



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



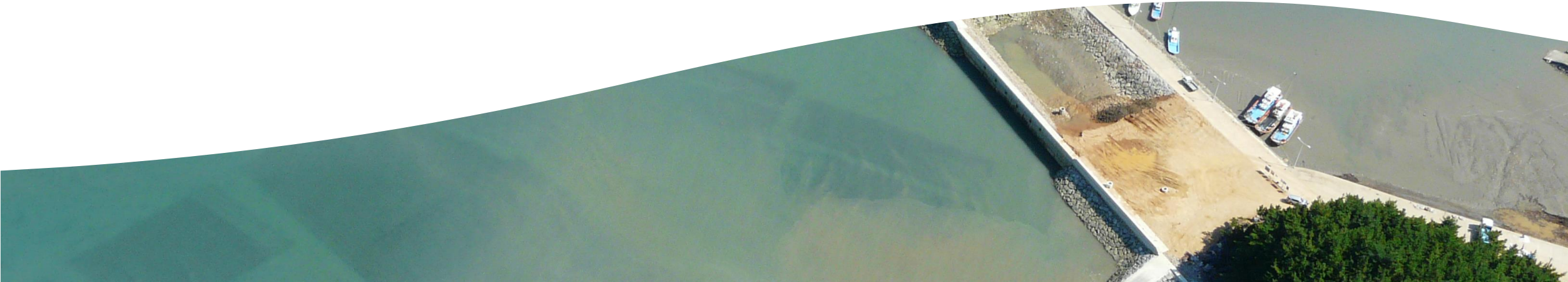
Phase I: Reclamation as a post-war, state-building project

- 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



Japan

~1945

Salt industry &
Agriculture

- Public Water Surface Reclamation Act (1921)

1950s

Post-war
nation
building

- Occupation Authority of the Allied Power (1945-1951)
- 1st 5-year reclamation plan (1945-1950)

Late 1950s-
Early 70s

Port, industrial
land, and
agriculture

- Land provision for rapid economic growth
- Tokyo Bay, Setoumi Bay & Ariake Sea

1980s-90s

Urban land

- Real-estate, harbor & waste-disposal
- Anti-reclamation movement by civil groups

1990s-Present

Small-scale
Diversified use

- 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

1950s

Salt industry

- State-owned property
- Collective system

1960s-70s

Agriculture

- Large-scale farms (第○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

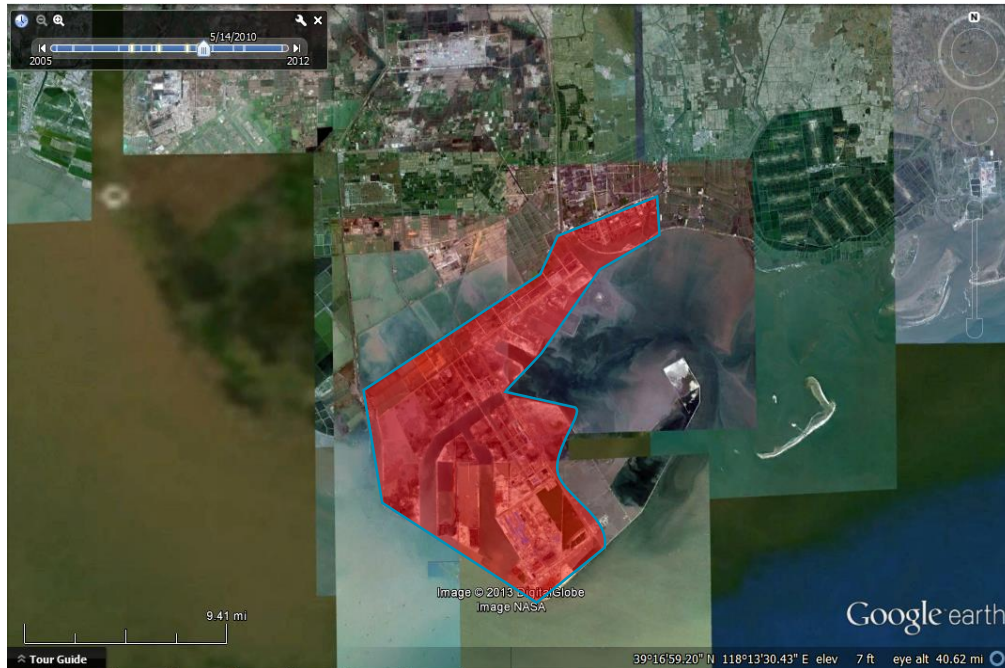
What drives land reclamation today in Northeast Asia?



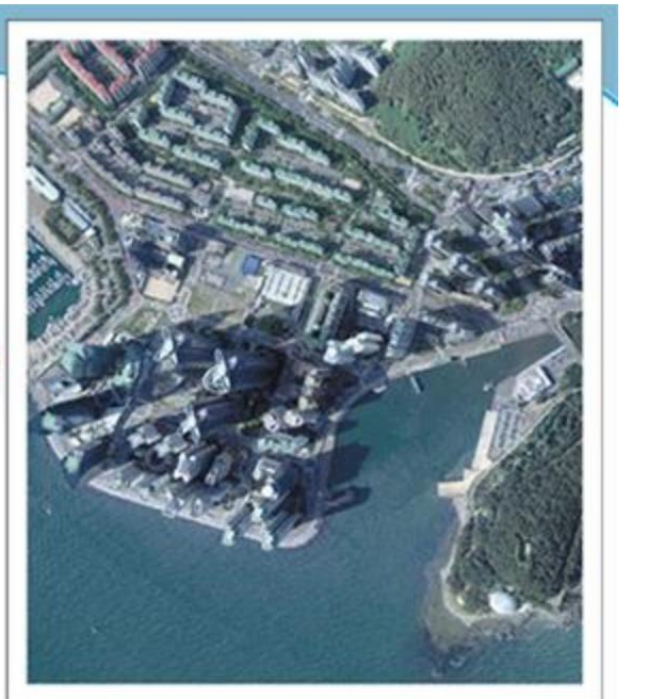
Phase III: Urban renewal/New cities movement

- 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*

A photograph of a crab, possibly a ghost crab, in a muddy, wet environment. The crab is positioned in the center-right of the frame, facing towards the left. Its body is light-colored with dark, mottled patterns. Its large, white, pincered claws are prominent. The background is a vast expanse of wet, greyish-brown mud with some small, dark, organic debris scattered throughout. The lighting is soft and diffused, creating a somber and textured atmosphere.

THANK YOU

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