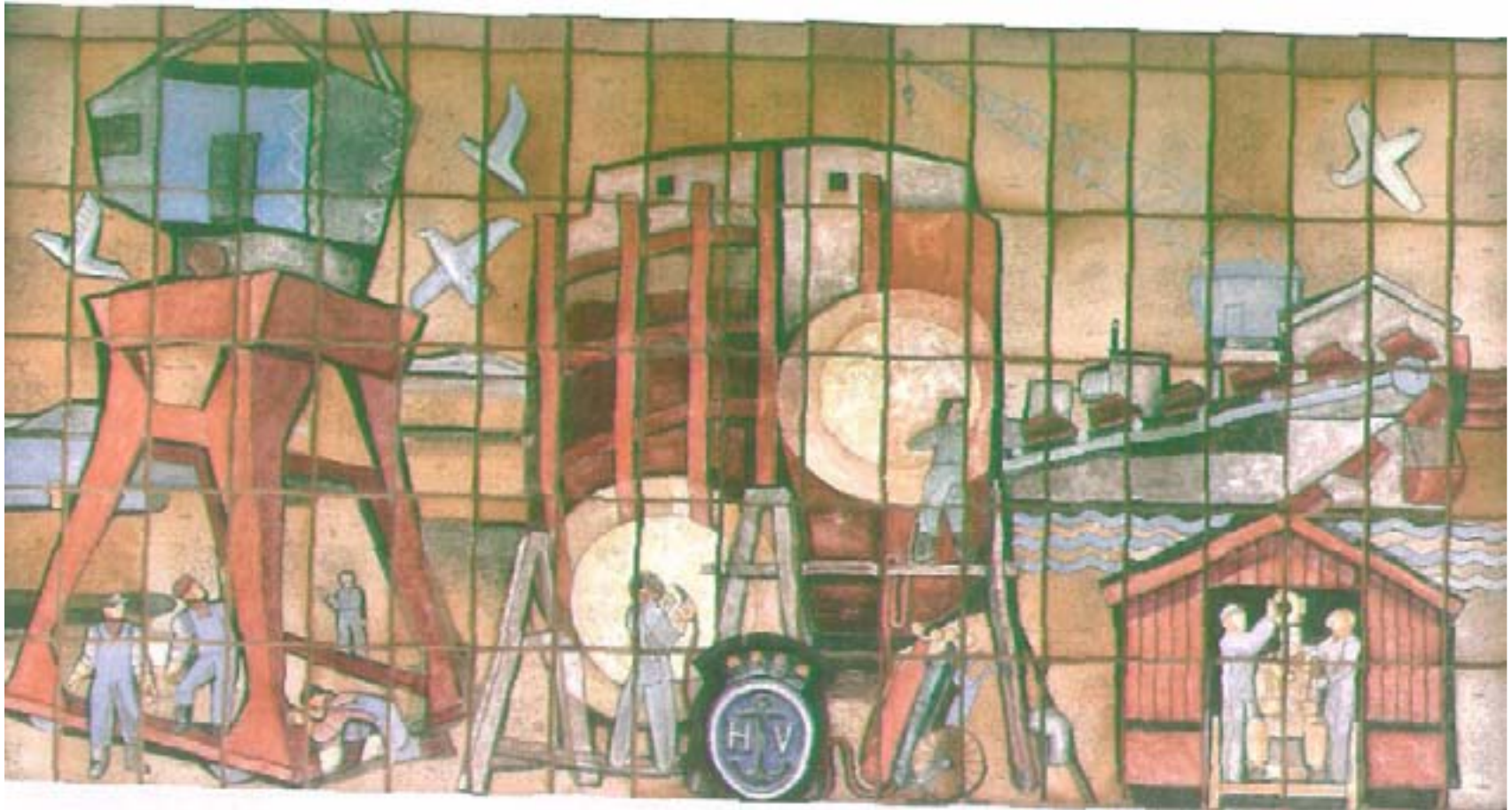


**This is much more..... WE are going to
save the world.....**



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From good old days to carbon footprint





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Carbon footprint of Port of Oslo

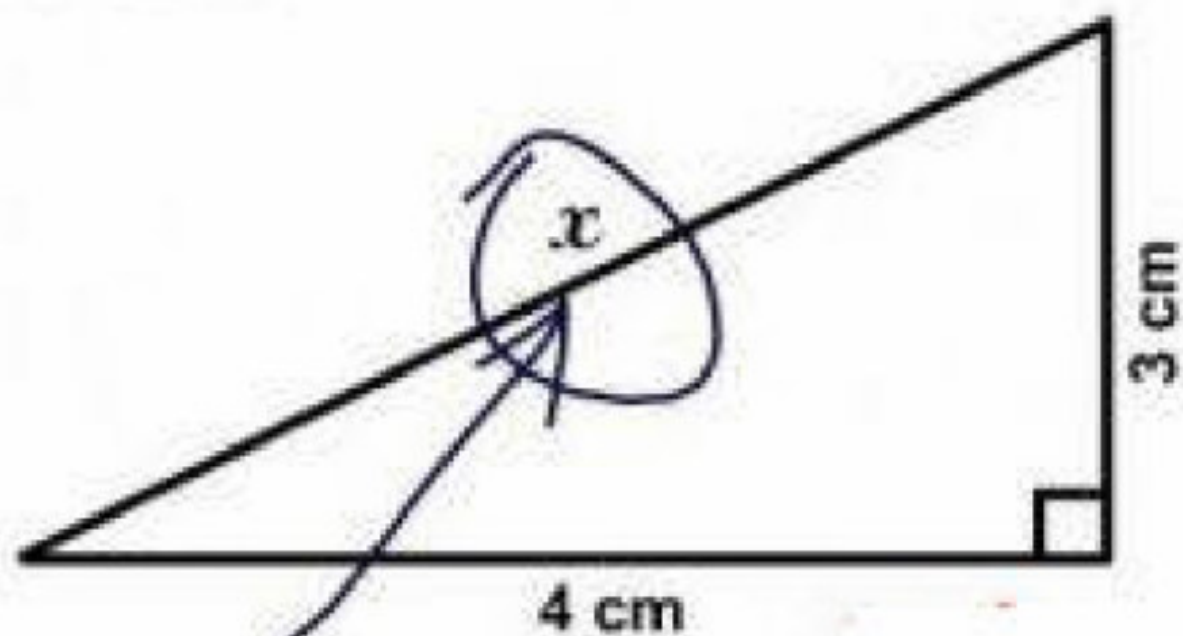
Emission sources

- Company cars
- Operational vessels
- Operational machines
- Cranes
- Commuting employees
- Electricity usage buildings, harbour lighting, lighthouse, cranes



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3. Find x .



Here it is



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Carbon footprint of Port of Oslo Results

Item GHG in tonnes CO₂eq

- Scope 1 Direct emissions: 456
- Scope 2 Energy indirect emissions: 49
- Scope 3 Other indirect emissions: 199

Total 704



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Carbon footprint of Port of Rotterdam

GHG-emissions 2007 (in tonnes CO₂eq):

- Scope 1, Direct emissions: 8960
- Scope 2, Energy indirect emissions: 7230
- Scope 3, Other indirect emissions: 20100

Total amount = 36290



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Carbon footprint of Port of Oslo

General findings

- Carbon footprint is an ongoing process
- The process is important, not only the outcome
- A carbon footprint can be used by every organization, big or small, complex or not
- Commitment of people (the change of attitude) is necessary
- The documentation of data is essential
- The presence of an (environmental) management system proved of great value for Oslo



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Remember!

Carbon footprint is an ongoing process

Management guidance

Commitment

Communication

With the *Port Wiki* as a (first) starting point!



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By boat or by car...?





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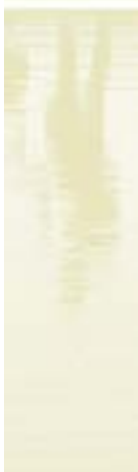


Foto: Borgvar Christiansen 03.02.07