

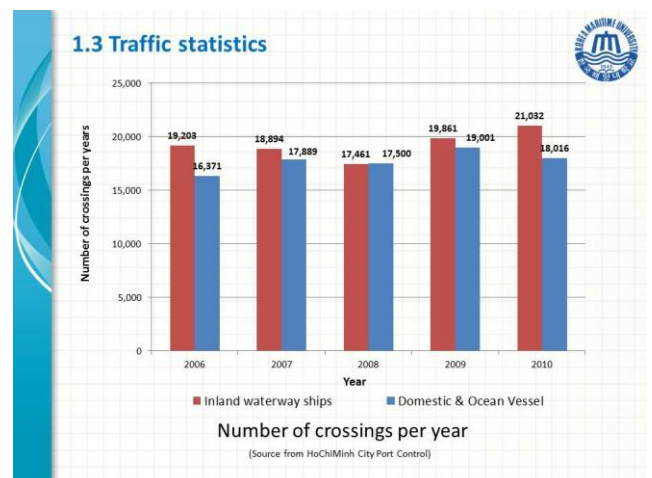
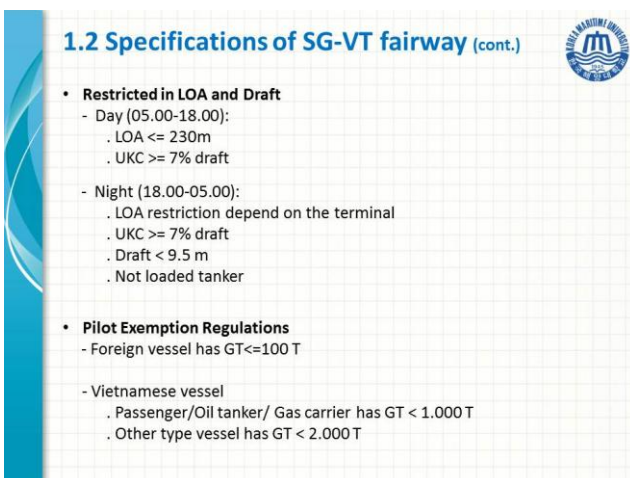
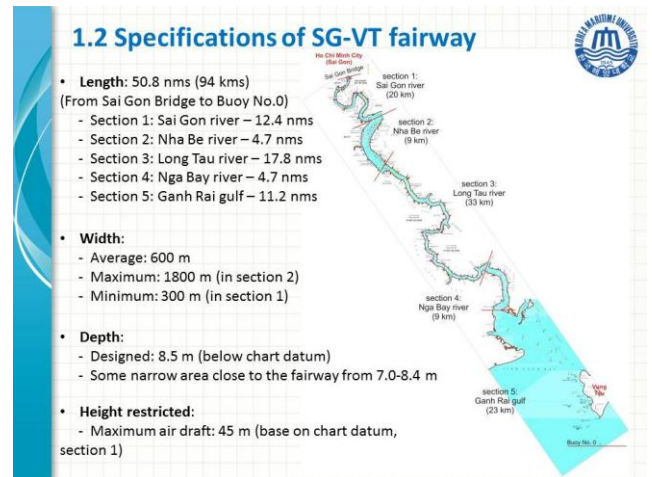
SAFETY PROBLEMS IN SAIGON – VUNG TAU FAIRWAY

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Abstract: The presentation raises some elements related to marine traffic safety in Sai Gon-Vung Tau fairway with the aim that it could be a basis for further analysis to find out a solution for improving marine traffic safety in the fairway, the most important fairway in the South part of Vietnam.

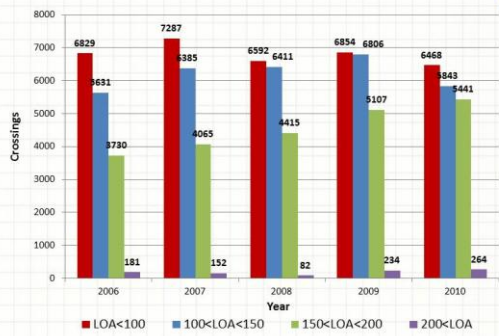
Key words: Sai Gon-Vung Tau fairway, Traffic statistic, Traffic survey, Natural problems, Human related problems.



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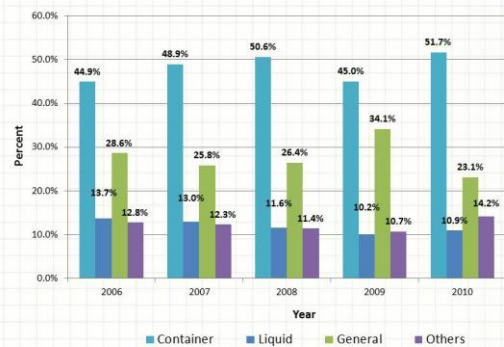
1.3 Traffic statistics (cont.)



Number of domestic & ocean vessel crossings per year classified by LOA

(Source from HoChiMinh City Port Control)

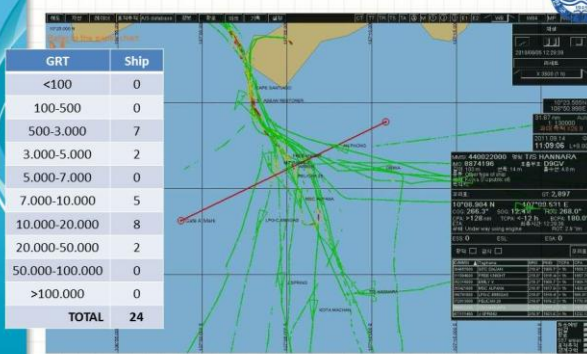
1.3 Traffic statistics (cont.)



Percentage of type of cargoes

(Source from HoChiMinh City Port Control)

1.4 Traffic survey data



Traffic survey made by T/S HANNARA during 12 hrs on June 5, 2010

1.5 Statistic of accidents

Statistic during 5 years (2006-2010)			
Numbers of ocean vessel passages		88,777	
	Number of accidents	Accident per passage	Passage per accident
Collision	55	6.20E-04	1,614.1
Grounding	1	1.13E-05	88,777.0
Others (fire, sink, capsized...)	14	1.58E-04	6,341.2
Total	70	7.88E-04	1,268.2
Person injured	14	1.58E-04	6,341.2
Person died	12	1.35E-04	7,398.1
Total	26	2.93E-04	3,414.5

Statistic of accidents, person injured from 2006-2010

(Source from HoChiMinh City Port Control)

1.5 Statistic of accidents (cont.)

	SG-VT Fairway	Busan	Ulsan	Incheon	Yeosu
Probability of collisions	620.0 E-06	11.7 E-06	10.6 E-06	11.2 E-06	1.94 E-06
Comparison (X times higher)		53.0	58.3	55.4	319.3

Compare with other water way

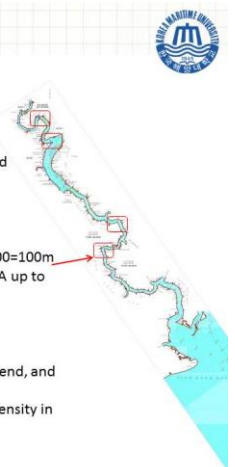
(Source from: HoChiMinh City Port Control, A Study on Local Maritime Traffic Management to Promote Maritime Traffic Safety in the Istanbul Strait-Yusuf Volkan Aydogdu)

2.1 Natural problems

-Bends: 33, many bends have small radius
=> Masters must have good maneuvering skill, Familiarized with the fairway
But according to Port regulation, master of VN ship which GT<2.000 can self pilot does not need to attend any pilot exemption course.

-Minimum channel radius at curve: 500m
=> for safe result, normally vessel's LOA <= 1/5 * 500=100m
But according to Port regulation, vessel which has LOA up to 230m can pass this bend without any tug assistant etc...

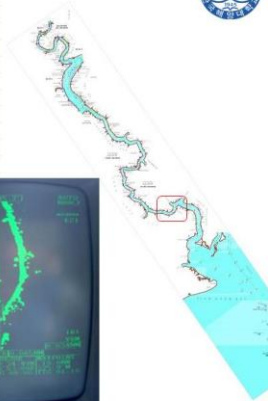
- 70% of berths, mooring buoys located along the bend, and in narrowest area of the fairway
=> difficult for berthing/un-berthing and high density in this area



2.1 Natural problems (cont.)

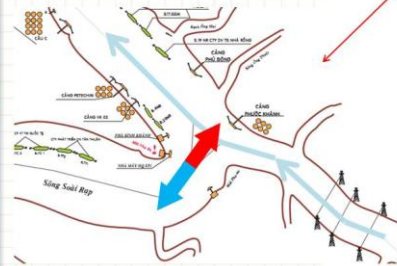


-More than 50% length of the fairway has high trees along both banks => restricted in visibility



2.1 Natural problems (cont.)

- Strong tidal stream up to 4 kts & current set is very complicated due to there are many branch along the fairway
=> difficult in ship handling



2.1 Natural problems (cont.)

- Fog: thin, exits for a short time, about 20 days/year
- But rain: often heavy, about 160 days/year (from May-Nov.)
=> restricted in visibility (especially with inland waterway facilities and domestic vessel). 50% accidents occurred when it was rain



2.2 Human related problems

- 100% inland waterway facilities in VN were not equipped with communication equipment such as VHF, and Radar also

=>

- How can an ocean vessel communicate with him for avoiding collision?
- How can he detect obstacle, especially at night and in rain

=> **inland waterway facilities is one of the most dangerous target of ocean vessel while sail on the fairway.** (70% of collisions accidents occurred between ocean vessels and inland waterway facilities)



2.2 Human related problems (cont.)



=> some narrow area of the fairway become more narrow because of illegal fish trapping and sand exploitation activities which out of the control of authorities



2.2 Human related problems (cont.)

- Pilot competency:
 - After graduated, student can become an assistant pilot.
 - And after a number of safe passages he attend an examination to get a pilot license
 - He doesn't need to become a master before become a Pilot

=> **About less than 50% of crews and pilot have full fill competency.**

50% remain are lack off competency, so in case of difficulty the risk of incidents become very high.

a passenger vessel aground caused by pilot mistake

