Integrated Intermodal Transport and Logistics Development for the NE Asia

October 24, 2012

Dr. Sungwon Lee

The Korea Transport Institute
Contents

- Rationale for Infrastructure Development
  - Infrastructure Development and Economic Growth

- Transport in Northeast Asia
  - Trends in Northeast Asia
  - Transport and Logistics Trends in NEA
  - Economic Exchange Prospects
  - Physical Bottlenecks
Infrastructure Developments in Northeast Asia
- Infrastructure Development Needs for Northeast Asia
- Effects of the TKR-TSR and Other Continental Railway Linkage

Institutional Barriers and Framework for Integration
- Institutional Barriers
- Legal Framework for International Transport in NEA
- Strategies and Actions
- An Example
- Connections to Central Asia and Europe
I. Rationale for Infrastructure Development
Infrastructure Development and Economic Growth

• Well developed transport network and facilitation of flow of goods is a precondition to sustained economic growth

• Enables world market access
  - Provides transportation and logistics services to cities and industrialized areas
  - Connects hinterlands to logistics hub

• Prerequisite for regional peace and mutual prosperity
  – Need for an efficient transport and logistics network
• South Korea and Taiwan: Successful cases of economic growth through infrastructure development

• Regional Cooperation is required for building an integrated transport network and removing institutional barriers
II. Transport in Northeast Asia
Trends in Northeast Asia

- Northeast Asia (NEA) is one of the most economically vibrant regions in the world
- Rapid economic growth: Over two times the world average
  - Annual GDP growth rate of 6.4% (NEA) vs. 2.4% (Worldwide)
- Rapid growth in transport demands due to increased socio-economic activities
Transport and Logistic Trends in Northeast Asia

- Rapid increase in road transport
  - Increased road pavement ratio (e.g. China)
  - Advent of motorization

- Decrease or stagnation of rail transport

- Active railway development in East Asia (e.g. China)
Physical Bottlenecks

- Deficient transport related infrastructure in most Northeast Asian countries (excluding Japan)

- Many missing links
  - Disconnections in the Korean Peninsula

- Lack of intermodal transport facilities

- Lack of technical compatibility and interoperability at border crossing points

- Delays in customs

- Safety and reliability problems
Map of Northeast Asia

Proposed Integrated Transport Network in North-East Asia
III. Infrastructure Developments in Northeast Asia
Infrastructure Development Needs for Northeast Asia

- $16-160 Billion US Investment required for infrastructure development in NEA per year
- $5-15 Billion US external financing is estimated to be required
- China has the biggest share
- Roads, airports, ports, railways, pipelines, power plants, etc,
Trans Euro-Asian Railway

TSR
Moscow~Tumen
9,766km

TMGR
Moscow~Ulan Baatar~Beijing~Shineuiju
8,460km

TMR
Moscow~Manjouli~Namnyang
7,973km

TCR
Moscow~Arasankow~Beijing~Shineuiju
9,584km
Effects of the TKR-TSR and Other Continental Railway Linkage

- Reduce transportation and logistics cost
- Expand economic cooperation between South and North Korea with the help of direct trade
- Increase Korea's potential for a regional transportation hub for Northeast Asia
• Expedite constructive progress in Inter-Korean reconciliation and unification

• Reduce political and military tension in Northeast Asia on the basis of mutual trust and cooperation
IV. Institutional Barriers and Framework for Integration
Institutional Barriers (1)

CASE of KOREA

- Retarded 3PL logistics market and environment
- Restrictions on custom related activities
  - Customs brokerage
- Restrictions in short sea shipping
Institutional Barriers (2)

CASE of CHINA

- Problems in rail freight services
  - Non-ISO standard containers
  - Too many ICS (Inland Container Stations)
- Lack of 3PL demands
- Restrictions on foreign investments in transport industry (To be reduced substantially)
Institutional Barriers (3)

CASE of JAPAN

- Problems of Prior Consultation system
  - Major institutional barrier for foreign operators
  - Japan Harbor Transportation Association exerts monopoly power in harbor related services
- High costs in harbor and inland transportation
- Restrictions in container transport by rail and road
- Separate EDI system
Legal Framework for International Transport in NEA

- Analysis of existing bilateral agreements and the progresses
- ESCAP Resolution 48/11 on road and rail transport modes in relation to facilitation measures
- SMGS Agreement (Agreement on International Goods Transport by Rail of 1 November 1951) of the Organization for Railway Cooperation
- Enlarging the scope of Transit Traffic Framework Agreements
Toward Integrated Transport and Logistics System in NEA

- Identification of physical and institutional barriers in transport system
- Integrated transport system for increased access to world markets and developments of hinterlands
- Compatibility in legal and institutional framework
- Restoration of missing links
- Deregulation in transport markets
- Cooperation through international organizations
Strategies and Actions (1)

Introduction

1. Well integrated transport infrastructure and facilitation of flow of goods is a precondition to trade and economic growth.

2. North-East Asia: Rapid progress in infrastructure development
   * Different level of development

3. Need for an efficient integrated transport network
Strategies and Actions (2)

Issues Identified

Infrastructure planning and development
4. Inadequate intermodal linkages

Logistics and facilitation
5. Institutional barriers such as complex border crossing, inadequate transit documentation and procedures

6. Harmonization of laws and processes

7. Initiatives to formulate a multilateral agreement
Strategies and Actions (3)

Strategy

9. Main principles: Promotion of cooperation, maximum use of existing infrastructure and active and constructive participation of countries

10. Main components
   (a) Improvement of transport integration and intermodal connectivity;
   (a) Promotion of logistics and transport facilitation; and
   (b) Implementation mechanism (national and regional level)
11. To improve transport integration and intermodal connectivity
   (a) Adopt proposed integrated international transport and logistics network
   (a) Examine the prospect of dry ports
   (b) Identify and remove bottlenecks
   (c) Review and update the network
   (d) Identify and prioritize infrastructure development requirements
   (f) Develop and maintain a database
Strategies and Actions (5)

12. To promote logistics and transport facilitation,
   (a) Simplify and harmonize transport and trade procedures and documentation particularly related to border-crossings
   (b) Promote the accession and implementation of international Conventions on transport facilitation
   (c) Strengthen transport and logistics intermediaries
   (d) Promote ICT application
   (e) Develop and enhance capacity and skills of policy makers
   (f) Develop capacity and skills of the industry
Sea-Land Intermodal Transport Systems

- **LoLo**
  - Lift-on Lift-off transport system using container ship
  - Transport containers only

- **RFS**
  - Road Feeder Service (Truck Ferry transport system)
  - Transport trucks using ferry

- **RoRo**
  - Roll-on Roll-off transport system (until bonded area)
  - Transport container+chassis using ferry

- **Trailer–Chassis**
  - Similar to RoRo. Door-to-Door transport system
  - Transport Container+chassis using ferry to the final destination

UNESCAP Seminar

The Korea Transport Institute
An Example: Sea-Land Intermodal Transport Systems

- Trailer-Chassis System
  - Trailer for roadway with container is directly loaded on the ferry → Shipping from one port to the other → Tractors are connected to the trailers, and transport to the final destination
Connecting Europe and Northeast Asia
Thank you