Political economy of coastal land reclamation in Northeast Asia

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Outline of the talk

• A shared history of coastal land reclamation in Northeast Asia

• Different paths: Main drivers of land reclamation in Japan, Republic of Korea, and China

• What drives land reclamation in Northeast Asia today?

• Ways forward
A shared history of coastal land reclamation in East Asia
A general trend of coastal land reclamation in East Asia

Salt farm → Agriculture (esp. rice production) → Aquaculture → Industrial or urban land/infrastructure

Small-scale
Low-tech and less dense
Minimal socio-ecological impacts

Large-scale
High-tech and intensive
Severe socio-ecological impacts
Phase I: Reclamation as a post-war, state-building project

• Japan: After the World War II, 1945~
• China: A New China, 1949~
• Republic of Korea: After the Civil War, 1953~

• Characteristics
  • The state (central government) was the main actor
  • Ideological (human's control over nature, nation rehabilitation, and national territory expansion)
  • Use of military and civil labor
  • Financed by foreign aid (Japan & Korea)
  • Managed by port & harbor (Japan), agriculture & irrigation-related authorities (China & Republic of Korea)
Phase II: From agriculture to multiple-purposed reclamation

• Reclamation in the earlier period focused on agricultural production increase
  • Reclamation was part of a national irrigation program

• Increased demand for industrialization and urbanization diversified the use of reclaimed land
  • Infrastructure: port, airport, LNG platform, etc.
  • Industrial use: factory, storage, and office space
  • Urban use: condos, schools, hospitals, and other urban amenities
  • Tourism: parks, hotels, museums, etc.
  • All of the above, so-called ‘comprehensive development’
Different paths: main drivers of land reclamation in Japan, Republic of Korea, and China
<table>
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<th>Time Period</th>
<th>Event Description</th>
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<td><strong>~1945</strong></td>
<td>Salt industry &amp; Agriculture</td>
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<td><strong>1950s</strong></td>
<td>Post-war nation building</td>
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<td><strong>Late 1950s- Early 70s</strong></td>
<td>Port, industrial land, and agriculture</td>
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<td><strong>1980s-90s</strong></td>
<td>Urban land</td>
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<td><strong>1990s-Present</strong></td>
<td>Small-scale Diversified use</td>
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- **Public Water Surface Reclamation Act (1921)**
- Occupation Authority of the Allied Power (1945-1951)
- 1<sup>st</sup> 5-year reclamation plan (1945-1950)
- Land provision for rapid economic growth
- Tokyo Bay, Setoumi Bay & Ariake Sea
- Real-estate, harbor & waste-disposal
- Anti-reclamation movement by civil groups
- Economic infeasibility due to high construction cost
- Civil environmental awareness
Republic of Korea

~1945
Salt industry & Agriculture
- "Increase Rice Production" campaign (1920-1934)
- "Public Water Surface Reclamation Act" (1923)

1950s
Post-war nation building
- Supported by the United Nations Korean Reconstruction Agency (UNKRA)

1960s-80s
Large-scale agriculture
- Promotion of the agricultural sector (rice)
- "Public Water Surface Reclamation Act" (1962)

1990s-Mid-2000s
Agriculture & industrial land
- Shihwa Lake & Saemangeum
- Anti-reclamation movement by civil groups

Present
Small-scale Urban land
- Songdo & other urban reclamation projects
- Civil environmental awareness
# China

<table>
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<tr>
<th>Time Period</th>
<th>Industry</th>
<th>Key Points</th>
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</table>
| 1950s             | Salt industry                   | - State-owned property  
- Collective system |
| 1960s-70s         | Agriculture                     | - Large-scale farms (第O农场)  
- Use of military and collective labor  
- c.f. Hong Kong |
| 1980s             | Aquaculture                     | - Large-scale fish farms for export (shrimp/ e.g., Liaoning)  
- Deng Xiaoping’s southern tour  
- c.f. Shenzhen |
| 1990s             | Industrial & urban land         | - To support rapid economic growth of the country  
- Not as attractive as agricultural land conversion |
| 2000s-Present     | Mega-scale Urban               | - “The 4th wave”  
- Unprecedented in scale and speed  
- Caofeidian, Tianjin Binhai New Area |
What drives land reclamation today in Northeast Asia?
Phase III: Urban renewal/New cities movement

• Reclamation is increasingly considered as a way to provision land to realize urban ideals
  • Model cities demonstrating the world’s sustainable urban future (Caprotti, 2017; de Jong, 2016) → Eco-cities
  • Experimental cities for applying state-of-art, futuristic technologies → Smart-cities

• The real-estate boom in recent years and high land price drive further land reclamation
  • Reclamation became a profitable business despite high construction costs
  • Local governments and real-estate businesses play an active role

• Environmental pressure is greater due to high population-density (e.g., wastewater)
• New challenges and problems (e.g., sea-level rise and the risk of flooding)
Caofeidian, China
Busan, RO Korea
Ways forward
• 'Equity' and 'Sustainability' (two main goals of the SDGs) should be seriously taken into account in evaluating the impacts of reclamation

• Economic impact assessment (EIA) may not reflect the real costs of land reclamation

• Social inequity: Loss of livelihoods, communities, fishing cultures, and traditions; Privatization of coastal space

• Environmental unsustainability: Loss of ecosystem services broadly defined; Non-humans perspective

• **Smaller-in-scale, high-impact reclamation projects** should also be closely monitored and assessed

  • Intensive land use and high risks (e.g., floods, tsunami, and sea-level rise)
Scientific knowledge alone about the ocean is [not] enough for making sense of it (let alone protecting it)... All accounts of the sea are partial and therefore there can be no such self-evident category as “our [human’s] oceans.”

- Stephen Heimreich, in Alien Ocean