

Clustering in and beyond the Delta region

Workshop February 27, Brussels
Cross sectorial and cross border cooperation of clusters



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The Delta region within the ARRA opportunity

Smart Delta Resources



*Cross sectorial symbiosis
in and beyond Delta Region*

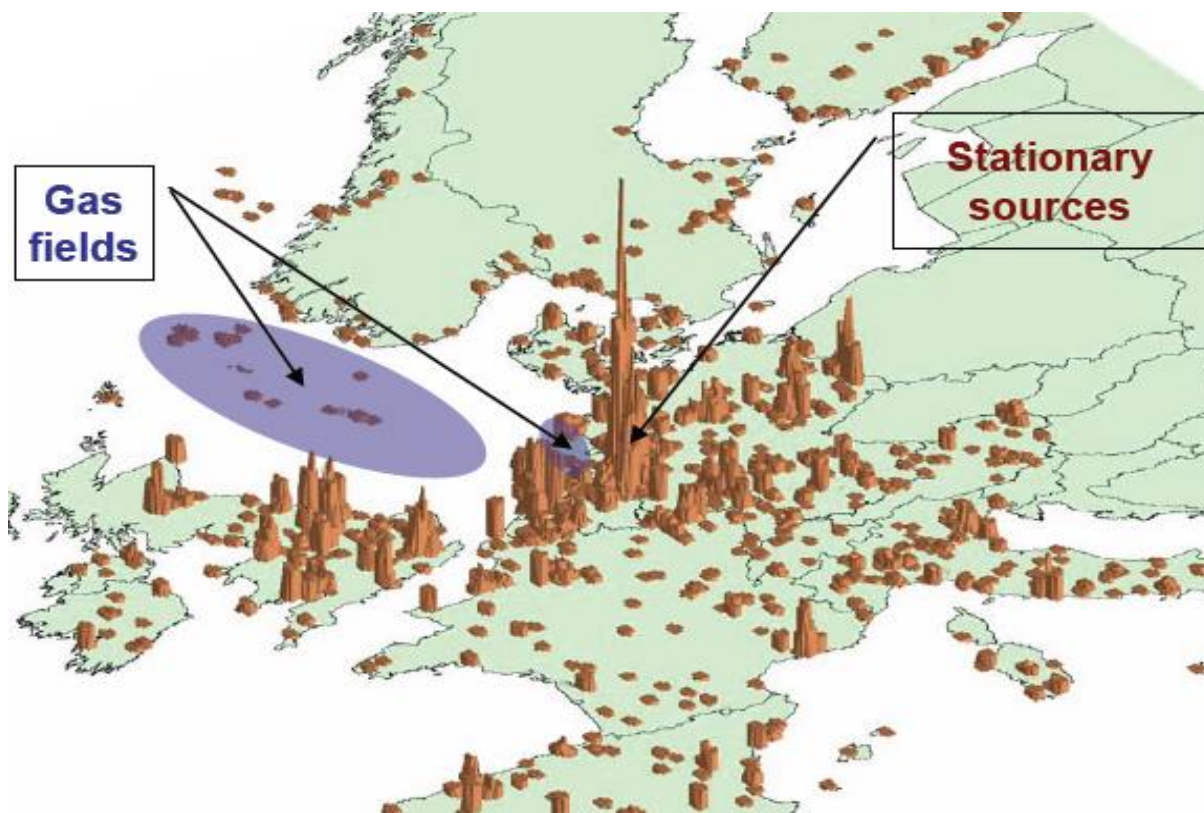
Biobased Delta



*Agro meets Chemistry
in and beyond Biobased Delta*

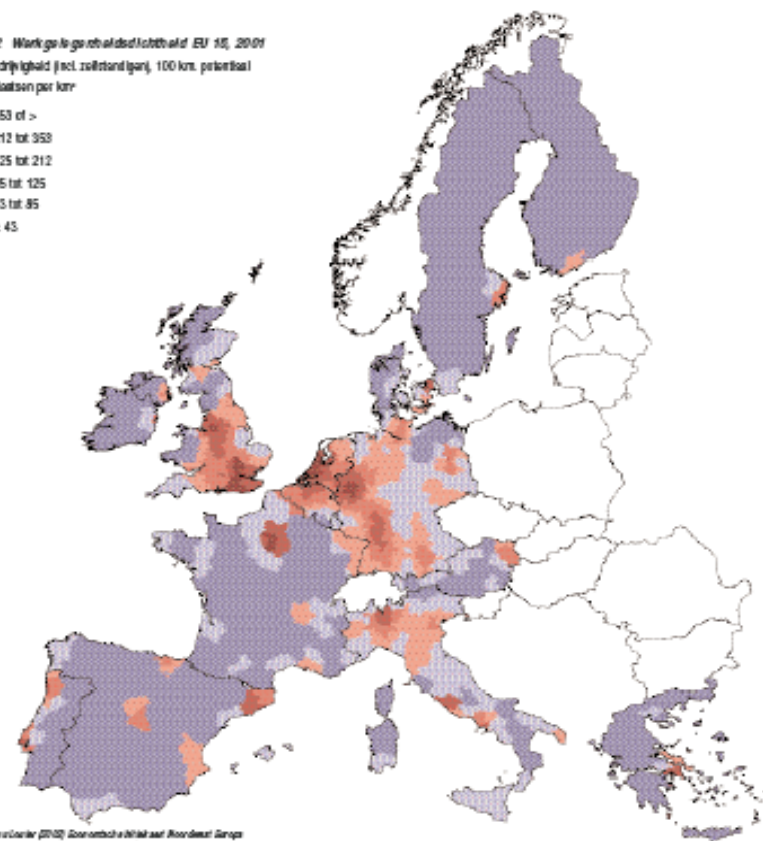
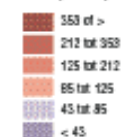
Market, technology, infrastructure, skilled people

CO₂/ha/yr



jobs/ha (red-high)

Figuur 2: Werkgelegenheidsdichtheid EU 15, 2001
Totale bedrijvigheid (incl. zelfstandig), 100 km. per regio
Arbeidsplaatsen per km²



Bron: Bureau van Lier (2002) Georechtelijke informatie Noordwest Europa

→ EU impacts !

Global Challenges for Delta & ARRRRA

- Global competitiveness European Process industry :
→ lacking resource and energy competitiveness
- How to achieve competitive biobased value chains ?

....but also

- Stellar logistics – infrastructure
- Global leading knowledge institutes and strong industry base

Synergy and symbiosis needed for sustainable transitions

Mega clustering and regional emphasis

- Ensure local collaborative approach / basis
- Connect at larger scale to drive critical mass and develop concepts



example : Big C

Bio Innovation Growth mega Cluster

An Initiative by BE-Basic, CLIB²⁰²¹ and FISCH

Supported by:

Biobased Delta, BioRegion Flanders

Example : IAR - BBDelta
Collaboration initiative



Complementarity
as basis for collaborations



Flanders, The Netherlands
and North Rhine-Westphalia



Strategic areas : Biobased Delta



Valorisation Green feedstocks

- New crops, seed and harvest technologies
Test farm De Rusthoeve (Colijnsplaat)
- Industrial symbiose: Sugarplant Dinteloord
- Varius (SME) cluster projects, incl. algae and seaweed
- Potential use of Super Heated Steam (TNO)



Green Building Blocks - Bioaromates

- Shared research program TNO, VITO, Green Chemistry Campus
- Anticipate on supply demand shortage as result of shale feedstocks
- Technology Development (TRL 1- 4)
- Performance materials, chemicals and coatings
- International collaboration

Biorizon
The way to aromatics



Strategic areas : Biobased Delta



SME – Innovation Clusters in Delta Region

- Biobased additives / biofunctionals
 - Industrial algae developments
 - Fiber clusters
 - Coating cluster
 - Natural pigments cluster
 - Pyrolyse cluster
 - Construction cluster
- 100 Companies (> Delta) engagement



Power of the Biobased Delta Region



- Strong agro and chemical sector
- Geographic position and infrastructure
- Cross border connections
- Collaboration within Triple Helix
- Open innovation (business driven)
- Topfacilities accelerate innovation



Agro meets Chemistry in and beyond Biobased Delta

Smart Delta Resources

→ Industry initiated and led – global players



- Cross sectorial : Chemicals, Steel, Food and Energy : complementary in footprints
- Improve competitiveness through Energy and Resource Symbiosis, also enabling opportunities for SME's
- Economical / Ecological and Societal synergies : Triple Helix approach

→ Mimic of the A-SPIRE (PPP) ambitions at regional level

→ demonstration / prove of concept

Why clustering ?

- Challenges for one party are too big – economics become essential driver, technology secondary
- Global Energy and Raw Material competition change – shale gas impact
 - Need for new approach to compete
 - Also opportunity for biobased solutions – product mix supply / demand changes
- Valorisation outside > within the fence : cross sectorial symbiosis opportunities

Challenges

- Culture / behaviour change : dependency of 3rd parties < economic advantage
- Ensure industry leadership



Thanks for your attention



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