Chemical Logistics - infrastructure as key to success

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Recommendations of HLG on the competitiveness of the chemical industry

Logistics

- Strengthen chemical clusters
- Find solutions for congestion
- Remove bottlenecks in intermodal transport
- Revitalize rail freight transport
- Close gaps in olefin pipeline network

European chemical industry clusters

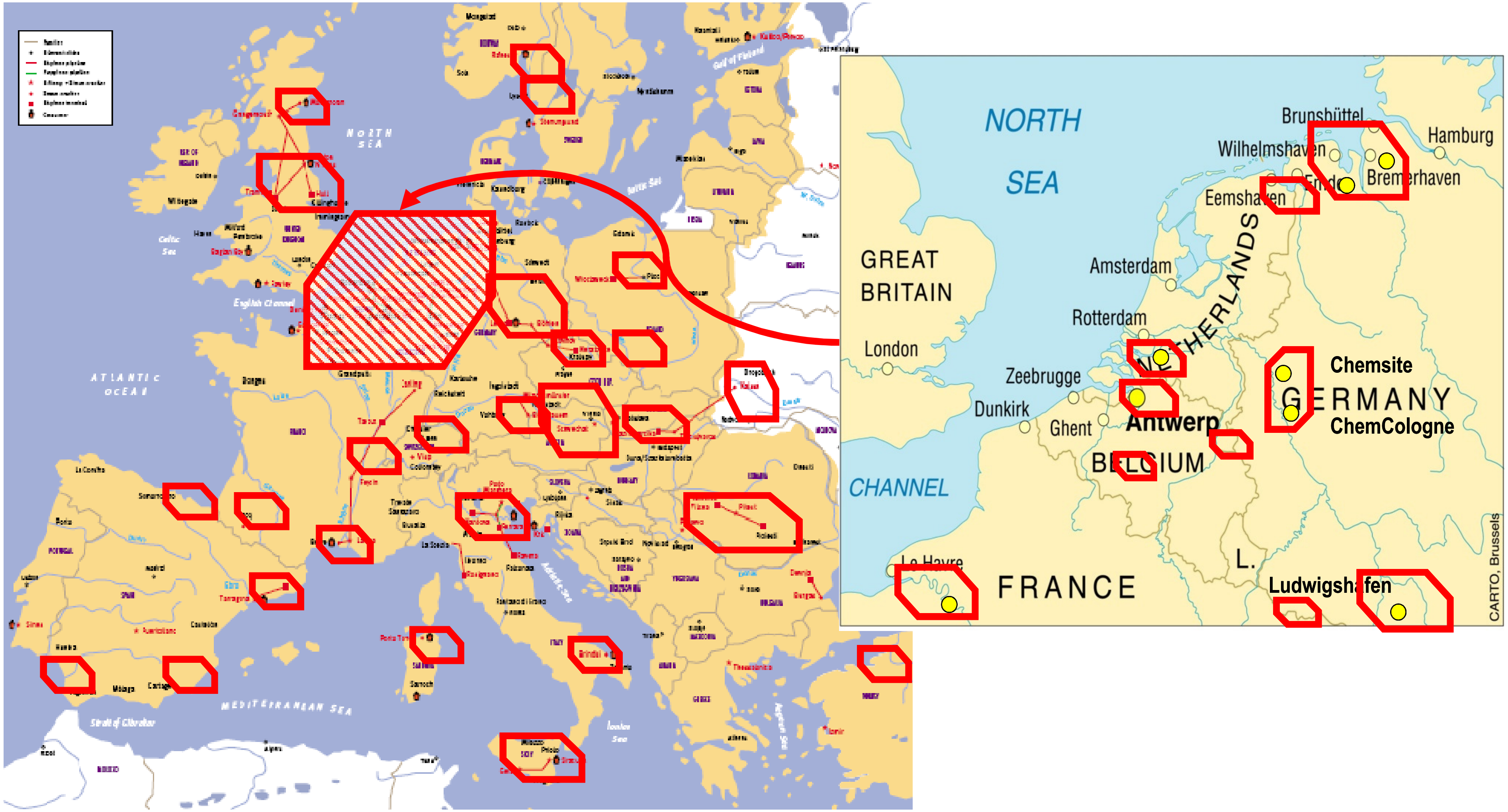
Current situation

- Europe has over 300 chemical production sites, the majority of which are located in clusters
- Most of these clusters have evolved historically around either a raw material source, a deep-sea port or the downstream customer industry
- In general Europe's chemical industry clusters are highly integrated along the product value chains

Advantages of having strong chemical clusters in Europe

- Improved **cost competitiveness** from integration along the product value chains
- **Increased investment** due to improved cost competitiveness
- **Lower logistics costs** due to a competitive offering of services within the cluster
- **Synergy benefits** from shared utilities, services and infrastructure
- Better **risk and HSE management**
- Increased **cluster critical mass**
- Better performance of individual cluster members then on a stand-alone basis

Major Chemical Clusters in Europe



Key attributes of successful clusters

- Efficient **logistics infrastructure** (proximity of a main port, terminals, storage & transport infrastructure, pipelines etc..)
- **Access to raw materials, energy and utilities** at competitive prices
- **Degree of cluster integration:** degree to which feedstock and products are linked
- **Proximity of key markets:** either B2B or downstream industries
- Availability of **efficient services** (logistics, finance, IT, packaging, security, marketing, promotion etc)
- **Cluster synergy:** sharing of utility services, infrastructure, manufacturing JV's
- **Presence of leading global companies**
- Stable **business climate** and stable **regulatory environment**
- **Investment environment:** role and support of the authorities in providing incentives and support in attracting new investment and the development of infrastructure
- Availability of **land**
- Good schooling and **educational** facilities

Recommendations of HLG on the competitiveness of the chemical industry

Clusters play an important role in improving the competitiveness of the chemical industry and should be strengthened

Strengthening of European chemical clusters

What is needed?

European and national industrial policies should support the viable clusters in their further development through

- Improve logistics infrastructure within and between clusters
- Remove bottlenecks preventing wider use of intermodal transport
- Remove regulatory barriers
- Overcome national and regional boundaries
- Close gaps in olefin pipeline network

Local cluster platforms

Pan-European cluster platform

Strengthening of chemical clusters

Development of **local cluster platforms** which should:

- Develop a strategic vision on the future development of the cluster and its interconnections
- Co-ordinate activities needed to enhance the strengths and eliminate the weaknesses of the clusters
- Facilitate improvement of the clusters' logistics infrastructure
- Facilitate closer collaboration of all involved stakeholders within clusters (chemical companies, service providers, infrastructure managers, authorities etc)

This should lead to better management of the clusters, more synergies and more investment in the logistics infrastructure.

Strengthening of chemical clusters

Development of a **pan-European cluster platform** which should:

- Provide a neutral action oriented forum with the objective of improving the general competitiveness of the clusters and proposing solutions to eliminate structural weaknesses
- Facilitate improvement of logistics infrastructure **between the clusters**
- Definition of common performance indicators and benchmarking

This should lead to more investment in logistics infrastructure aiming at a better interconnection of the clusters.

Conclusions

Europe has strong chemical clusters which are the backbone of the European chemical industry

European and national industrial policies should support the viable clusters in their further development

The chemical industries' competitiveness should be improved by improving the logistics infrastructure within and between the European chemical clusters

Investments in infrastructure should be directed

- to clusters with the potential to fulfil the performance criteria
- to connecting those potentially successful clusters

Local cluster platforms and a pan-European platform should be established to investigate and develop initiatives and investment opportunities to enhance the overall cluster competitiveness, including their logistics performance

Logistics infrastructure in Europe

- Good road infrastructure but heavy congestion in certain areas (main seaports, big cities, some big axles)
- Extensive rail network but sub-optimal use of available infrastructure
- Available inland waterways underutilized
- Intermodal infrastructure needs further development