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Potential New Transport Needs

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Potential New Transport Needs

Content of the presentation

- Background
- New lines of business
  - Bioenergy
  - Mining projects
- Influence on waterborne transport and new canal and fairway projects
- Conclusions

Potential New Transport Needs

Background

- **Major structural changes in the industry**
- **The global recession**
- **Energy policy in EU**

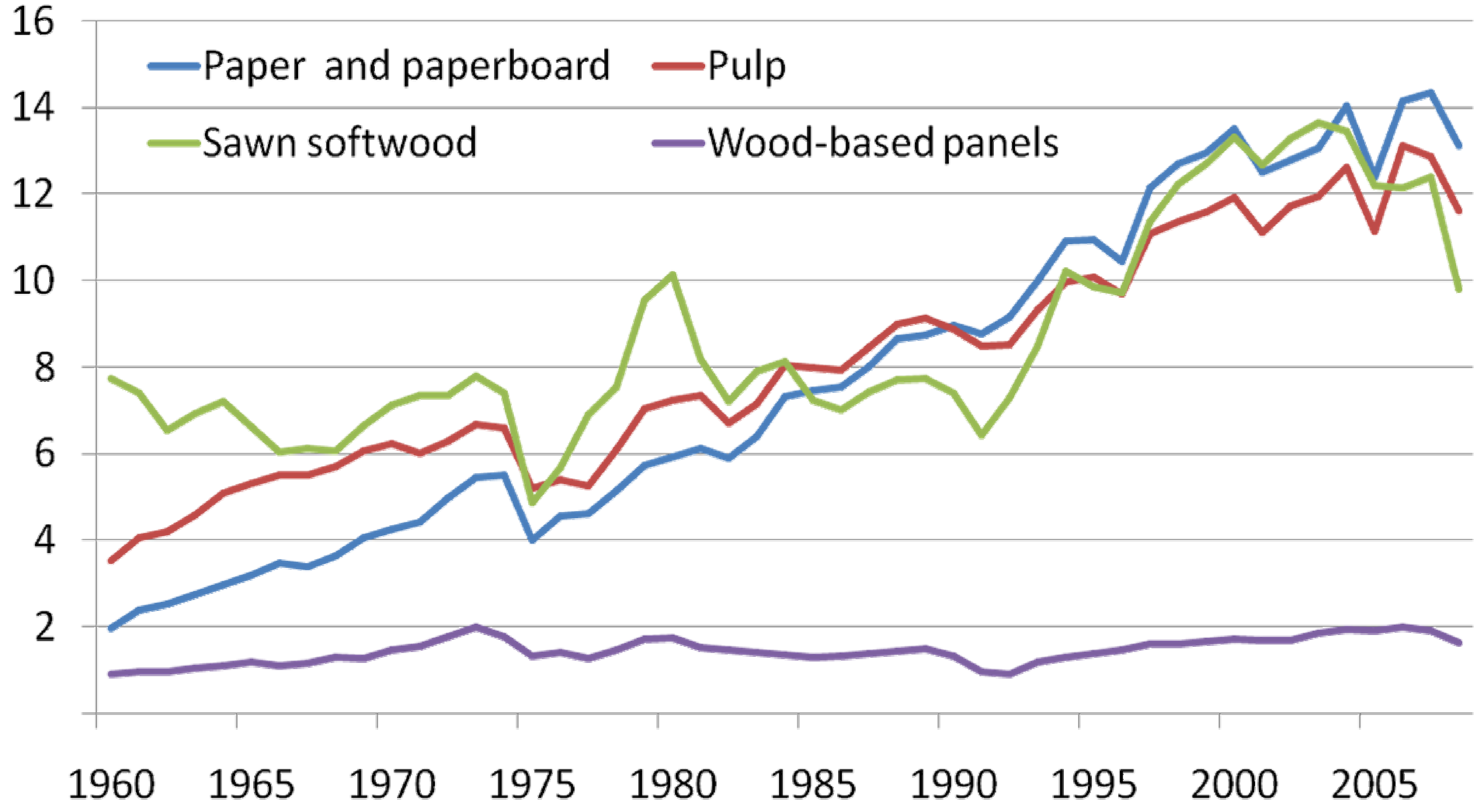
Potential New Transport Needs

Structural change in industry:

- **Industry is moving production closer to the main market areas and to less expensive countries**
- **Production will concentrate more on hich-tech and special products**
- **At the same time there are possible new potential lines of business arising**

Potential New Transport Needs

Forest industry



SOURCE: Finnish Forest Industries Federation. 1 %change, compared to the previous year

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Forest industry

	1980	1985	1990	1995	2000	2005	2007
Share of employment, %							
Wood industry	2,4	1,8	1,5	1,5	1,4	1,2	1,2
Pulp and paper industry	2,4	2,1	1,9	1,9	1,7	1,4	1,2
Total forest industry	4,8	3,9	3,4	3,4	3,1	2,6	2,4
Share of GDP (value added), %							
Wood industry	2,5	1,3	1,5	1,4	1,2	1,0	1,1
Pulp and paper industry	4,2	3,6	2,9	5,0	4,8	2,6	2,4
Total forest industry	6,7	4,9	4,4	6,4	6,0	3,6	3,5
Share of industrial production, %							
Wood industry	9,0	5,2	6,3	5,5	4,6	4,3	4,7
Pulp and paper industry	15,4	14,5	13,0	19,8	18,1	11,3	10,3
Total forest industry	24,4	19,7	19,3	25,3	22,7	15,6	15,0
Share of exports, %							
Wood industry	13,4	7,1	7,1	6,9	5,2	4,7	4,5
Pulp and paper industry	29,0	29,1	30,5	26,9	20,8	15,3	14,6
Total forest industry	42,4	36,2	37,6	33,7	26,1	20,0	19,1

SOURCE: Statistics Finland, National Board of Customs, FFIF

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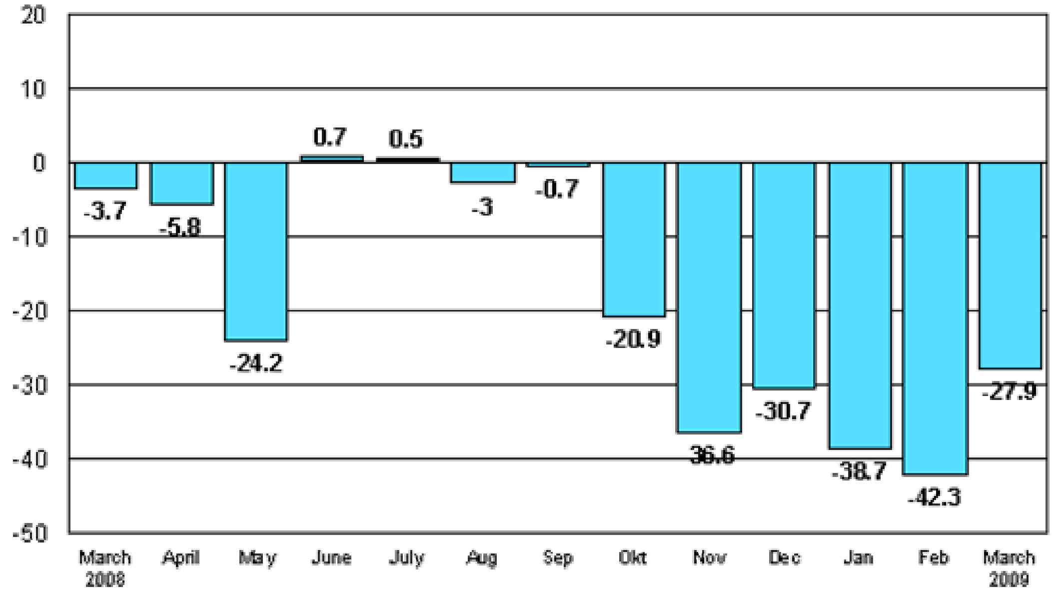
Global recession:

- **Change in new orders in manufacturing from corresponding month of the previous year (original series), %**



(Source: Statistics Finland)

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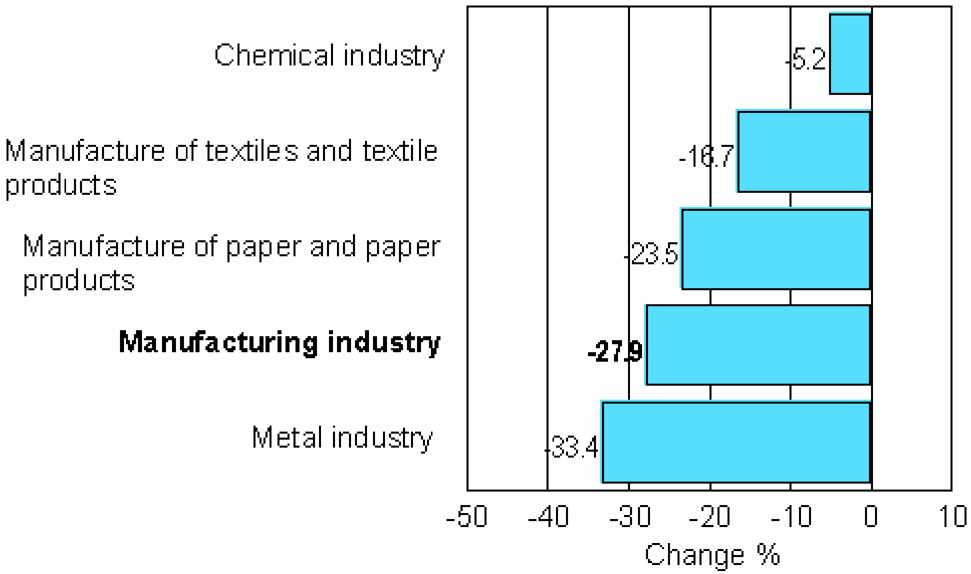
Global recession:

- **Change in new orders in manufacturing 03/2008-03/2009**

(Source: Statistics Finland)



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Energy policy

- Demands for the use of bioenergy and other renewable energy sources
- On EU level the aim is that 38 % of the energy production in Finland is based on renewable energy by 2020. (28.5 % in 2005)
- On shorter term there are national goals to increase the use of bioenergy

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New lines of business

- **Bionergy**
  - **The goal is to triple the use of wood chips in energy production by year 2020**
  - **Especially inland waterways are an alternative in transport of wood chips**
  - **Potential is several millions cubic metres**

- **Mining projects**
  - **Two major projects in Northern Finland**
    - **Kolari mining area in the border of Finland and Sweden**
    - **Sokli mine near the Russian border**
  - **Kolari mine would create annually 13 million tons of new cargo and Sokli mine approx. 2 million tons annually.**
  - **The possible increase of annual traffic in Norhern ports would be 100 %.**

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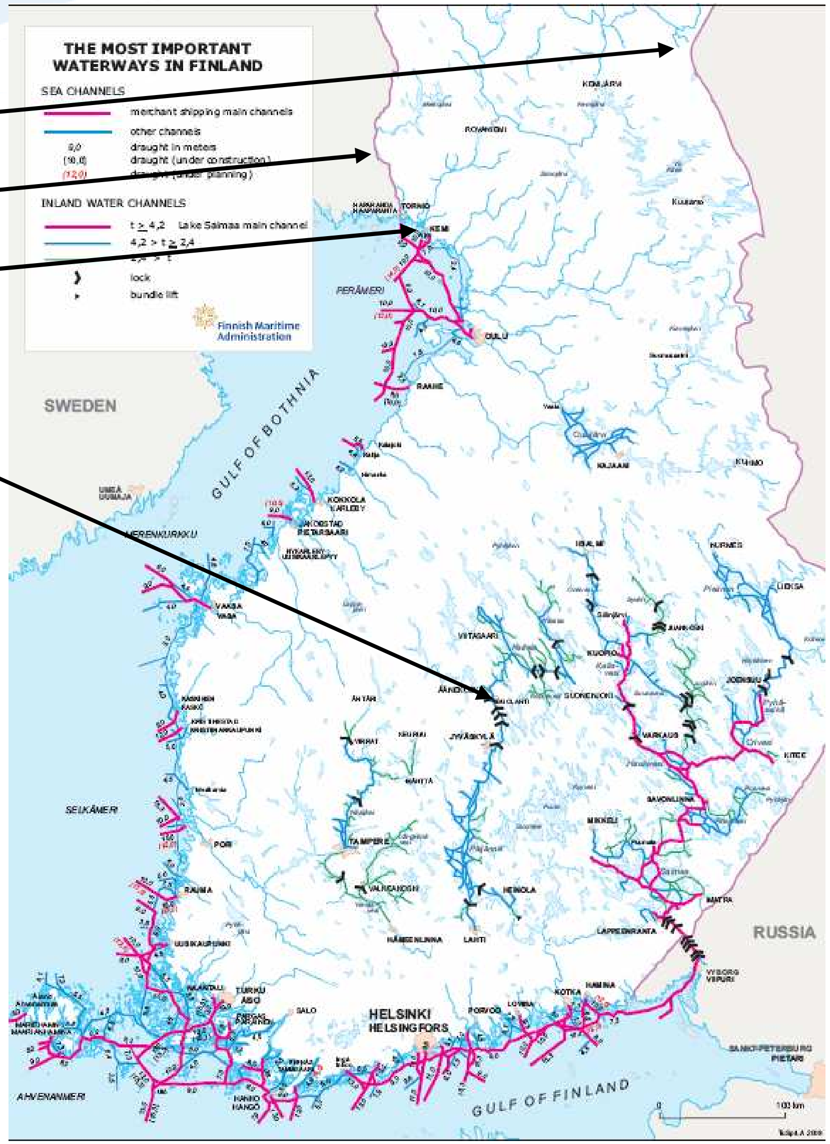
New lines of business

- **Sokli mine**
- **Kolari mine**
- **Port of Kemi**
- **Keitele Canal**



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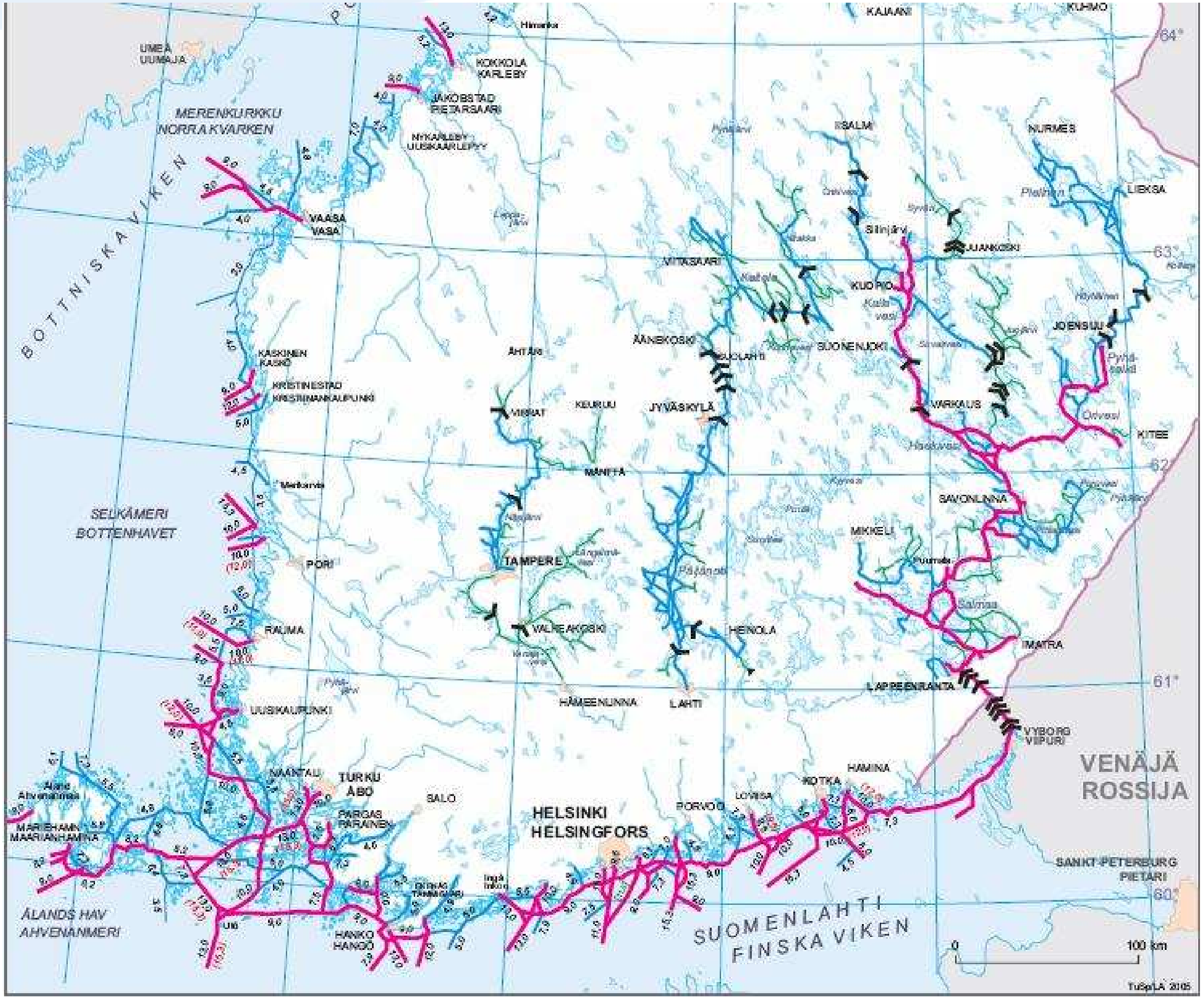
Bio energy – Case Keitele Canal

- **Keitele Canal was opened in 1993. Designed for timber floating.**
- **Timber floating has seized**
- **New power plant under construction**
- **Annual consumption 4 – 5 million cubic metres of peat and wood chips**
- **Inland waterway transport is a possibility**

Potential New Transport Needs



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Needed improvements on Keitele Canal

- Bridge heights
- Year-round Navigation
- Canal and fairways (in places)
- Lock equipment

Terminals

- Approx. 10 in lake areas south and north of the Canal

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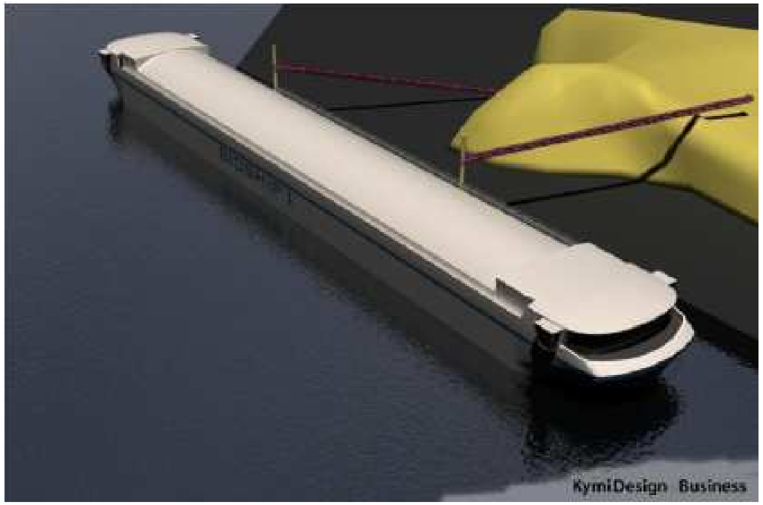
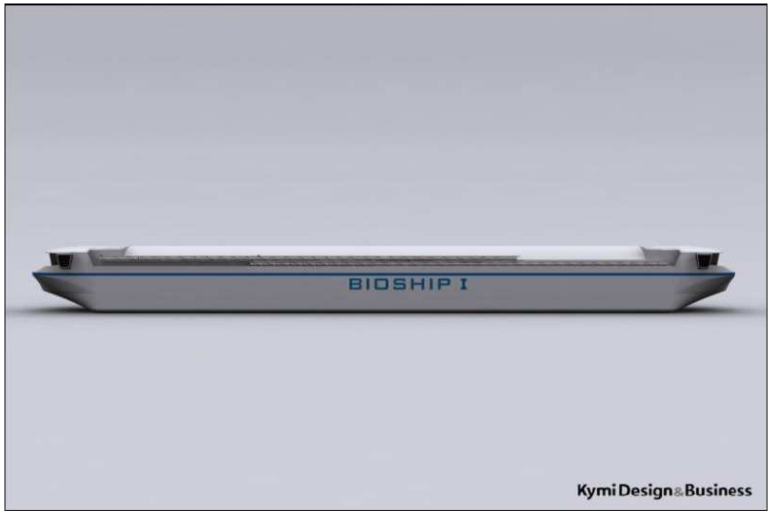
A new special vessel





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New special vessel

- **Still in design phase**
- **Ultralight, loading capacity approx. 7,500 cubic metres**
- **Draught only 2.4 metres**
- **Double diesel-electri propulsion system**
- **Pneumatic loading/unloading system**
- **Can operate in ice up to 70 cms thick**

Potential New Transport Needs

Total costs (rough estimate)

• **Canal and fairway improvements**	**25 million euros**
• **Terminals**	**10 million euros**
• **Vessel**	**25 million euros**
Total	**60 million euros**

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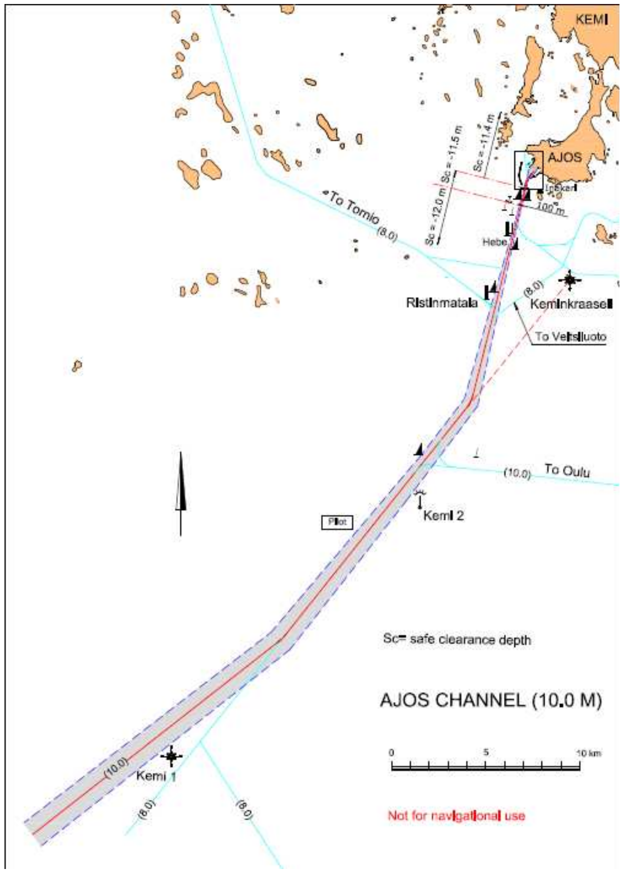
Mining projects

- Main port would be Port of Kemi
- Present annual traffic approx. 2 million tons
- Future annual traffic 15 – 16 million tons?



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Mining projects

- **Several alternatives have been studied**
  - **Port of Kemi**
    - **Approach channels with a maximum draught of 11 metres, 12 metres, 12.5 metres, 13 metres or 14 metres**
  - **Use of several ports in Northern Finland**
  - **Construction of a new port in Kalix, Sweden**
  - **Use of the Norwegian ports**
- **All alternatives require for major investments on railways and roads**

Potential New Transport Needs

Mining projects

- **Main port would be Port of Kemi**

11 metres draft	4 million euros
12 metres draft	18 million euros
12.5 metres	36 million euros
13 metres draft	80 million euros
14 metres draft	132 million euros

- **All alternatives are socio-economically very feasible**
- **Ice breaking assistance?**

Potential New Transport Needs

Conclusions

- Structural changes in the industry have major influence on the transport needs
- On short term, the global recession will reduce the transport needs considerably
- New fields of business will induce considerable new transport needs
   - ➢ Major improvements on the waterway network are needed in the future also to meet these needs
   - ➢ The waterways play a vital role in the future of transport


Thank you!