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)
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
Oslo and Rotterdam, compared

<table>
<thead>
<tr>
<th>Rotterdam</th>
<th>Oslo</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 500 hectar</td>
<td>120 hectar</td>
</tr>
<tr>
<td>407,000,000 tonnes</td>
<td>6,400,000 tonnes</td>
</tr>
<tr>
<td>11,000,000 TEUs</td>
<td>185 000 TEUs</td>
</tr>
<tr>
<td>(not registered) pax</td>
<td>6,300,000 pax</td>
</tr>
<tr>
<td>1200 employees</td>
<td>165 employees</td>
</tr>
</tbody>
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Small and complex
Port Of Rotterdam, large
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
Port of Oslo Board decision
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?
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)
Important environmental issues in Port of Oslo

- Environmental management system (ISO 14001 sertificate)
- Noise control
- Local air pollution (NOx)
- Esthetical considerations (Architectural standard)
- Oslo Fjord Clean Up (dredging project)
Architectural standard
This is much more..... WE are going to save the world......
From good old days to carbon footprint
Carbon footprint of Port of Oslo
Emission sources

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

Here it is
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
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
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
Remember!

Carbon footprint is an ongoing process

- Management guidance
- Commitment
- Communication

With the *Port Wiki* as a (first) starting point!
By boat or by car...?