

Issues for development with Inland Water Transportation in Myanmar

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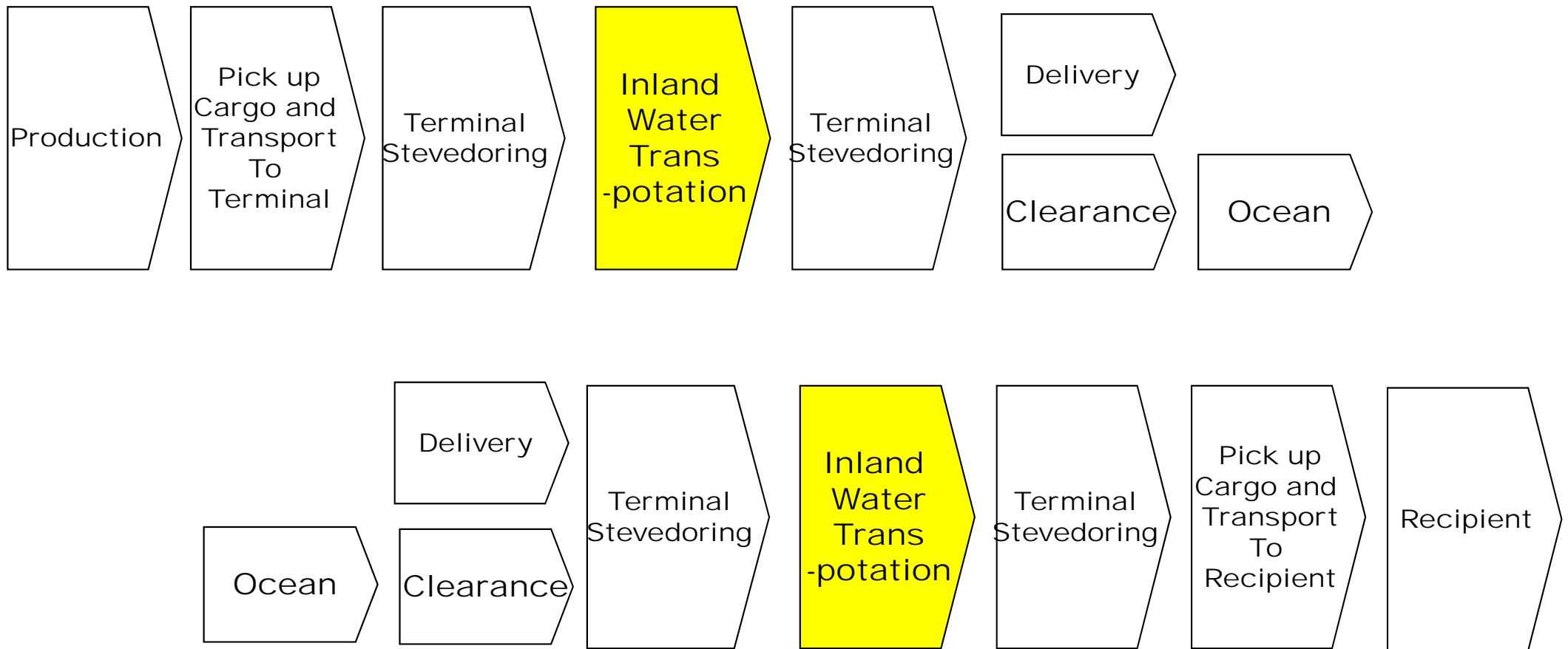
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1. Role of Inland Water Transportation in Logistics

Inland Water Transportation in Material Flow



1. Role of Inland Water Transportation in Logistics

Ayeyarwady can be a trunk line for transport & Logistics?

River	A: Length (km)	B: Length (miles)	<u>C: Drainage area (km²)</u>	<u>D: Average discharge (m³/s)</u>	C/A	D/A
<u>Ayeyarwady (Irrawaddy)</u>	2,170	1,348	411,000	13,000	189	6.0
<u>Mississippi– Missouri– Jefferson</u>	6,275	3,902	2,980,000	16,200	474	2.6
<u>Yangtze</u>	6,300	3,917	1,800,000	31,900	286	5.1

2. Barge & Tug boat Transportation

Major Transportation in United States for Agriculture

More than 6,000km length, height difference is 450 from the origin to the river mouth

More than 500 tug boats and 14,000 barges in Mississippi

One barge accommodates 1,500ton

One convoy is consisting of 24 barges, that is account for 36,000 ton !!!



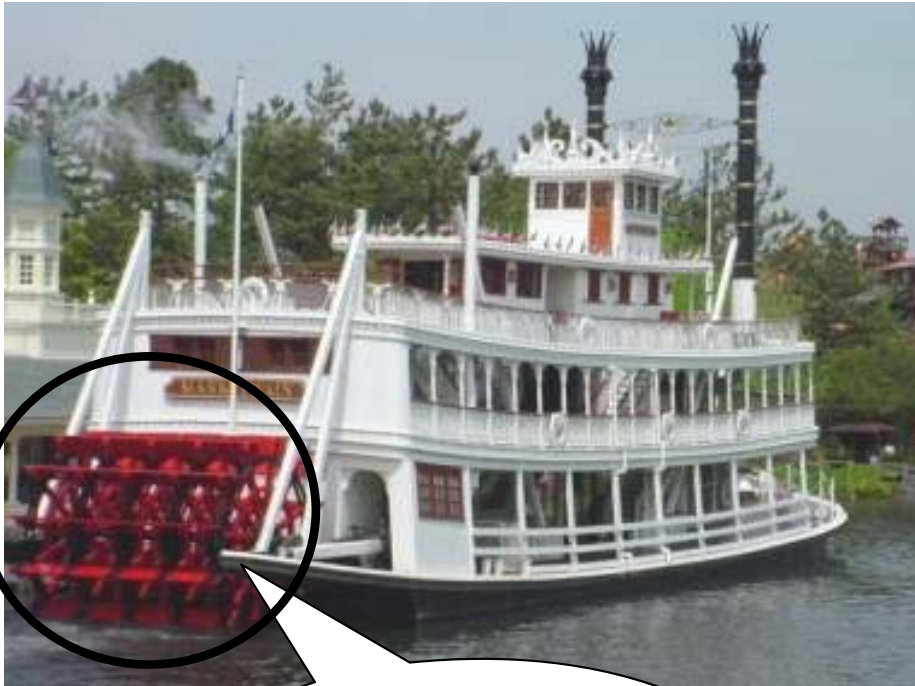
Pusher Barge for Mississippi

2. Barge & Tug boat Transportation

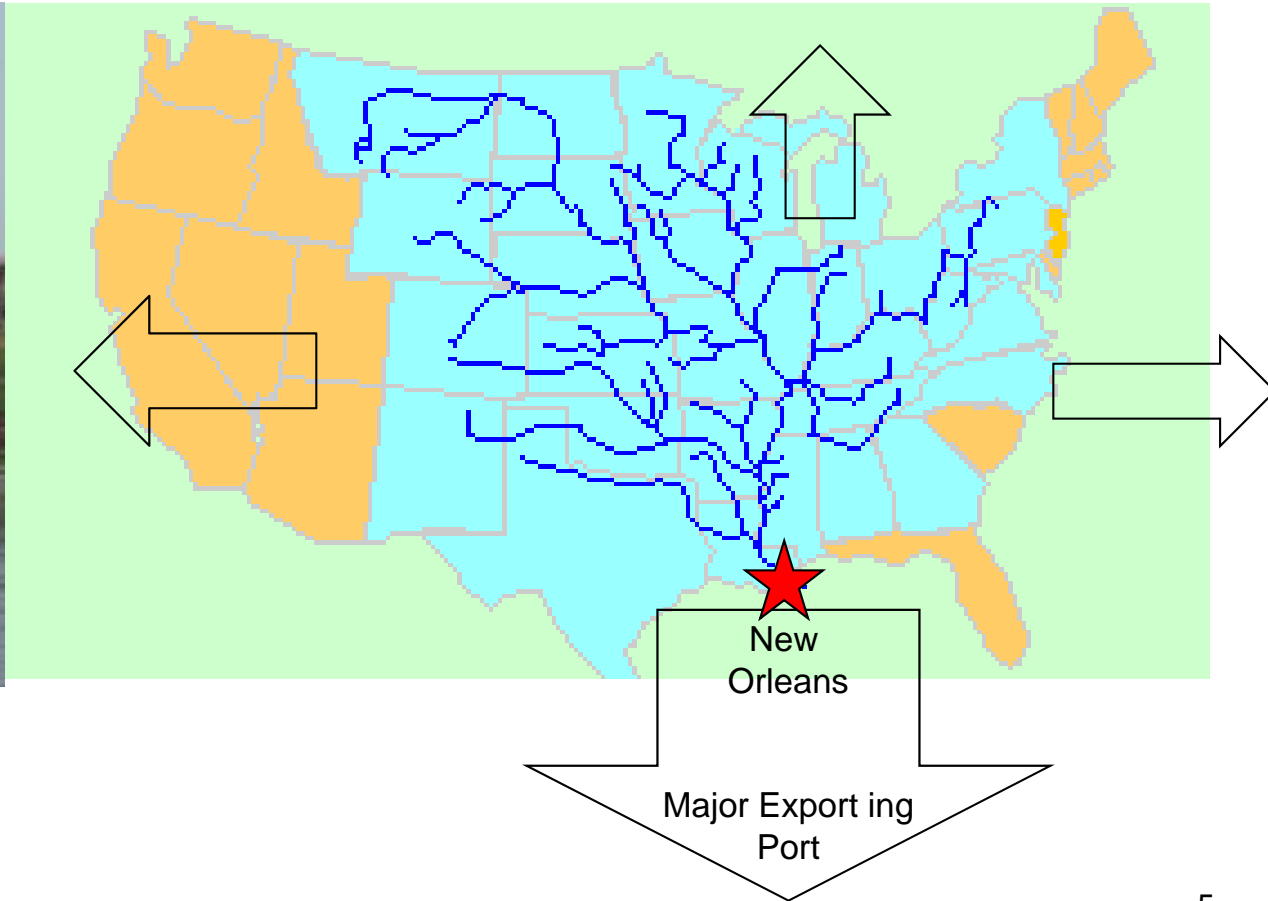
Inland water covers wide area!!

Mark Twain is improved for shallow water

Major exporting port is New Orleans



Improved for Shallow Water



3. Port and Related development

Example of Inland developments by river side in China

Leshan is located 150km south from Chengdu, Sichuan (China)

Mixed use development adjacent area, about 1,000ha is now going on, but.....



3. Port and Related development

Historical development Yangtze river transportation

1950s- 1960s : Coal, Oil, Minerals, Steel, sand, cement, salt, crops

1970s : Coal, Oil, Minerals, Steel, sand, cement, salt, crops+ Fertilizer

1980s: Coal, Oil, Minerals, Steel, sand, cement, salt, crops+ machines

1990s: Coal, Oil, Minerals, Steel, sand, cement, salt, crops+ **machine and parts (Container)**

2000s: Any kinds of goods and products, particularly heavy products

Inland Container Port terminal development in Yangtze River

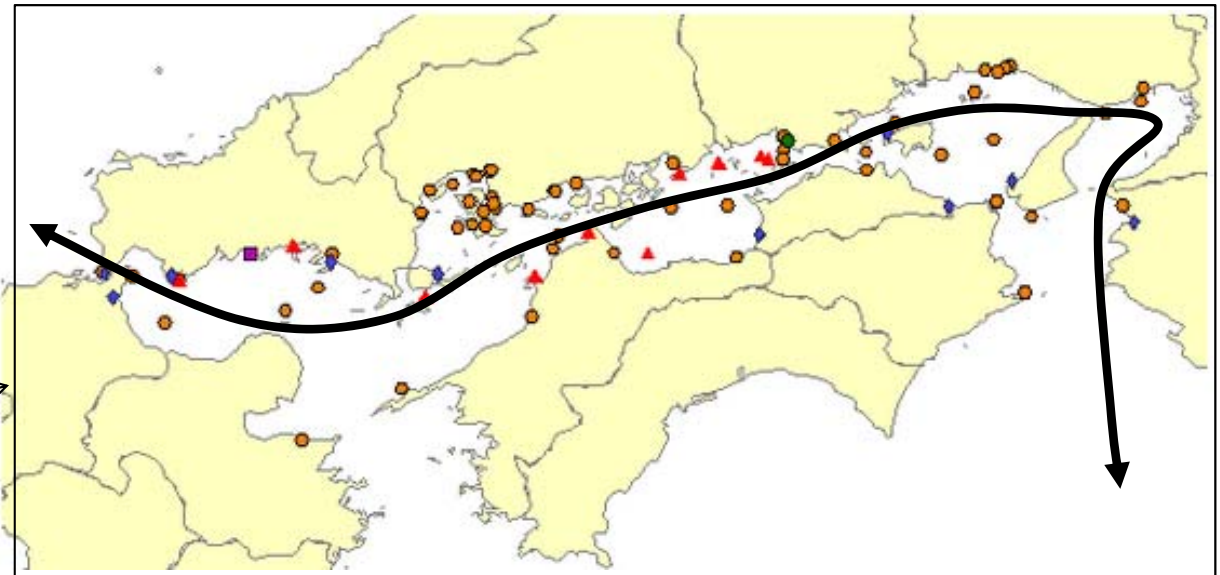
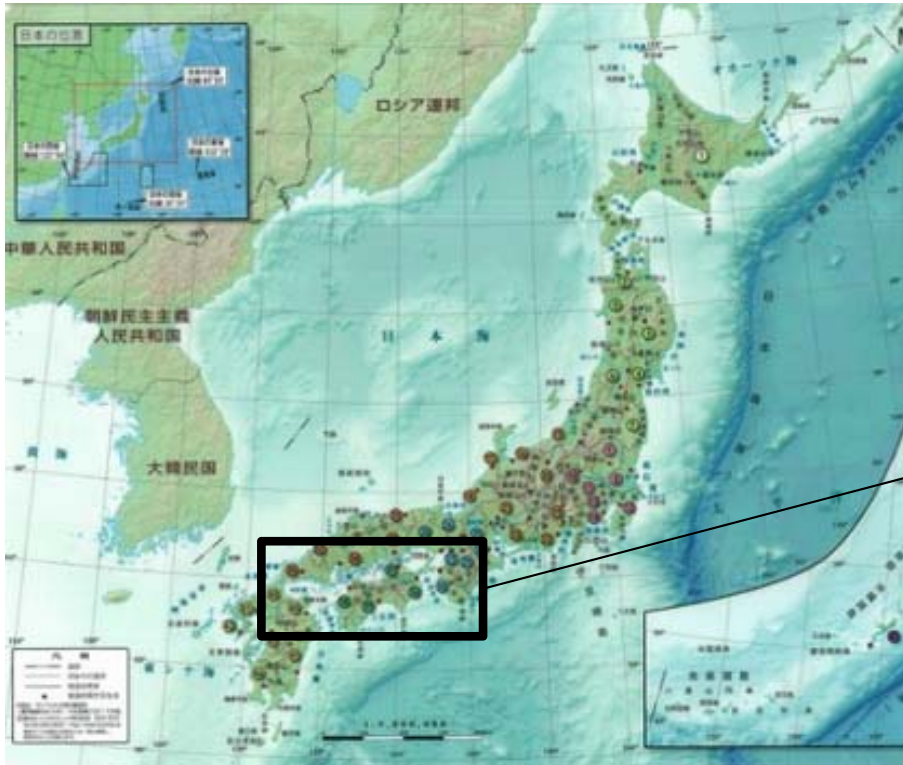


4. Living with waterway

Cities, Towns and Villages are located in coastal area between two islands

Waterway has been a major transport route for people, industries and

Setouchi area, located between Honshu and Shikoku Island, is like a large river!!!



4. Living with waterway

Always complying with that days request

1960s for coal and crops, 1970s for cement, iron, oil and steel, 1980s for heavy machine and parts for shipbuilding, 1990s for container transport just after heavy earthquake in Hanshin area, after 2000..... we transport everything heavy.



**Ship Parts transportation
For ship building**

Feeder transportation to an alternative port after Earthquake



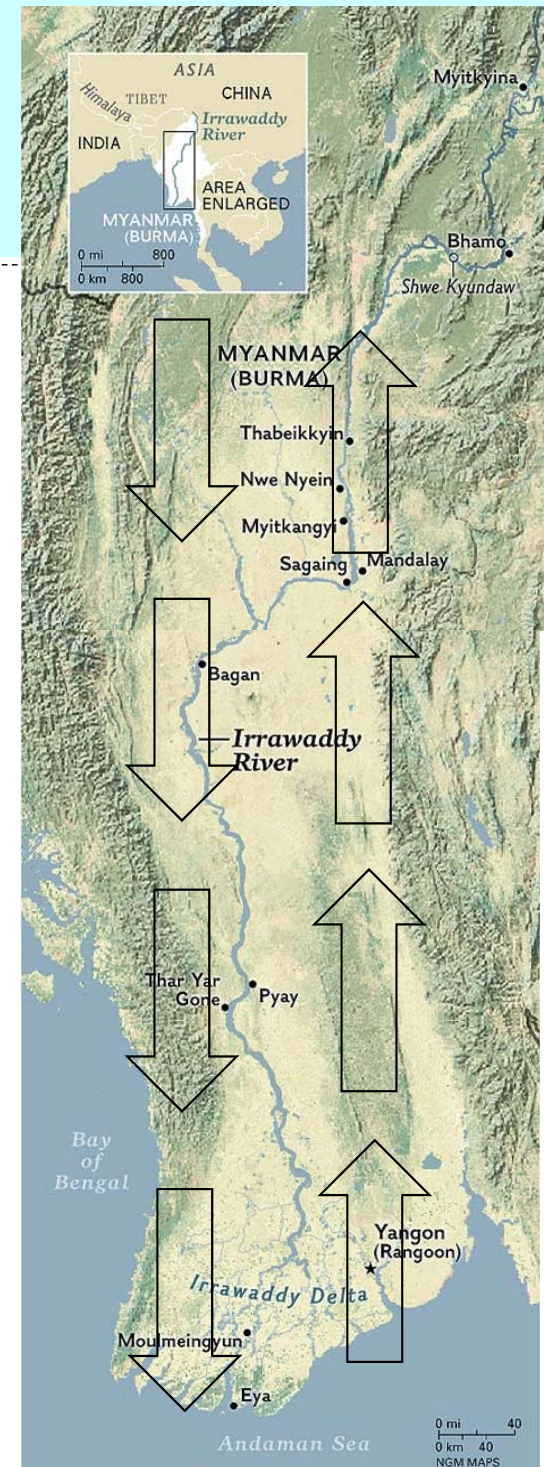
5. ISSUES– Ayeyawardy River to be a trunk line Ayeyawardy River has a huge potential as a trunk line in Myanmar

(Potentials)

- More than 400 cities, town and villages
- Major agricultural production area
- Rich in resources (ex. Mineral in the mountains)
- Suitable for Living area from Ancient days

(Issues)

- Flexible waterway system for Water level Difference between Rainy and Dry season
- Port and Stevedoring system
- Access road
- Bulky cargo terminal such as silos for crops
- Waterway availability for nighttime
- International export/import system in inland area



Contact Information

**Thank you very much
for your attention**

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