



UNIVERSITY OF THE AEGEAN

Department of Shipping
Trade and Transport

Nauticus, Norfolk, March 30, 2009

Port Developments in Europe: Trends & Policies

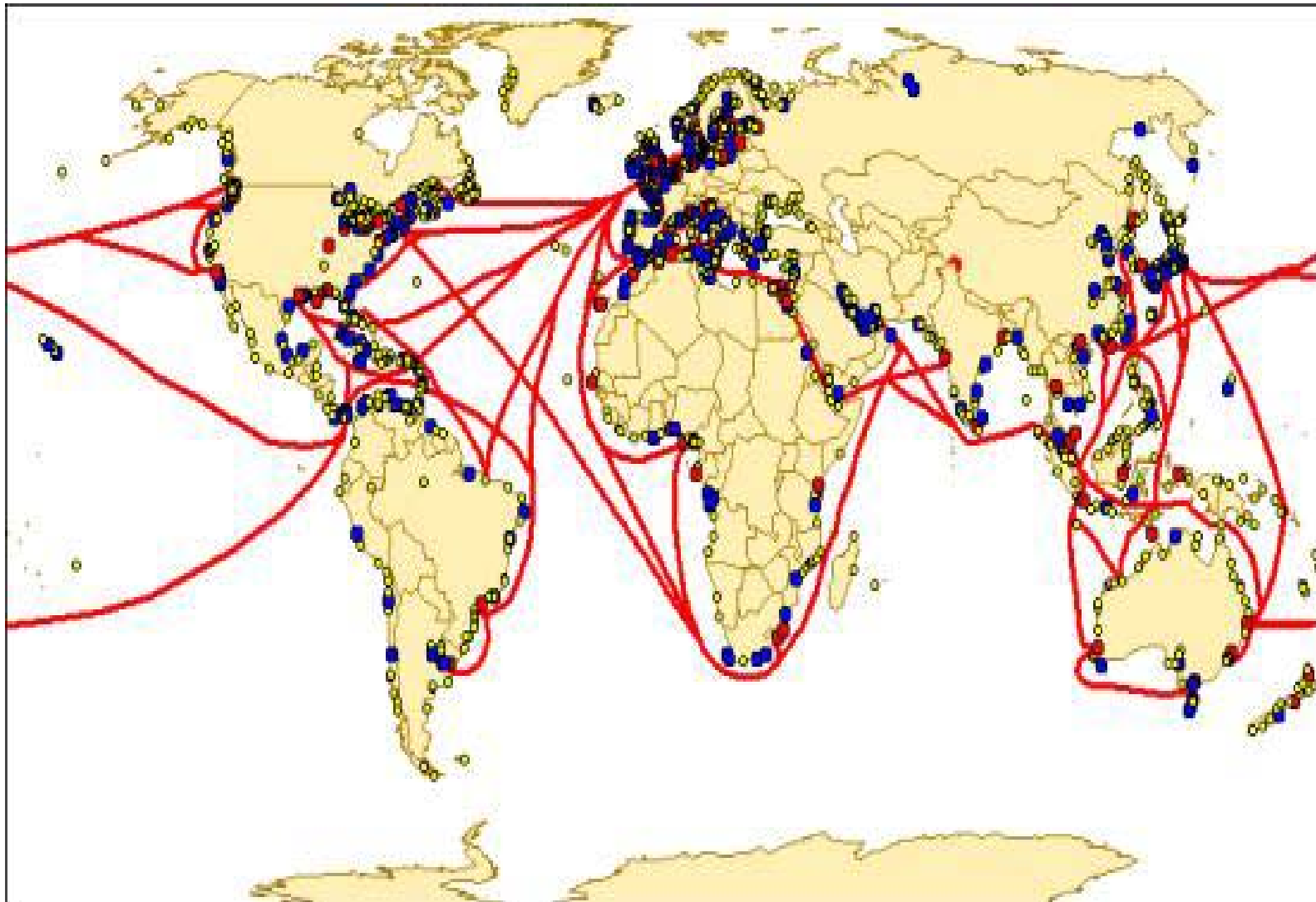
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EU: the biggest port concentration (>900 international commercial ports)



Key elements of the (new) European Port Policy

- **Designing a balanced EU port system** (...proximity, cooperation, coordination, specialisation)
- **Intra-port competition & Level playing field**
(Concessions, competition)
- **Sustainable port development**
- **Performance measurement**



Policy context of the new EPP

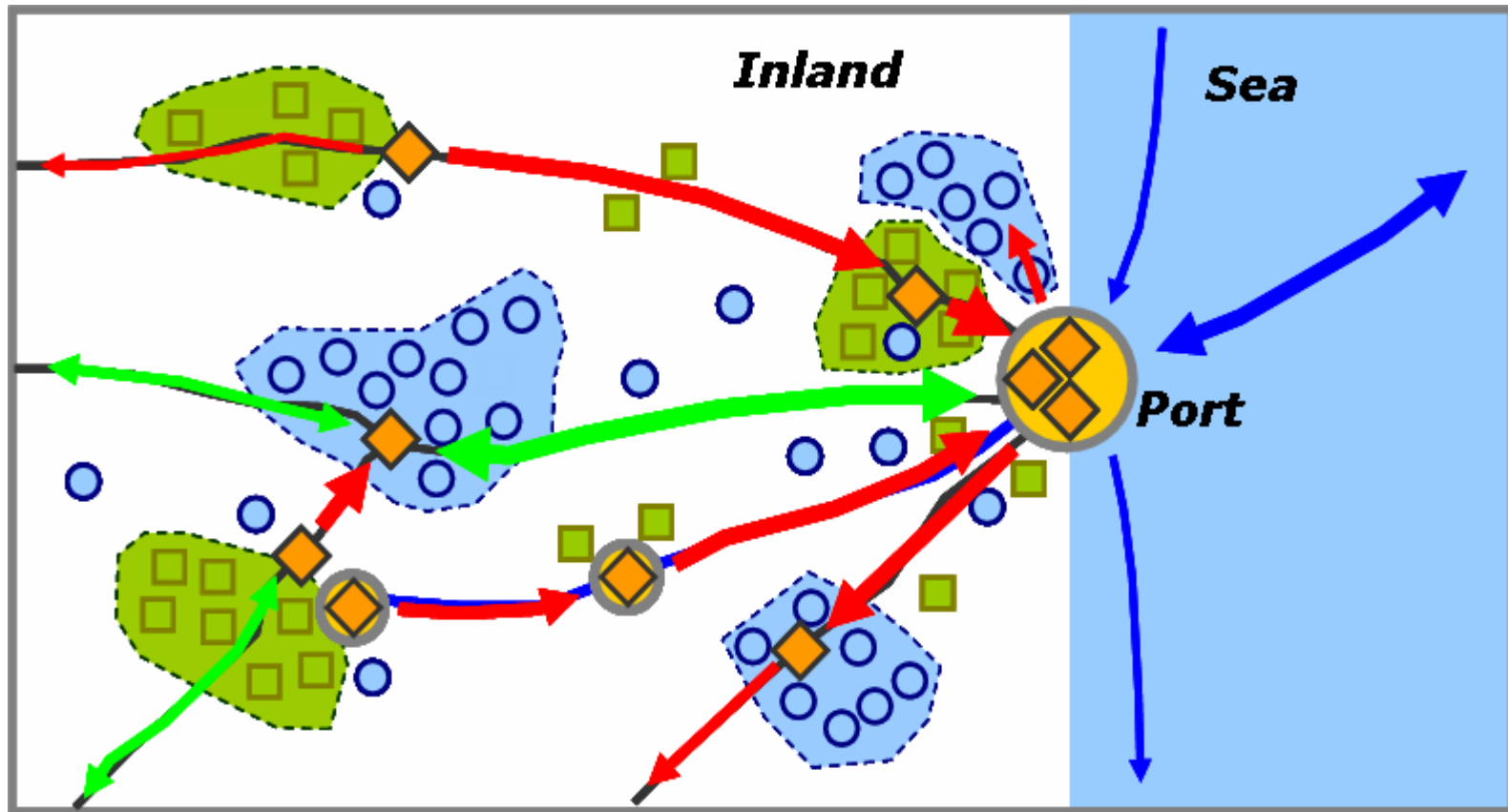
- EU maritime policy
October 2007



- EU Freight Transport
Agenda, October 2007



Port Regionalisation...



- Consumption
- Production
- ◆ Terminal / DC
- Link (mode)
- ↔ Balanced flows
- Imbalanced flows

Source: Notteboom & Rodrigue, (2005)



1. The Proximity issue

- Proximity due to geography (always there)
- Increased Proximity: **The European integration effect**
- Increased Proximity: **The (Inter- & Intra-) Industrial Developments Effect**



...& the 'Proximity problem'



The Betuwe Route

Source: PoR (2007)

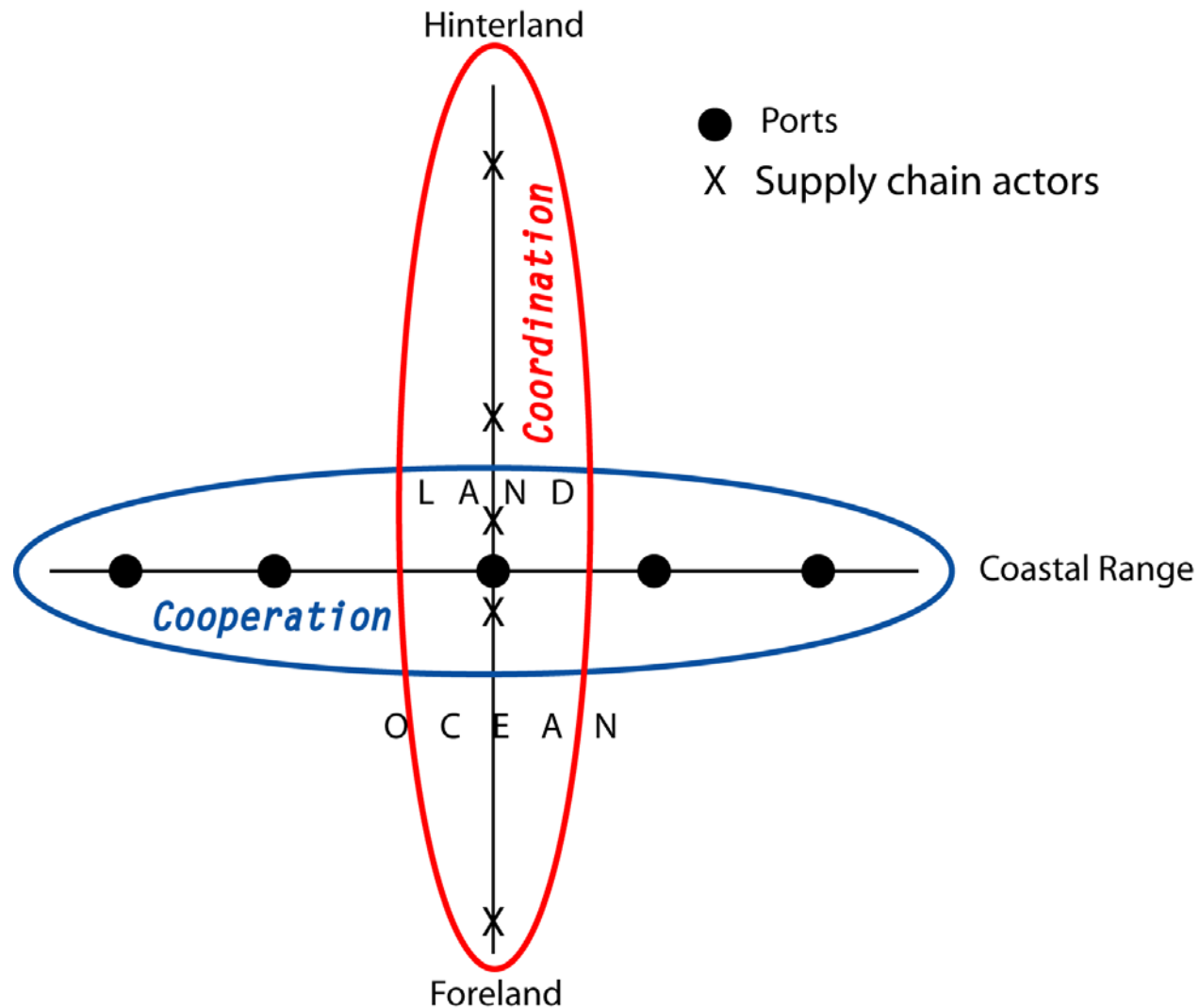




Congestion is a feature of most large seaports (this is Rotterdam).

The number of passenger cars on the port infrastructure is striking. They contribute very much to the problem.

Port Authorities Strategies: Coordination & Cooperation



Some practical examples:

Scope	<p>Port authority (PA) investments in inland intermodal terminals. (Barcelona PA in terminals in Zaragoza and Toulouse (France))</p> <p>PA investments in hinterland rail freight connections (Rotterdam, Amsterdam, Barcelona)</p>
Alliances	Transformation of Port of Rotterdam's community info system in joint venture with Port of Amsterdam.
Incentives and rules	Joint action of an association of inland barge terminals, the port authority in Rotterdam and in-port barge terminals, to agree on transshipment conditions for barges.
Collective action	Investment in port community info systems, by the Port of Rotterdam and the Port of Barcelona.
Mergers of PAs	Malmoe (Sweden) & Copenhagen (Denmark)



Recognition of the proximity issue

“Cooperation between ports and especially between those close to each other is most welcome, as it can lead, inter alia, to specialisation in cargo or ship types, and organisation & pooling of hinterland transport facilities. It would certainly lead in many cases to an improvement in output”

EPP Communication - 18.10.07



Trans-European Transport Networks

- **Targets to bring about the positive effects of cooperation via linking infrastructures**
 - inter-operability
 - inter-connection
 - complementarity of modes
- **Advances supply-chain development via hinterland integration (distribution centres, logistics etc).**
- **A more intensive use of all existing ports towards a 'more rational' distribution of traffic flows**

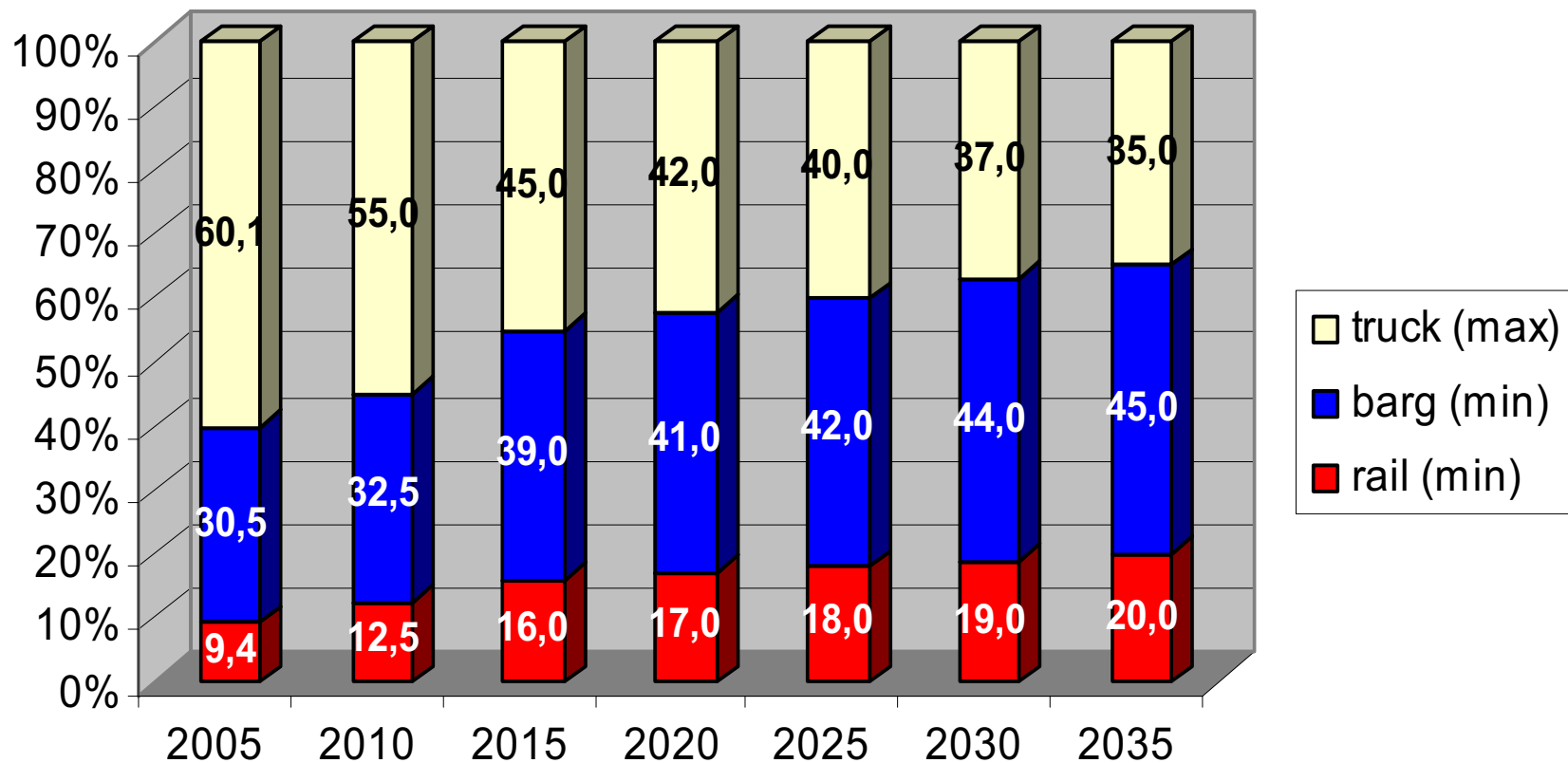


Integrating intra-EU seaborne trade: SSS

- **Motorways of the Sea**
 - Resolving bottlenecks
 - Performance indicators and quality labels
- **Simplify administrative procedures**
 - European Maritime Space without Barriers
- **Co-operation projects (R&D, Marco Polo)**
- **Formalise co-operation of ports and stakeholders:**
 - (Local, National, Regional) SSS Promotion Centres, National Focal Points, MoS Task Forces)



Port of Rotterdam Strategy: Modal Shift requirements from new concessions



2. The level playing field



- Lowering regulatory entry barriers (Concessions)
- Redefining inter-port competition



Substantial 'locational' Entry Barriers

- **Unavailability of land for entrants**
 - Natural & environmental barriers constrain port capacity
 - 'Greenfield' port development (building port infrastructure in a completely new location) is generally not a viable strategy for entry in Europe



Number of Undertakings in major Seaports

		Technical-nautical services			Terminal handling & storage/transshipment		Through-put (million tonnes 2003)
		Pilotage	Towage	Mooring	Container	Break-bulk	
Belgium	Antwerp	1	1	*	12	12	126,1
	Zeebrugge	1	1	1	4	5	25,1
Cyprus	Limassol	1	1	1	1	1	3,0
	Larnaca	1	1	1	1	1	1,9
Denmark	Aarhus	1	1	1	2	1	10,0
	Fredericia	1	*	*	1	1	16,5
Estonia	Miiduraana	1	*	*	NA	2	2,3
	Tallinn	1	3	*	3	7	37,0
France	Marseille	1	1	1	3	13	92,4
	Le Havre	1	1	1	1	7	67,4
Germany	Bremerhaven	3	2	*	15	8	42,5
	Hamburg	2	8	*	25	22	93,6
Greece	Piraeus	1	PP**	1	1	1	21,4
	Thessaloniki	1	PP**	1	1	1	14,9
Italy	Genova	1	1	1	4	12	46,9
Latvia	Liepaya	*	2	*	*	3	4,9
Lithuania	Klaipeda	*	2	2	3	5	30,2
Malta	Marsaxlokk	1	4	1	1	1	
	Amsterdam	1	1	1	4	8	40,8
NL	Rotterdam	1	3	1	19	9	307,4
	Gdansk	1	1	2	1	2	21,3
Poland	Leixoes	1	1	1	1	8	12,8
	Lisboa	1	6	1	3	12	11,3
Slovenia	Koper	1	1	1	1	1	11,0
Spain	Algeciras	1	3	*	2	2	48,3
	Barcelona	1	2	*	4	24	29,9
	Valencia	1	1	*	3	17	30,5
UK	London	1	6	*	7	8	51,0

*: Probably only one supplier; **: Pool from licensed private companies;



Top-10 global container TOs throughput (in 2006; equity based)

	Operator	Equity TEU throughput (million)	Throughput % share of World Total
1	PSA Corporation*	41,2	9,3
2	APM Terminals	32,4	7,4
3	Hutchison PH*	30,8	7,0
4	DP World**	26,2	5,9
5	Evergreen	8,1	1,8
6	Cosco Group	7,9	1,8
7	Eurogate	6,6	1,5
8	HHLA	6,0	1,4
9	OOCL***	4,8	1,1
10	APL	4,6	1,0
	Top-10 global operators	168,6	38,2%
	Other global operators	33,0	7,5%
	Local Operators	239,7	54,3%

Big-10
2006: 38,2%
2001: < 30%



* PSA acquired 20% of HPH in 2006; figures reflect this.

** DPW acquired P&O Ports in 2006.

*** OOCL has since sold most of its terminal interests;

Source: Drewry, 2007

Port Authorities in pressure

■ Existing concessions

- Suddenly confronted with a 'new' operator
 - A concession structure that has not much in common with the initial one (M&A in consortia)
 - Common user conditions turn (in essence) to dedicated services
 - Operators lock in certain carriers
- Consortia exert constant pressure to renegotiate agreements

■ New concessions

- Consortia use financial solvency and experience to limit the entrance to the market
- in spite of the expressed intentions of policy-makers for introducing intra-port competition



Guidelines (Code of practice) regarding:

- **Concession (= the dominant entry mode) procedures**
 - Criteria to evaluate bids**
 - Pricing**
 - Duration**
 - Renewal mechanisms**

- 'Commonality' for those wishing to pursue common strategies.
- 'Clarity' for competition
- How 'common' and 'clear' is the guidance?



Redefining inter-port competition

- **Financing, charging, accounting practices: clarity for all**
 - Policy limitations linked to practical problems/diversity/ confidentiality
 - Clarifying the rules of the game: *Transparency Directive & State aid rules and financing of seaport infrastructure*

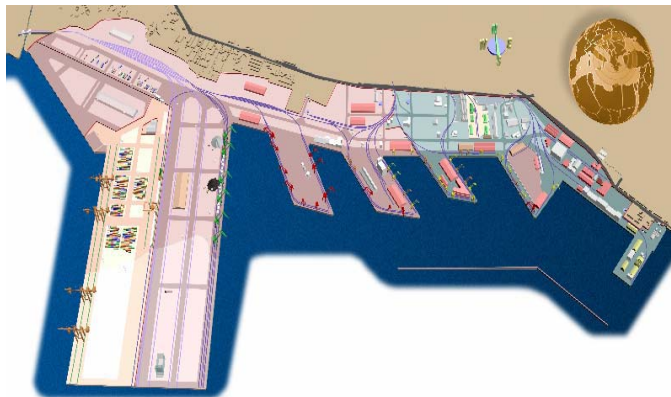


.....Concessions abandoned



July 2008

Hutchison Port Holdings (HPH) is awarded the concession of the Port of Thessalonica (Gr) (600.000 TEU to turn to 1,3 m.)



December 2008

Hutchison withdraws its interest



In the News...(March, 25)

“ DP World is working to ensure the cost of the **London Gateway Port Project** “is tailored to the world we are in now rather than six months ago” (LPA CEO)

■ Initial plan

- 7 container vessel berths, 1 ro-ro facility
- 2.7km of quayside
- 3,5 m. TEUs
- adjoining commercial and logistics centre



Delays in the Planning Process: Some Cases in Northwest Europe

	Development of initial plans	Proposed date for start operations (first phase)	Earliest date for start terminal operations
Le Havre 'Port 2000' – France	1994	2003	2006
Antwerp – Deurganck Dock - Belgium	1995	2001	2005
Rotterdam – Euromax Terminal – the Netherlands	2000	2004	2008
Rotterdam – Maasvlakte II – the Netherlands	1991	2002	2013/2014
Deepening Westerscheldt -the Netherlands/Belgium	1998	2003	2009?
Wilhelmshaven/JadeWeserPort - Germany	NA	2006	2010
Cuxhaven - Germany	NA	2006	Never
Dibden Bay – UK	NA	2000	Never
London Gateway – UK	NA	2006	????
Felixstowe South – UK	NA	2006	2008
Hull Quay 2000/2005	NA	2000	2007



3. Sustainable development of ports



- Environmental legislation
- Port-city relations



The Maasvlakte II (Rotterdam) story..



‘Green’ concerns threaten the progress of the major port-project in Europe: Maasvlakte II (Rotterdam)

- **Project slips further behind schedule due another round of legal objections from environmental lobbyists**

The London Gateway story..

■ London Gateway Port

- 7 container vessel berths, 1 ro-ro facility
- 2.7km of quayside
- adjoining commercial and logistics centre

■ Condition:

- agreement between port promoters and authorities that the impact on the local area is adequately catered for

■ Process

- Public inquiry into the applications
- Conditions to mitigate the large scale impacts
- Permission for Adjacent Logistics - Commercial Centre - Business Park



In the News... (Sept, 31)



“The possibilities to construct new infrastructure are limited and must be reconciled with environmental concerns”

Commissioner for Transport



A Long List of 'Green' Issues



■ Cargo Handling operations

- Land take
- Congestion



■ Port maintenance /expansion activities

- inland expansion
- maritime expansion (dredging)
- management of disposal



■ Recreational activities



■ Port Refuge



Environmental Challenges: Local



- Port area
- Tenants & Operators
- Port-City links
- Stakeholders
- Risk and cost
- Political & market uncertainties



Air quality & Dust – (initiatives to reduce ship emissions)

- **Legislation on marine fuel sulphur** (2005) limiting to 0.1% by mass the S content of marine fuels used by ships at berth, from 1 January 2010 (0,15% as from August 8, 2007).
- **Promotion** of the use of shore-side electricity (controversial..)
- **Study** into market-based instruments, including environmentally differentiated port / fairway dues
- **Clean Marine Award**, for which ship operators, shippers & ports which promote low-emission shipping will be eligible to apply (ESPO associated)



Noise - requiring public noise maps & action plans

Assessment and Management of Environmental noise

- applies to:
 - agglomerations having over 250,000 population by 2007 – to expand to 100,000 popn by 2012. **Affects many port cities.**

- Application to ports:
 - **noise maps** showing average annual noise levels, with special emphasis on hinterland activities
 - **action plans** to be prepared saying what, competent authorities will do to manage noise



Environmental legislation affecting ports

- **Demands the search for ‘alternatives’**
 - Environmental Impact Assessment Directive
 - Strategic Environmental Assessment Directive
 - Birds and Habitats Directives
 - ...
- **Assessment of ‘alternative solutions’ for port development projects**
 - Within a port?
 - Within a range of ports in a given Member State?
 - Within a range of ports in different Member States?
- **Expected Guidelines on the application of EU environment legislation to port development**
- **Initiatives to promote a structured dialogue between ports and cities and a positive image of ports**



Technical Problems still exists - Dredging and sediment management

- Additional controls on dredging and dredge disposal activities with potentially significant cost implications.
- Natural differences in sediment characteristics & different effects from activities within areas.
- Some ports (i.e. Rotterdam, London):

Maintenance Dredging Frameworks



Conflict between port needs and the application of 'green rules'

- **Difficulties in carrying out a specific project**
 - Large number of competent authorities don't carry out the assessment process in a rapid, simple and transparent manner.

- **Lack of integration between transport and environmental policies**
 - Promotion of SSS (environmentally friendly)
 - Environmental legislation (impedes certain necessary infrastructural works in ports).



Conflict between port needs and the application of 'green rules'

- **Lack of consistency in Rules Implementation - different interpretation of**
 - “likely significant effect”
 - “adverse effect”
 - “public interest”

- **Lack of integration between environmental and economical needs of:**
 - Society**
 - Port Entities**



Follow the tide?

Environmental Management in Practice

Environmental Management Component	1996	2004	2006	% + or -
Environmental Plan?	45	62	82	+37
Plan aims for 'Compliance-Plus'?	32	48	72	+40
Does Plan aim to raise Environmental awareness?	44	69	68	+24
Is Environmental Monitoring carried out?	53	65	72	+19
Does Plan involve community & Stakeholders?	53	39	78	+25
Is ESPO Code available?	41	53	53	+12
Designated Personnel?	55	67	88	+33



Environmental Management in Practice

Management Component	2004	2006	% + or -
Review Environmental Management Programme?	43	50	+7
Publish review?	33	79	+46
Policy made available to Public?	64	89	+25
Environmental Performance Indicators?	50	62	+12
Environmental Management System?	20	57	+37

Source: www.espo.be



Voluntary self-regulation seems to be essential: (e.g. ECOPORTS Foundation)

- Self Diagnosis Methodology
- Port Environmental Review System
- Issue-specific Workshops
- Training Schemes
- Environmental Performance Indicators (EPI)
- Environmental Management Systems (EMS)
- Best practice Guidelines



4. Port performance measurement

■ Most commonly used indicators: Productivity- Utilization Measures

- Quay productivity: Containers or cargo tones / meter / year
- Terminal Area productivity: Containers or cargo tones / m² / year
- Storage Area productivity: Containers or cargo tones / m² / year
- Crane utilization: Containers or cargo tones / year (and % of the nominal output)

■ There are some Service Quality Measures...

- Usually used by PAs and operators -not publicly available



The search for KPIs is part of the agenda

- **Elaboration of Key Performance Indicators (KPIs) is expected by the end of 2009.**
- Potential: Development of Benchmarks on
 - Productivity
 - Service levels
 - Barge waiting time
 - Road vehicle service quality index
 - Ship service quality index
 - Connectivity



Vital questions (still to be answered)

- **What is a port?**
- Is port policy a *transport* policy or an *industrial* policy?
- Are ports like any other commercial enterprises?
- How can we establish common rules for *all* ports?



Thank you
for the attention
& for the invitation

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