

ANALYZING RISKS INVOLVED IN HANDLING OIL AND CHEMICALS IN ESTONIAN PORTS

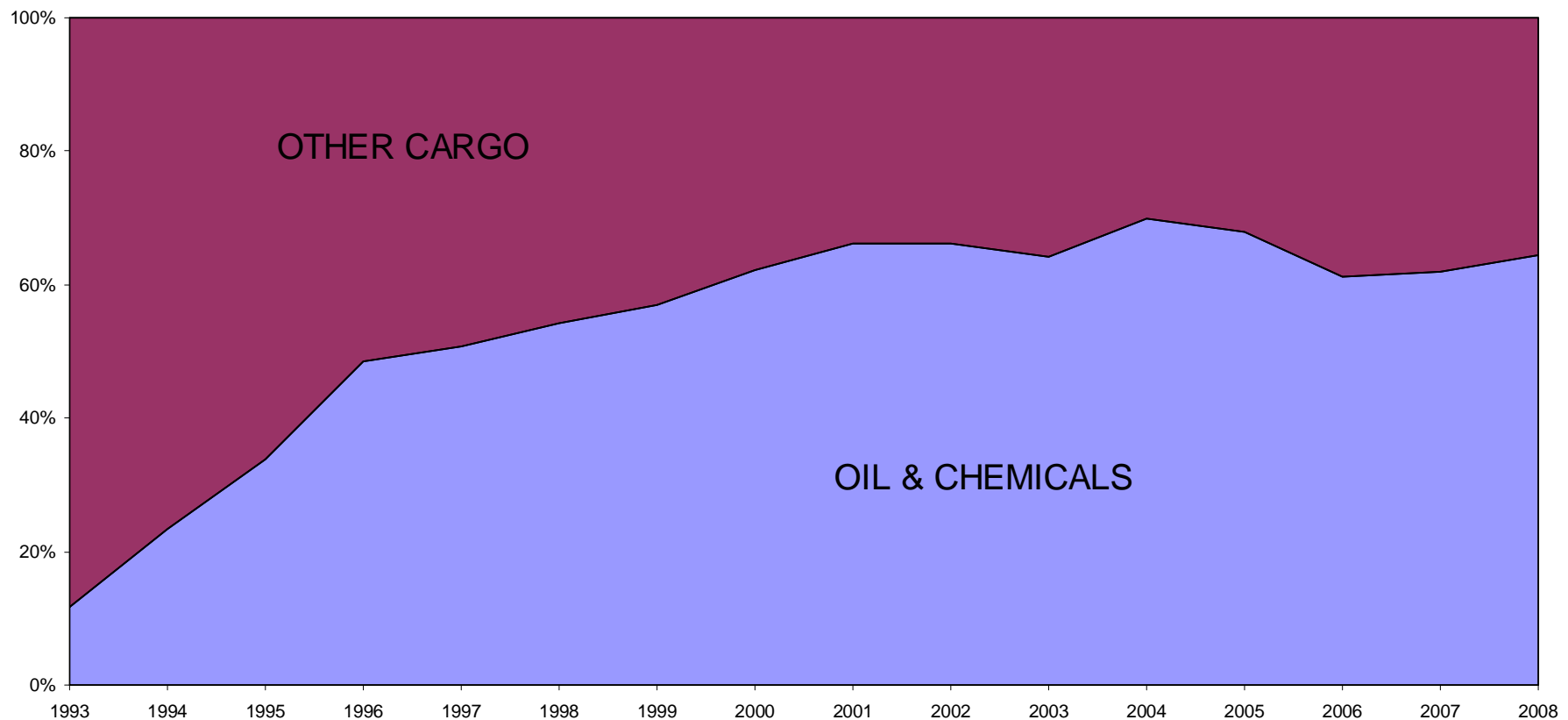
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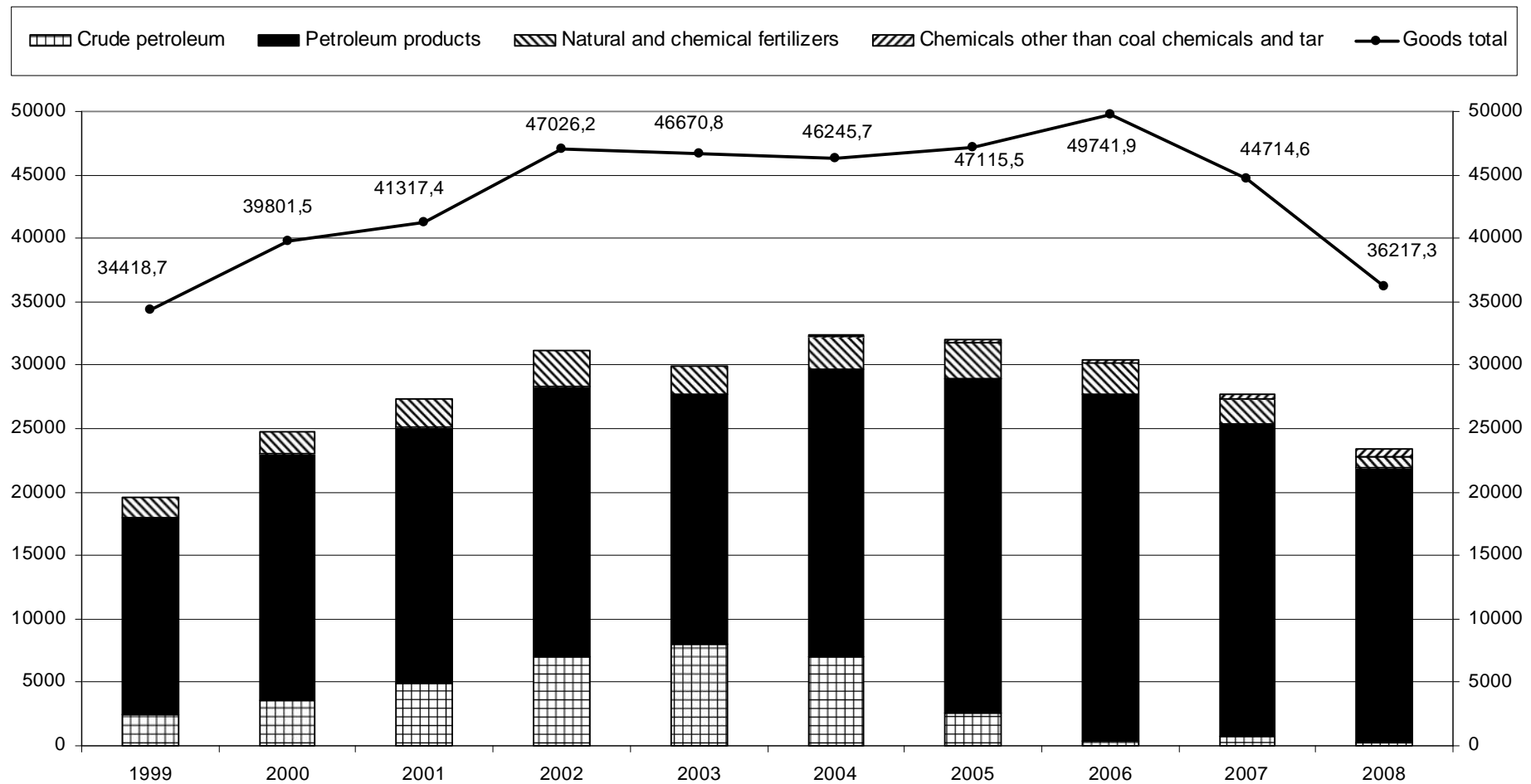
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Cargo Flows of Oil & Chemicals

- Change in Cargo Flows

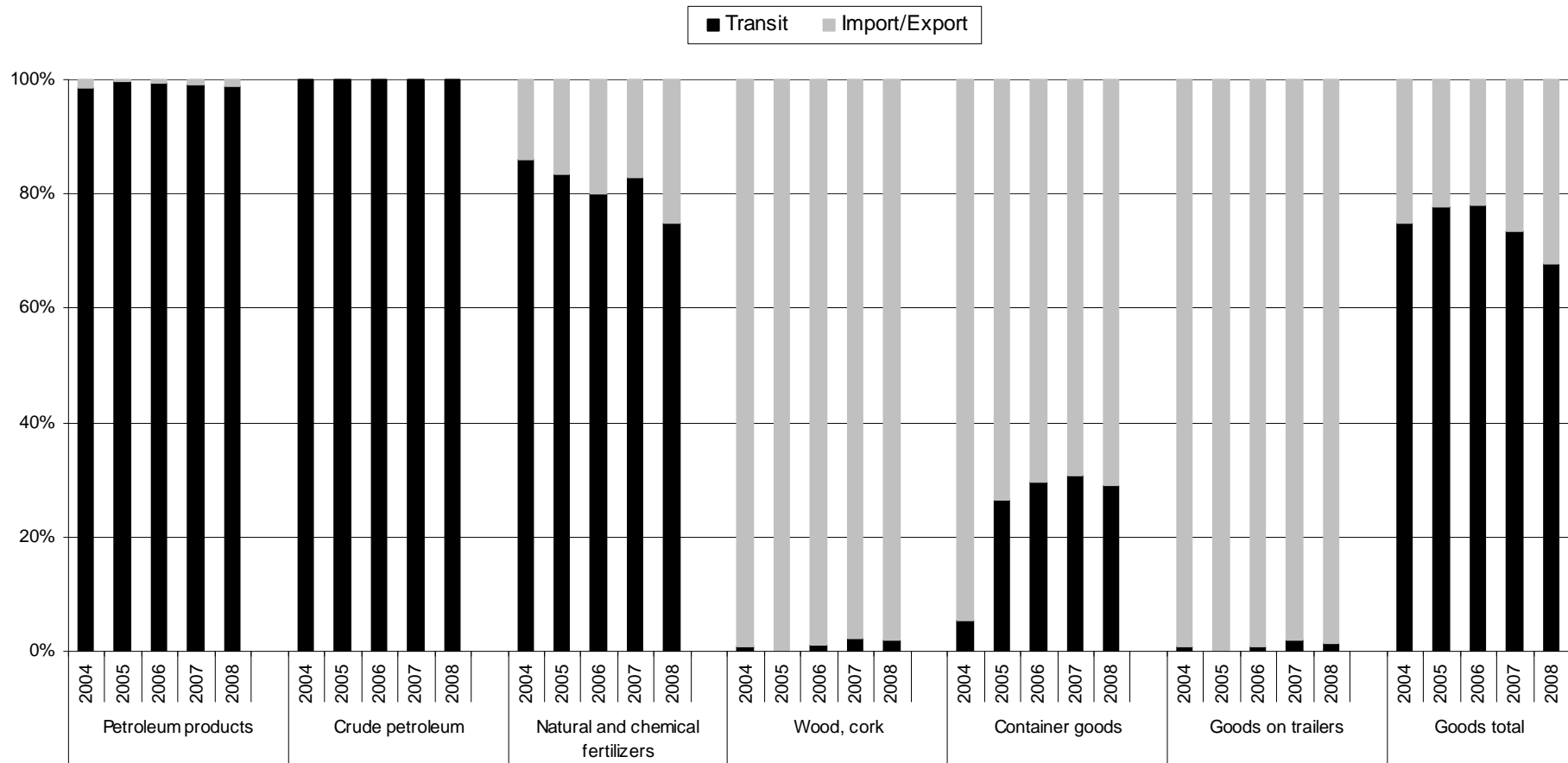


Cargo Flows of Oil & Chemicals



Cargo Flows of Oil & Chemicals

- Transit cargo share of different cargo groups



Ports Handling Oil and Chemicals

- Sillamäe
- Muuga
- Miiduranna
- Paljassaare
- Vene-Balti
- Paldiski



Railway stations serving Ports

- Vaivara
- Maardu
- Muuga
- Ülemiste
- Kopli



Defining the risks

- Environmental
- Political
- Social

Researches so far ...

... from readiness to accident point of view

Evaluating ...

... environmental problems of dangerous cargo handling

... social aspects of having dangerous cargo terminal close to the towns and living areas

Problem

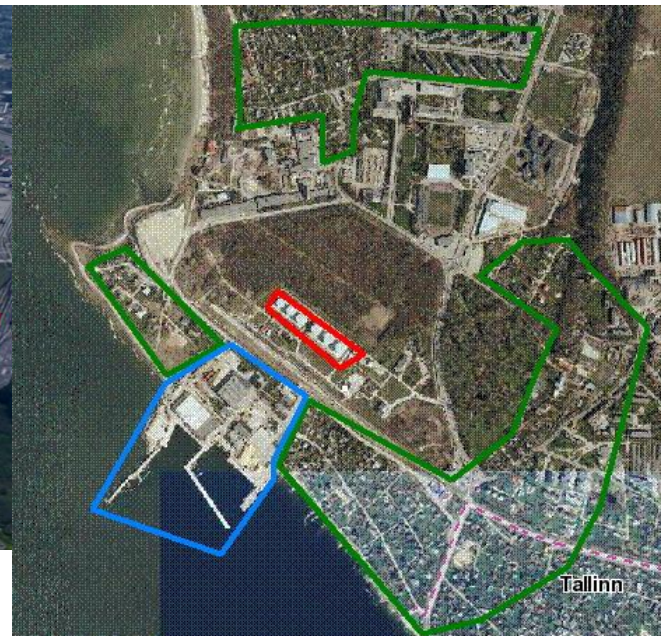
Nearness ...

... of different terminals to each other

... of terminals to urban areas



- 1 – Liquid bulk storing and loading/unloading area;
- 2 – Liquid bulk storing area;
- 3 – Dry bulk (fertilizer) area;
- 4 – Liquid bulk loading/unloading area;
- 5 – Dry bulk (fertilizer) loading/unloading area



- Port area
- Liquid storage facilities
- Urban areas in 1000 m vicinity

Domino effect



Problem

- Lack of monitoring and implementation of the legislation
- Lack of competence for that

Solution

- Intensifying the monitoring of handling the cargo
- Enforcing the limitations of concentrating dangerous cargo and establishing of objects hazardous to environment through licenses, planning affirmations etc
- Co-operation between different institutions