Prospects and Challenges of Rail Ferry and Ro-Ro Shipping between TRACECA Countries in the Caspian Basin

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Overview

- A changing environment
- A strong market demand
- The intermodal transport offer in the Caspian Sea
- Improving the transport supply further
- The Rise of Malcolm Mc Lean
A Changing Environment

- The Globalization of the Economy entails:
  - an always greater world-wide division of labour
  - the permanent delocalization of a number of industrial activities from developed to emerging countries then from emerging countries to less developed countries

  Globalization will ineluctably bring about an increase in the transit function and maritime role of the Caspian Sea TRACECA littoral countries which have also recognized the socio-economic benefits they can expect from these developments. Expressions of political will to implement necessary corresponding measures start being heard.

- The Supply Chain concept based on uninterrupted just-in-time delivery has become the world-standard for the transportation of goods
Garment Traffic from Belgium to North Africa

Dendermonde-Marseille-Casablanca/Tunis

Author: C. Schürmann
A changing environment

- New patterns have appeared in shipping transport especially on main long-haul East-West routes:
  - unexpected concerns emerged in relation with the safety of sea-borne transport due to the revival of high-scale piracy on crucial shipping arteries and congested narrow chokepoints
  - container ship overcapacity is exacerbating rate wars between shipping lines

In 2007 606 cellular container vessels representing 3,638,000 TEU were ordered for a value of 53.2 Bios USD bringing the world yard order book to 1,462 ships totalling 6,960,000 TEU or 63.7% of the fleet existing at the time. Half of the capacity on order was for vessels of 8,000 TEU and more with deliveries spreading up to 2012
A Changing Environment

✓ Freight rates have therefore become volatile apparently for the benefit of Shippers. However they remain at an unsustainably low level for the Ocean Carriers to break even and keep on offering the same quality of service as during pre-GFC times

✓ Fluctuating but generally increasing oil prices have spurred Shipping Lines to introduce slow steaming allowing to reduce fuel consumption and therefore costs. This results in longer transit-times (+ one week between the Far-East and Europe)
A Changing Environment

✓ The ever-increasing size of container vessels poses a threat to a number of today direct ports-of-call which are unable to handle them. As a result many – including major ports in Asia and Europe - could therefore be served by feeder only in the future.

All these factors weigh more and more on Users’ inventory costs and lead them to reconsider their established routes and modes of transport.

The development of fast tracks and alternative modes to round-the-world sea-borne transport only is now a must.
Logistics Processes and Motorways of the Sea II
ENPI 2011/264 459

M/S MAERSK MC KINNEY MOLLER
400 M LOA / 59 M WIDTH / 73 M HEIGHT
18,000 TEU........the first of 20!
A Strong Market Demand

- The number of Turkish trucks driven to Central Asia destinations and through Central Asia to Afghanistan and Pakistan increased by 170% between 2005 and 2011 (16,921 to 45,484)

- Crossing Iran (because of the sanctions) or Russia (because of the country’s protectionist policy) is more and more difficult

- The rail ferry traffic between Baku, Aktau and Turkmenbashi is also booming: between 2008 and 2012 the number of wagons carried grew from 32,726 to 62,972 (+92%) and the cargo tonnage from 2,089,000 T to 3,873,000 T (+85%)
Turkish Truck Flows to Central Asia

Number of trucks running from Turkey to Central Asia in 2011

- **Turkey** (45,484 trucks towards Central Asia in 2011)
- **Kazakhstan** (5,371 trucks)
- **Uzbekistan** (4,768 trucks)
- **Turkmenistan** (27,995 trucks)
- **Kyrgyzstan** (1,496 trucks)
- **Tajikistan** (2,110 trucks)
- **Afghanistan** (3,484 trucks)
- **Pakistan** (299 trucks)

Author: C. Schümman, 2013
The Scope of the TRACECA Concept is Changing:

the Regional Corridor created in 1993 to link Western Europe to Eastern Europe, Caucasus and Central Asian countries is becoming a Trans-continental Axis connecting Europe to China truly renewing the Silk Road
The Intermodal Transport Offer in the Caspian Sea

Considerable infrastructure investments are going-on:

- the new Baku Port and International Logistics Center at Alyat,
- the renovated railway link Baku-Tbilisi-Kars which could link Asia and Europe through Anatolia and the Marmaray Tunnel under the Bosphorus,
- the railway connection Zhezkazgan-Beineu which will shorten the distance between the Chinese border and the Caspian Sea by 1,000 km,

All these projects will become operational in the next 3 years.
The Intermodal Transport Offer in the Caspian Sea

- Plans for the rehabilitation and extension of the ports of Poti, Aktau and Turkmenbashi and construction of logistics centers in the 2 Caspian ports have been approved and are under implementation or due to be implemented soon.

- Soft measures which aim at facilitating trade and border-crossing procedures are also either under implementation or considered in all the TRACECA countries: Georgia is working at implementing the PAIES system with Ukraine. Discussions on advanced exchange of information and unification of transport documents are going on between Customs Services and Railway companies of the countries involved in the ‘Silk Wind’ Project.
The Intermodal Transport Offer in the Caspian Sea

- CASPAR has renovated and up-graded its rail ferry / Ro-Ro fleet over the last 5 years
  13 vessels with wagon capacities up to 54 units per ship are now operated between the 3 TRACECA Caspian Sea Ports

- KAZMORTRANSFLOT, the National Shipping Company of Kazakhstan, should launch a tender for the building of 2 rail ferries in July 2013

- The Government of Turkmenistan intends to acquire 2 modern Ro-Pax vessels to be built at the Pula Ulyanik Shipyard in Croatia
Logistics Processes and Motorways of the Sea II
ENPI 2011/264 459

M/S BALAKEN / 54 wagons – built 2012

© Ivan Sinovcic
MarineTraffic.com
The Intermodal Transport Offer in the Caspian Sea

The tonnage deployed in the Caspian allows to cover wholly the existing and potential Ro-Ro and Rail Ferry trade.

However, although offering frequent departures, the existing services cannot work according to regular schedules because of inadequate/obsolete port handling and border-crossing procedures as well as delays in railway operations and planning, insufficient port railway equipment and shunting tracks.
The Intermodal Transport Offer in the Caspian Sea

- This results in waiting times at roads, excessive berth occupancy and under-utilization of the ports and of the rail-ferry fleet.

- The same applies for the Ro-Ro services reducing their attractiveness for trucking companies and hampering their development while the market demand for this type of transport is huge and increasing. The difficulty is even greater in the case of the Ro-ro trade due to the lack of adequate berths in Aktau and Turkmenbashi.
Improving the Transport Supply Further

- Infrastructure: this is an important component but time is needed before the benefits of corresponding investments can be reaped

- Soft measures: efficient procedures reducing border-crossing, port handling and sea-passage transit-times can be implemented quicker and more easily. A better asset-management results in a reduction of operating costs, improved attractiveness of the existing services, and therefore in an increased trade volume. Besides, such steps have to be taken compulsorily before the completion of infrastructure works so as to ensure the optimal use of the rehabilitated / new facilities and the best return on investment, especially in case same is financed through loans
Improving the Transport Supply Further

Soft measures involve no or very small investments. Vocational staff education and training often represent the main part of corresponding projects. For the LOGMOS Project, in the Caspian Basin, they address:

- Border-crossing issues which are twofold:
  - Customs procedures on the borders (ports) must be quicker, simplified and harmonized in accordance with international conventions signed by the TRACECA member States, and made well-known in advance to the user. This is evidently best achieved where governmental agencies use pre-declaration systems (TIR-EPD, PAIES, NCTS)
  - Port procedures which include planning of the berthing and handling of vessels, vessels’ inward and outward clearance, cargo storage monitoring, implementation of port community systems and users’ friendly information portals
Improving the Transport Supply Further

The ultimate targets are:

- To reduce and possibly eliminate waiting time at roads and at berth for vessels plying regular services, Rail-ferries, Ro-Ros and Ro-Pax, and, in the future container feeder vessels

- To improve the predictability and therefore attractiveness of these services and meet the market requirements by having them running on schedule
Improving the Transport Supply Further

➢ To develop gradually electronic pre-booking / advanced payment systems for Ro-Ro and Ro-Pax vessels equivalent to those existing in other seas, enhancing the reliability of Caspian liner shipping services

➢ To foster when possible the use of common transport documents (such as the CIM / SMGS common railway consignment note) enabling to develop seamless international block container train operations across the Caspian

➢ To support the implementation of integrated intermodal tariff platforms to enable users to obtain easily transparent door-to-door quotations
All this can result only from a close, concerted, permanent cooperation between stakeholders throughout TRACECA.
The Rise of Malcolm Mc Lean

In the rest of the world many transports which earlier took place in wagons and on rail-ferries are now carried out in trucks and Ro-Ro vessels but even more in containers

There are no dedicated container services in the Caspian Sea. The only regular container operation is the carriage of NATO humanitarian cargo to (from?) Afghanistan performed by non-specialized general cargo vessels.

Globalization and integration of TRACECA economies in the world’s economy will unavoidably call for the set-up of fully-fledged container shipping and shore services in the Caspian Region

In turn containerization will help TRACECA countries to develop and enlarge their trade
The Rise of Malcolm Mc Lean


Effects of containerization (UK/Europe)

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<thead>
<tr>
<th>Pre-container: 1965</th>
<th>Container: 1970/71</th>
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<tbody>
<tr>
<td>Productivity of dock labor</td>
<td>1.7 (tons per hour)</td>
</tr>
<tr>
<td>Average ship size</td>
<td>8.4 (average GRT)</td>
</tr>
<tr>
<td>Port concentration (number of European loading ports, southbound Australia)</td>
<td>11 ports</td>
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<tr>
<td>Insurance costs (Australia-Europe trade for imports)</td>
<td>£0.24 per ton</td>
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<tr>
<td>Capital locked up as inventory in transit (Route: Hamburg-Sydney)</td>
<td>£2 per ton</td>
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The Rise of Malcolm Mc Lean

Source: Authors' own calculation
Thank you for your attention!

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