National strategies to enhance sustainable port development

Professor Paul Tae-Woo Lee
Director, Maritime Logistics and Free Trade Islands Research Center
Ocean College, Zhejiang University, China
The aims of my presentation:

❖ To highlights multi-aspect functions of ports,

❖ To propose new approach/paradigm for developing National Strategies to Enhance Sustainable Port Development, and

❖ To discuss policy recommendation and reference from the perspective of Vietnam.
The motivation and background of my presentation:

- Not a few port development (investment) in developing countries were made by the donor’s (port investor’s) perspective without considering the recipients' peculiar economic and political governance systems.
- Such port development (investment) was not incorporated into their long-term economic development plans in association with their international trade structure.
- A series of follow-up port investment were not timely made; consequently, its synergy effect could not be achieved.
- Port investment (port hardware development) was not marched together with port soft development.

Having considered the above points, my presentation is trying to propose a new way of thinking, approach, and paradigm for developing national strategies to enhance sustainable port development.
Multi-aspect functions of Ports: Challenges ports are facing

- A node of multimodal transport systems and international supply chains
  - A node of value chains in supply chain system.
  - Integrated and inseparable node in customers’ supply chains.
- An enabler of economic development of the national economy
  - Lowering logistics costs and improving competitiveness of international trade.
  - Job creation, value added, forward and backward linkage effects, & etc.
- Port/city interface and co-development.
- Reducing port-related shipping gas emissions
  - Emission control area (ECA), shore power facilities (shore side electricity) at berths
  - Green shipping corridors.
- Resilient system to cope with natural disasters, terrorist attacks, & pandemic diseases
- Expanding the role of ports from VN’s national economy to the region and to the world
- A port is an organic organization in the context of geo-socio-economic system.
National strategies to enhance sustainable port development

- Each stakeholder’s different perspective and Integration among their needs:
  - Central government
  - Local government
  - Port authority
  - Port developer: donor, investor, financier
  - Terminal operator
  - Port users
  - Port/city community
  - International organizations, e.g., IMO, UNESCAP
How to build National Strategies to enhance sustainable port development?

Three Port Development Doctrines

❖ Only by a port user’s effort/investment: **Anglo-Saxon Doctrine** *(Bennathan & Walters, 1979)*

❖ Collaboration between port users and central/local government: **European Continent Doctrine** *(Bennathan & Walters, 1979)*

❖ Central government’s leading role/intervention: **Asian Port Doctrine** *(Lee and Flynn, 2011)*
The Anglo-Saxon Doctrine:
- Full cost recovery pricing from port users without subsidy from government.
- Uncompetitive port pricing.

The European Doctrine:
- Marginal port pricing → not easily applicable due to unavailable full cost accounting data.
- Partially subsidy by local government an/or central government.
- Social overhead capital provided by the local government.

The two Doctrines cannot explain the high growth of ports in Asia, such as China, Singapore and South Korea over the last four decades.
Key Characteristics and Driving Forces of Asian Port Doctrine

❖ Government leader’s ethos or Ideology:
  ✓ A port as national strategic asset in the context of national economic development plan
  ✓ Government intervention in allocating resources and port pricing

❖ “Advantage of Backwardness (a late-comer’s advantage)”
  ✓ Importing latest soft/hardware technology to the port development

❖ Port Pricing Mechanism to improve port efficiency & competitiveness
  ✓ Cross-subsidization: no direct government subsidy but reallocating a part of the revenues from existing terminals (a port) is transferred to construct a new terminal (port) with higher construction cost.
  ✓ Administered pricing & Public enterprise approach: Port is regarded as an infrastructure to promote international trade, so that a government controls port price level and contributes to lowering logistics costs.

● Port pricing under the Anglo-Saxon Doctrine:
  ✓ Port charges is based on full recovery of the port construction costs from port users.
Asian (Port) Doctrine Paradigm

- **Ideology & Rationale**
  - Gerschenkron model (Advantage of backwardness)
  - Infant industry argument
  - Government interventionism (Institutionalism)
    - Public enterprise approach
    - Administered pricing

- **National Strategy**
  - Cross-subsidization
  - National economic security
  - SOC and Infrastructure
  - National welfare

**Geo-economic factor**

**Globalization: Manufacturing center**

**A New Paradigm for Port Development Policy**

**Asian Port Success**

**Economic theories; policy alignment**

**Economic actor: State as port Operator & Economic facilitator**

**Asian port pricing**

© Lee 2016
VN’s National vision of Integrated Maritime Logistics System in association with Gateway Port Development

UNESCAP Case: Vision for strengthening co-operation within sub-regional expert networks for the shipping and port sector (Lee, 2022)

Overview and Analysis of Shipping and Port Sector in the Pacific

Global Trend Current Situation, Problems, & Challenges in the Pacific

Vision and Strategy for “Integrated Maritime Logistics System” at Sub-regional and National level

1. To integrate a regional/national economy into the globalized economy: Integrated transportation as driving force enabler
2. To improve int’l trade competitive edge: Lower doing business costs by improving maritime connectivity & efficiency
3. To maximize impacts of the port investment and FTA on national & regional economy: Logistics industry as growth engine
4. To establish hub-and-spoke in association with logistics distribution center in the Pacific: Optimizing transportation network
5. To accommodate green factors for logistics and transport: Green growth + sustainability growth
6. To secure the regional economy from natural disasters, pandemic, & terrorist Attacks: Building resilience strategy
7. To develop “One Country” concept of the Pacific: Value added and job creation
8. To apply economies of flow, connexion, and fusion technologies* for maritime logistics (e.g., IMISP): IT-based logistics and transportation platform
9. To build up mechanism to train human power for maritime logistics and IT-based platform: Training course & human power exchange program through the sub-regional cooperation
10. To develop efficient governance system for maritime logistics industry: Governing and collaboration between the Pacific and sub-regional bodies
Exploring Port Devolution Path from the 1st Generation Ports (1GP) to 6th Generation Ports (6GP)

1GP — 4GP

Critic on 4GP

Beresford et al. (2004), Pettit and Beresford (2009)

 Flynn and Lee (2010), Flynn et al. (2011), Lee and Lam (2015, 2016)

Lee et al. (2018)

5GP

A “dynamic customer-centric community port”

6GP

Considering Factors:
- Fusion technologies
- New economies concepts
- Sustainability with Smart port
- Outbreak of COVID-19

UNCTAD (1992, 1999)

Criticize the 1GP to 4GP and adding missing port functions
## Comparison of the 5GP and the 6GP

<table>
<thead>
<tr>
<th>Item</th>
<th>5GP</th>
<th>6GP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X-axis:</strong> Complexity</td>
<td>• Government support</td>
<td>• Government support</td>
</tr>
<tr>
<td></td>
<td>• Locational restriction</td>
<td>• Locational restriction</td>
</tr>
<tr>
<td></td>
<td>• Environment, Security &amp; Safety concerns</td>
<td>• Sustainability</td>
</tr>
<tr>
<td></td>
<td>• Resilient system</td>
<td>• Security &amp; Safety concerns</td>
</tr>
<tr>
<td></td>
<td>• Sustainability</td>
<td>• Resilience (natural disasters, COVID-19 pandemic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Import of new technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Green house gas (CHG) emission: Decarbonization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Climate change</td>
</tr>
<tr>
<td><strong>Y-axis:</strong> Economic Value Creation</td>
<td>• Market growth</td>
<td>• Market growth</td>
</tr>
<tr>
<td></td>
<td>• Port competition</td>
<td>• Port competition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Value-added</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Social welfare</td>
</tr>
<tr>
<td><strong>New features</strong></td>
<td></td>
<td>• “Smart port technology platform”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• “Resilient system”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• “Governance for smart port system”</td>
</tr>
</tbody>
</table>
Evolution Path to the **Sixth Generation Ports (6GP)** as “**Smart Ports**”

**Economic Value Creation**

- Market growth
- Port competition
- Value-added
- Social welfare

**Dynamic Customer-Centric Community Port (5GP)**

- Integrated to port user’s multi-faceted business requirements & port stakeholder’s needs

**Globalized e-port**

- Global information flow & standards

**SCM port (bilateral e-ports)**

- 2-way flow of information

**Logistics port**

- Multiple port services

**Cargo port**

**SMART PORT (6GP):**

- Applying fusion technology*
- Dynamic Smart-Centric Community Port with economies of flow, economies of connections, and economies of fusion technology

**Complexity**

- Government support
- Locational restriction
- Sustainability
- Security & Safety concerns
- Resilience (natural disasters, COVID-19 pandemic)
- Import of new technology
- Green house gas (CHG) emission: Decarbonization
- Climate change

**Smart Platform**

**Smart Community (port/city interface)**

**Smart Governance**


Notes: * Fusion technology comprises of Bio-Technology (BT), Information Technology (IT), Nano-Technology (NT), Artificial Intelligence (AI), Blockchain, Big data, and Soft computing.
Discussion points with proposing **new ways of thinking, approach, and paradigm** for developing national strategies to enhance sustainable port development

- **Vietnamese case**

1. A New Paradigm with **New Economies concepts**
2. Key Driving Forces in **6GP smart ports model**
3. Innovative Approach for **Port Pricing** having multiple drivers
4. Promoting **VN’s maritime/land connectivity**
5. Developing **Gateway Port Development in VN**.
Traditional Concepts of Economies

- Economies of Scale
- Economies Scope
- Economies of Density
- Economies of Speed

Are the above economies enough to improve port productivity and efficiency?

Probably NOT! We need a new paradigm.
1. A New Paradigm with Three New Economies concepts

**New Economies** to improve Efficiencies and Competitive Edge in Maritime Transport, Logistics (MTL) & Supply Chain Management (SCM).

1. Economies of Flow

2. Economies of Connection (networking)

3. Economies of Fusion technology

**Note:** These concepts were coined by Paul T-W Lee (2009) and published in Lee (2015).
2. Key Driving Forces in 6GP smart ports model

- The 6GP smart ports reflecting 3 main streams, being been evolved from the 5GP as “Dynamic Customer-Centric Port Community”.

Three pillars:

1. To define **Complexity** (X-axis) and **Economic value creation** (Y-axis.)

2. Adoption of **new economies concepts**
   - **Economies of flow**: cargo flow in tandem with information flow
   - **Economies of connection**: all stakeholders connected on the same platform, e.g., single widow system
   - **Economies of Fusion technology**: IT, BT, NT, AI, block chain, cloud system, IoT, mobile services, and others.

3. **Smart port technology platform** with smart governance for smart connectivity and smart governance.

(The Sixth Generation Ports (6GP) as “Smart Ports”)
3. Port Pricing Mechanism to Improve Port Efficiency & Competitiveness

❖ “Market failure” and “Government failure” under the Anglo-Saxon Doctrine and the European Doctrine.
➢ Since the financial crisis in 2008 and the outbreak of COVID-19, note that western countries (e.g., US, UK, France) and Japan discarded neo-liberalism and adopted the government’s intervention to subsidize air and shipping industries.
  • Neo-liberalism aims to minimize the role central government in association market function.

❖ A new port pricing approach under the Asian Doctrine (Lee & Lee, 2010; Lee and Flynn, 2011):
➢ Cross-subsidization:
  • It allocates a part of the revenues to be taken from existing terminals (a port) for constructing a new terminal (port) with higher construction cost, so that it enables the new terminal (port) offer competitive price to port users.
➢ Administered pricing & Public enterprise approach:
  • Both contribute to promoting the national and regional economy and controlling a national price level, because overall port pricing of the two is governed by Central Government through a port authority (PA).
Innovative Approach for a Strategic Port Pricing Model

- **Port Pricing Mechanism** and a port investment/development should go hand in hand from the beginning stage of the port development.

### Determinants of Port Pricing

1. **Demand**
   - a. Demand
   - b. Price Sensitivity of Demand
   - Buyer-based pricing (customer orientated)
   - Demands Differentiation and Focus on Service Input Factors

2. **Competition**
   - a. Competition from other modes/nodes
   - b. Routing/Intermodal Competition
   - Competition-based pricing (competitor orientated)
   - Demands Proactive Policy Regarding Rivals

3. **Cost**
   - a. Fixed Cost
   - b. Variable Cost
   - Cost-based pricing (cost orientated)
   - CURRENTLY DOMINANT

4. **Finance**
   - a. Break-Even
   - b. Cash Flow

5. **Social Welfare (Effects on the Community)**
   - a. Efficiency
   - b. Externalities (Congestion, Pollution)

6. **Others**
   - a. Economy Condition
   - b. Price Regulation
Sanp shots on VN’s maritime connectivity
### Container throughput in Vietnam, Thailand, & Cambodia

<table>
<thead>
<tr>
<th>Year</th>
<th>Cambodia</th>
<th>Thailand</th>
<th>Viet Nam</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>7,760,800</td>
<td>8,362,500</td>
<td>306,206</td>
</tr>
<tr>
<td>2013</td>
<td>7,372,468</td>
<td>8,254,299</td>
<td>312,000</td>
</tr>
<tr>
<td>2014</td>
<td>8,254,299</td>
<td>9,202,200</td>
<td>424,000</td>
</tr>
<tr>
<td>2015</td>
<td>9,463,000</td>
<td>8,841,833</td>
<td>474,000</td>
</tr>
<tr>
<td>2016</td>
<td>9,983,000</td>
<td>8,967,705</td>
<td>9,463,000</td>
</tr>
<tr>
<td>2017</td>
<td>9,390,935</td>
<td>9,905,940</td>
<td>9,938,000</td>
</tr>
<tr>
<td>2018</td>
<td>10,243,600</td>
<td>10,755,780</td>
<td>10,860,269</td>
</tr>
<tr>
<td>2019</td>
<td>10,213,905</td>
<td>10,213,905</td>
<td>(*641,842)</td>
</tr>
<tr>
<td>2020</td>
<td>12,422,588</td>
<td>10,755,780</td>
<td>(*641,842)</td>
</tr>
</tbody>
</table>

Vietnam’s throughput is higher than Thailand’s one in 2019.


*Note: the data in parentheses are taken from PAS's annual report.*
Liner Shipping Connectivity Index (LSCI) in Vietnam, Thailand, & Cambodia


*Note: The 2022 data are the average of the previous two quarters (Q1, Q2).*
Data description in 2017

- **Total ports connected by Vietnam**: 3210
- **Total ports of Vietnam**: 49
- **Total vessels called in Vietnam**: 10145
  - Container: 877
  - Tanker: 875
  - Bulk carriers: 2054
  - Cruise ship: 36

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of vessels called in Vietnam</td>
<td>9002</td>
<td>9677</td>
<td>9715</td>
<td>9240</td>
<td>10145</td>
</tr>
<tr>
<td>Number of vessels connected to the world ports</td>
<td>814702</td>
<td>1315267</td>
<td>1133477</td>
<td>763609</td>
<td>785769</td>
</tr>
</tbody>
</table>
80% of ship flows from/to Vietnam are in the region of Maritime Silk Road.
4. Promoting VN’s Maritime/Land Connectivity

➢ Corridors in Greater Mekong Sub-region Economic Cooperation in the Belt and Road Initiative (BRI)

Source: Lee (2016); Source: www.gms-eoc.org

➢ Transport Corridors of GMS (UN ESCAP)

Southern Economic Corridor (1,030km) [3-1 & 3-2] in the BRI are connected to VN.

Common purpose and similarities in developing corridors in the ASEAN between BRI & UNESCAP.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>No. of project</th>
<th>Rank</th>
<th>Country</th>
<th>No. of project</th>
<th>Rank</th>
<th>Country</th>
<th>No. of project</th>
<th>Rank</th>
<th>Country</th>
<th>No. of project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pakistan</td>
<td>47</td>
<td>15</td>
<td>Kenya</td>
<td>13</td>
<td>29</td>
<td>Kuwait</td>
<td>7</td>
<td>43</td>
<td>Tajikistan</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Bangladesh</td>
<td>46</td>
<td>16</td>
<td>Angola</td>
<td>12</td>
<td>30</td>
<td>Mongolia</td>
<td>7</td>
<td>44</td>
<td>Bolivia</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Indonesia</td>
<td>46</td>
<td>17</td>
<td>Egypt</td>
<td>12</td>
<td>31</td>
<td>Serbia</td>
<td>7</td>
<td>45</td>
<td>Brunei</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Malaysia</td>
<td>34</td>
<td>18</td>
<td>Nigeria</td>
<td>12</td>
<td>32</td>
<td>Zimbabwe</td>
<td>7</td>
<td>46</td>
<td>Burundi</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Russia</td>
<td>22</td>
<td>19</td>
<td>Ethiopia</td>
<td>11</td>
<td>33</td>
<td>Madagascar</td>
<td>6</td>
<td>47</td>
<td>Cameroon</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Saudi Arabia</td>
<td>21</td>
<td>20</td>
<td>Sri Lanka</td>
<td>10</td>
<td>34</td>
<td>Mozambique</td>
<td>6</td>
<td>48</td>
<td>Ghana</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Laos</td>
<td>20</td>
<td>21</td>
<td>Tanzania</td>
<td>10</td>
<td>35</td>
<td>Thailand</td>
<td>6</td>
<td>49</td>
<td>Morocco</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Myanmar</td>
<td>19</td>
<td>22</td>
<td>India</td>
<td>9</td>
<td>36</td>
<td>Turkey</td>
<td>6</td>
<td>50</td>
<td>Venezuela</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Nepal</td>
<td>18</td>
<td>23</td>
<td>Iraq</td>
<td>9</td>
<td>37</td>
<td>Uganda</td>
<td>6</td>
<td>51</td>
<td>Algeria</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Vietnam</td>
<td>17</td>
<td>24</td>
<td>P. N. Guinea</td>
<td>9</td>
<td>38</td>
<td>Ukraine</td>
<td>6</td>
<td>52</td>
<td>Armenia</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Cambodia</td>
<td>15</td>
<td>25</td>
<td>Uzbekistan</td>
<td>9</td>
<td>39</td>
<td>Zambia</td>
<td>6</td>
<td>53</td>
<td>Belarus</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Iran</td>
<td>15</td>
<td>26</td>
<td>Bosnia &amp; Herz.</td>
<td>8</td>
<td>40</td>
<td>Guinea</td>
<td>5</td>
<td>54</td>
<td>Chad</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Kazakhstan</td>
<td>15</td>
<td>27</td>
<td>Philippines</td>
<td>8</td>
<td>41</td>
<td>Oman</td>
<td>5</td>
<td>55</td>
<td>Congo-Brazzaville</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>UAE</td>
<td>15</td>
<td>28</td>
<td>Cote d'Ivoire</td>
<td>7</td>
<td>42</td>
<td>Singapore</td>
<td>5</td>
<td>56</td>
<td>Djibouti</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: The ASEAN Member States in yellow.
China’s overseas port supply chains (PSC) along the New MSR

Source: Figure 1 in Lee et al. (2022), Transport Policy.
Proposed Global Logistics Distribution Center (LDC) along the B&R

(LDCs in East Africa & Middle East)  
(LDCs along Silk Road Economic Belt)

(LDCs along South-South Trade Routes)

8 Locations of Global LDCs
(Along the new MSR)
1. Southern Africa
2. Sri Lanka - T/S hub port in the Indian Ocean
3. The Middle East
4. Northern Oceania

(Along the Belt)
1. Northeast Asia
2. Eastern Europe - dry hub ports along the Silk Road Economic Belt
3. Southern Europe
4. Northern Europe – the Le Havre-Hamburg range

Source: Figure 1 in Lee et al. (2022), Transport Policy.
VN’s Maritime Connectivity embedded in the new Maritime Silk Road

- **ONE BELT**: Silk Road Economic Belt by China Rail Express
- **ONE ROAD**: New Maritime Silk Road (Lee et al., 2018)
- **Polar Silk Road** (Arctic Shipping Route) by China’s Arctic Policy (Jan. 2018)

- Port supply chains have been developing along the new Maritime Silk Road.
- Global logistics distribution centers (LDCs) have been proposed along the Belt & Road (Lee et al., 2022).
Vietnamese “Two corridors, One Economic Belt” (Li, 2004)

- “President Tran Duc Luong of Viet Nam was concerned with building “Two corridors, One economic belt” with China. (18 July, 2005)

- Nguyen Phu Trong, General Secretary of the Communist Party of Vietnam Central Committee, addressed China’s Belt and Road Initiative and Vietnam's "Two Corridors and One Economic Circle" plan.” (November 13, 2017)


(Source: Li Wenchuang, 2004, VASS)
China’s “Belt and Road Initiative” and Vietnamese “Two Corridors and One Economic Circle (Belt)”

The first meeting between the two countries’ expert groups on building "two corridors, one economic belt", by President Tran Duc Luong of Viet Nam holds talks with President Hu Jintao of China (18 July, 2005)

Signing of a memorandum of understanding on joint implementation of China’s Belt and Road Initiative and Vietnam's "Two Corridors and One Economic Circle" plan.” (13 November, 2017)

VN’s land connectivity: Block Train Service for Fushan, Yantai (China) to Hanoi (Vietnam) on 18 June 2019

- Opening block train service between Fushan, Yantai (China) to Hanoi (Vietnam) on 18 June 2019.

Discussions & Concluding Remarks:

VN’s Strategic Positioning with Action Plans
How to implement Vietnamese “Two corridors, One Economic Belt” (2004) in the context of China’s BRI?

How can VN’s economy and global supply chains be connected to the globalised world?

How to evaluate the impacts of the VN’s multimodal transport on the ASEAN?
Questions to ponder for VN’s Strategic Positioning with Action Plans

- How about VN’s leadership and Reaction to the new emerging global supply chain?
  - 2nd largest manufacturing/global supply chain centres in Asia.
  - Learn China’s experience, avoiding her trials and errors.
- What about VN’s “Gateway Port Development Strategy” in the ASEAN?
  - Road, Rail, Sea, and River Corridors in the region

![Map of Greater Mekong Sub-region and Transport Corridors of GMS (UN ESCAP)]
4. VN’s Vision of Gateway Port Development

❖ VN’s VISION of GLOCAL Hubs
  ▪ GLOCAL: Global+Local
  ▪ Glocalization: Globalization+Localization
❖ What about VN’s VISION of “Gateway Port Development Strategy”?

❖ VN’s telecommunications consist of stocks of information, knowledge, goods, image, financing, and brains.
  ➢ Transport Corridors:
    ▪ Road, Railway, Sea, River and Air Corridors in the subregional and world economy.
  ➢ Information corridor
  ➢ Passenger & Freight corridor
  ➢ Goods corridor

Sources: revised by author based on ©Dick & Rimmer, 2003; ©Rimmer, 2006; revised by author based on ©Rimmer (2006).
4. VN’s Action Plans for Gateway Ports

❖ The multilayered hub of VN can be referred to as a ‘Global Gateway’ as VN’s economy is plugged into the subregional and world economy.
❖ Serving the hinterlands in the region. (See green circles.)

❖ Connecting the “Corridors in Greater Mekong Sub-region” to the railways, seaports & river ports in the region.

➢ Example: connectivity development from coastal ports in VN to Phnom Penh Autonomous Port (PPAP).
➢ CIQ issues at Cross-borders in river transportation.
➢ Developing physical communications in collaboration with UNESCAP: sea, air, (high-speed) rail, road, and ICT (Information and Communications Technologies).
Concluding remarks: VN’s Strategic Positioning with Action Plans

My presentation has proposed new ways of thinking, approach, and paradigm, which could be good references for developing national strategies to enhance sustainable port development.

- Leading role of Central government under the Asian Port Doctrine
  - Government’s revisit to multi-aspect functions/roles of ports. A port is an organic organization.
  - Lessons from successful port development in Asia.
  - Advantage of backwardness (a later-comers advantage, i.e., Gerschenkron’s Model) in developing ports.
Concluding remarks: VN’s Strategic Positioning with Action Plans

- **6th generation ports** as smart ports.

- **Strategic positioning of Vietnam** to promote her **maritime/land connectivity** in collaboration with sub-regional collaboration and networking.
  - “Connect the BRI” strategy or “Be connected to the BRI” strategy

- **Integrated (strategic/commercial) port pricing model.**

- **GUI Model** for building national strategies by Tripartite collaboration: Government (+UNESCAP)-University-Industry
Having said that, policy makers need to apply “Ommatidia (compound eyes) approach” for developing national strategy for sustainable port development.
Selected References:

Thank You
谢谢
감사합니다
ดุษฎีภรณ์
Terima Kasih
Vinaka
ขอบคุณครับ / ขอบคุณค่ะ
ありがとうございます
Muchas Gracias

cảm ơn

Contact point:
Professor Paul Tae-Woo Lee
Email: paultaewoo.lee@zju.edu.cn