



Potensi Optimalisasi Industri Pertahanan Indonesia



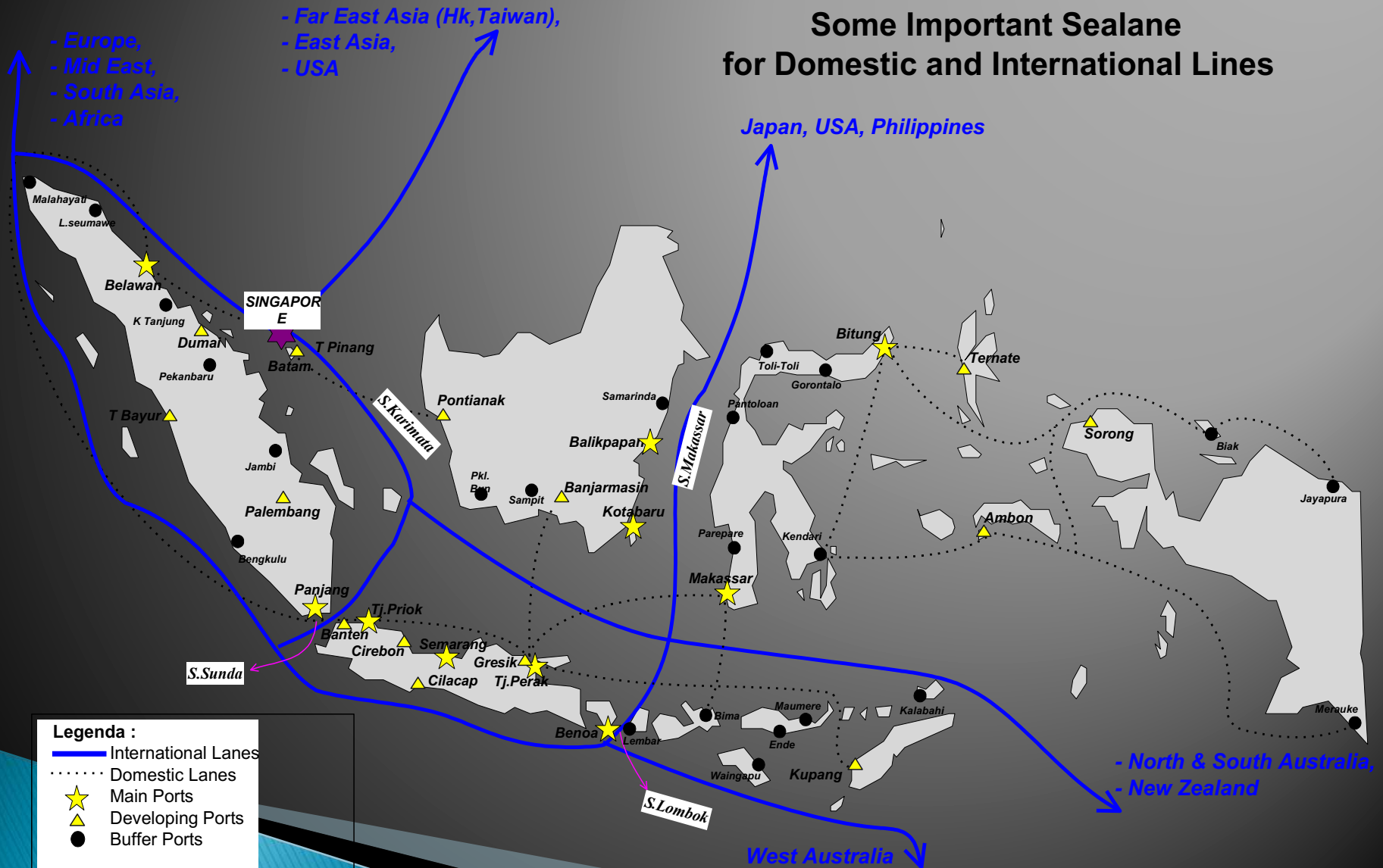
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Sealane in Indonesia

Some Important Sealane for Domestic and International Lines



Legenda :

- International Lanes
- Domestic Lanes
- ★ Main Ports
- ▲ Developing Ports
- Buffer Ports



Ship Built by Country of Building

Rank	Gross Tonnage	YEAR		
		2020	2021	2022
1.	China	23,257,200	26,863,204	25,893,611
2.	Korea, republic Of	18,173,891	19,687,307	16,254,013
3.	Japan	12,827,375	10,726,209	9,585,299
4.	Vietnam	544,699	372,492	444,033
5.	Philippines	608,211	643,456	395,586
18.	Indonesia	36,388	64,473	42,661

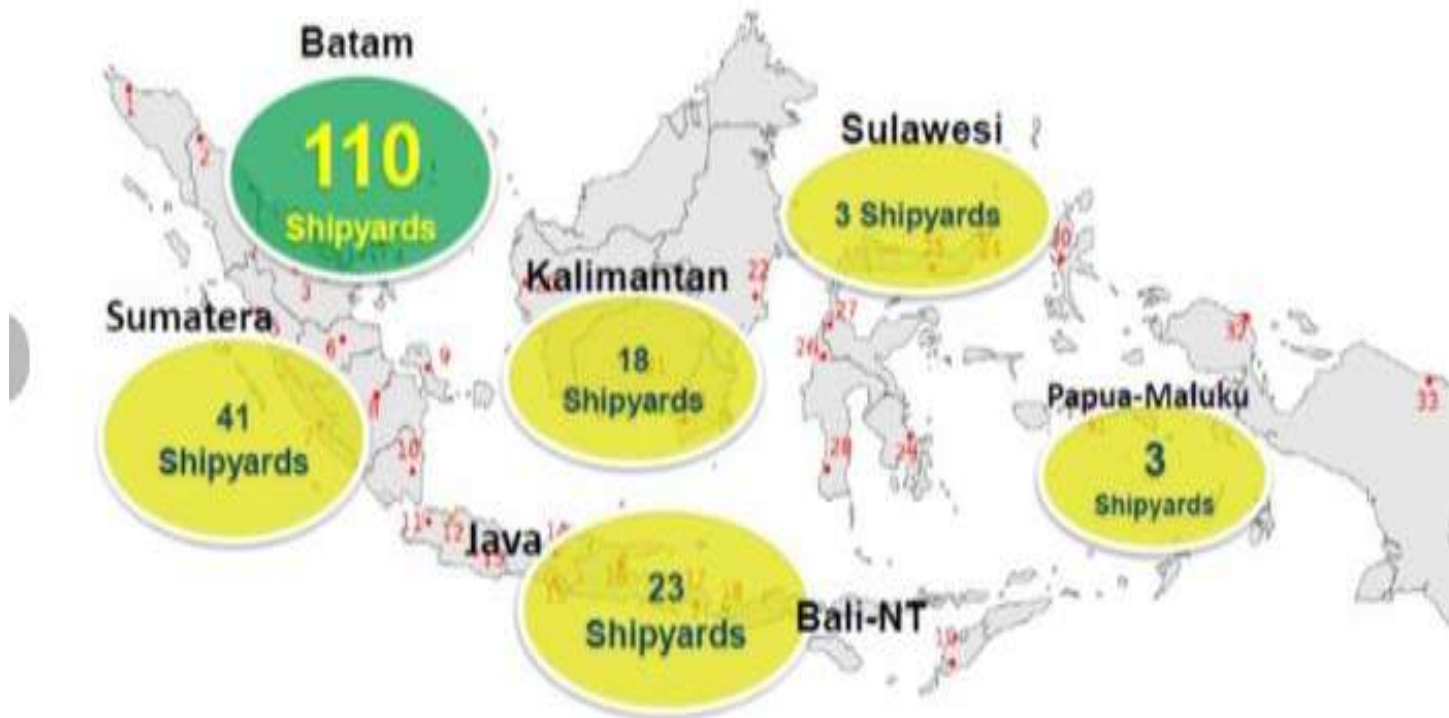
Table. 1: Ships built by country (UNCTADStat 2023)



	Korea
History	Korean Government nurturing the industry until prospers.
Initiative	<ul style="list-style-type: none"> - Started with the Korea Shipbuilding Promotion Act in 1967. - Expand into huge high technology and labour intensive. - The shipbuilding industry remains as major contribution to the Korean export sector.
Innovation (Research and Development)	<ul style="list-style-type: none"> - Koreans are serious in innovations. - The shipyards are spending a lot of money in design office especially the staff and facilities – Samsung Heavy Industries is having 1500 designers (from research to detail design)
Production Efficiency	<ul style="list-style-type: none"> - The Koreans did not invent anything new in shipbuilding production; instead they make it better and faster. - The shipyards in Korea are building the ships in blocks but bigger instead of blocks they are building mega blocks (almost 2500t to 3000t per block)
Production	<ul style="list-style-type: none"> - Korea has 1795 vessels mainly complex and high-tech vessels like Ice Class Crude Oil Tanker or LNG Carriers) - 2022. (16,254,013 GT)



Shipyard Location at Indonesia



Sources : Pratama, Panggih & Fadillah, A. (2019)



Production Record Shipyard in Indonesia



Sources : Iperindo



National Shipyard in Defence Industry

- Landing Platform Dock (LPD)
- Frigate
- Corvette,
- Landing Ship Tank (LST),
- Offshore Patrol Vessel (OPV),
- Submarine
- Harbour Tug



Riau Islands Shipyard in Warship Production

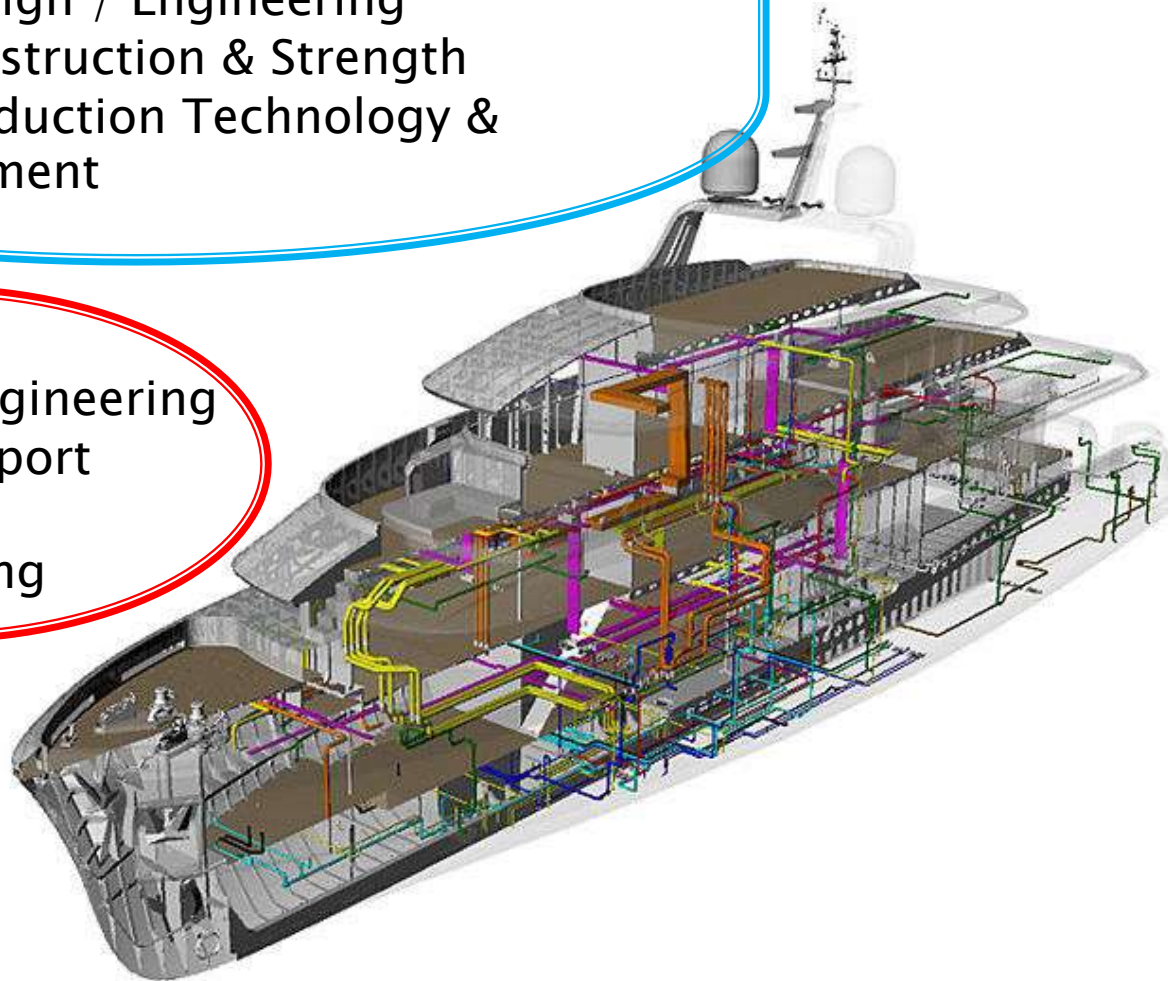
- PT Bandar Abadi Shipyard (KRI Teluk Weda-526, KRI Teluk Wondama-527) Tahun 2021
- PT Karimun Anugrah Sejati (KRI Karotang 872 dan KRI Mata Bongsang 873) Tahun 2020 (KRI Bung Karno 369, KRI Tuna 876) Tahun 2023 (KRI Pollux 935) Tahun 2021
- PT. Palindo Marine (KRI Marlin 877) Tahun 2023 (KRI Surik - 645, Siwar - 646, Parang - 647). (KRI Tatihu-853, KRI Layaran-854, KRI Madidihang-855)



Naval Architecture

- Ship Design / Engineering
- Ship construction & Strength
- Ship Production Technology & Management

- Marine Engineering
- Sea Transport
- Offshore Engineering





Renewable Energy in Ship Design





Renewable Energy in Ship Design





Electric Boat





Conclusion

- Indonesian shipyards are too concentrated on low cost vessels rather than shifting to high-tech or high cost vessels
- Riau Islands Province have the opportunity to become a shipbuilding nation (strategic shipping line, abundance of natural resources and large of engineering community)
- Government and Private sectors should work hand in hand to provide platform for the future in ensuring the nation aspiration to become a shipbuilding nation



Conclusion

- Indonesia needs to develop the passion for the maritime industry, through sustainable and continuous development in innovation and development of the maritime industry from senior High school to university and later for the industry stakeholders



THANK YOU