3.3 First Seminar on the Development Roadmap Towards Competitive Indonesian Maritime Transport

3.3.1. ASEAN Cooperation in Transport (Bernard Tai – ASEAN Secretariat)

ASEAN Cooperation in Transport

STRAMINDO Seminar
Jakarta
15 July 2003

By
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ASEAN Secretariat

The views expressed here are the author's own, and do not necessarily reflect the views of the ASEAN Secretariat

ASEAN Member Countries

- Brunei Darussalam
- Cambodia
- Indonesia
- Lao PDR
- Malaysia
- Myanmar
- Philippines
- Singapore
- Thailand
- Viet Nam

Basic Facts on ASEAN (2000)

Member Countries	Population (Thousand)	GDP (US$ Billion)	Per Capita GDP (US$)
Brunei Darussalam	338	4.623	14,094
Cambodia	12,200	3.230	289
Indonesia	204,790	153.252	723
Lao PDR	5,218	1.712	315
Malaysia	23,266	89.321	4,016
Myanmar	49,008	7.083	155
Philippines	76,320	75.189	990
Singapore	4,018	92.257	25,864
Thailand	62,405	121.933	1,986
Viet Nam	77,686	31.611	396

ASEAN vs Other Groupings, '98

(source: 2001 ASEAN-Japan Statistical Pocketbook)

	Population (mil)	GNP (US$ bil)	GNP per capita (US$)	Trade value (US$ bil.)
ASEAN	**503**	**554**	**1,100**	**604**
EU	385	8332	21,600	4248
NAFTA	396	8852	22,300	2305
MERCOSUR	210	1087	5,200	185

ASEAN

- ASEAN: a market of more than 520 million people, half of China's population
- ASEAN's GDP of US$556 billion, about the same as China's.

8th ASEAN Summit, Nov 02

- The idea of striving for an ASEAN Economic Community (AEC) by 2020 was proposed for the first time.
- AEC: "A logical extension of ASEAN's goal towards integration".
- Agreed to explore the possibility of transforming ASEAN into AEC by 2020 with ASEAN's integration being deepened and accelerated through the AEC.

Benefits from ASEAN economic integration

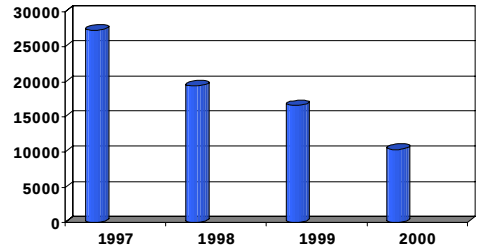
- Export and FDI competitiveness
- Improved welfare
- Strengthen role in international arena
- Political stability

Rooms for further regional integration?

- Intra-ASEAN trade accounts for nearly 25% of ASEAN's total trade, up slightly from 21.4% in 1993
  - (vis-à-vis the Intra-EC trade was at 35.3% in 1958 and 50.3% in 1970)

FDI in ASEAN (US$ mil)

(source: ASEAN Secretariat)



- Export-oriented economic models
- In these times of depressed global demand, ASEAN may need to find new strategy for growth
- Growth to come from within may be needed.

New wave of globalization

- Global trade & investment liberalization
- Intertwined regional production and trading networks
- Rule-based economic system (WTO, IMO, etc)
- IT revolution
- Global safety, security and environment concerns

Rising trend towards integrated production network in ASEAN: Regional solution is necessary

IMPLICATIONS FOR ASEAN's TRANSPORT SYSTEMS

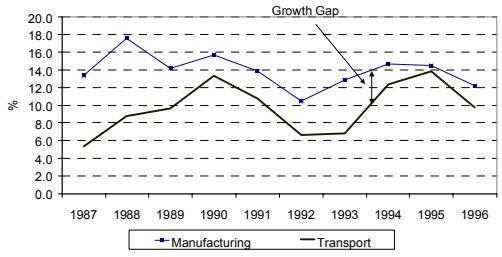
- **Demand for time reliability**
- **Demand for certainty**
- **Demand for safety**
- **Demand for security**
- **Demand for clean technologies**

Challenges

- To stay competitive, ASEAN's transport sector need to be a lead factor in economic growth

Transport: Leader or laggard?

Malaysia: Annual Growth Rate of Manufacturing Output and Transport Services



ASEAN's response

- **ASEAN Vision 2020** Kuala Lumpur, 15 December 1997
- **Hanoi Plan of Action** (16 December 1998)

ASEAN Vision 2020

Kuala Lumpur, 15 Dec 1997

- "ASEAN as a concert of SEA Nations, outward looking, living in peace, stability and prosperity, bonded together in partnership in dynamic development and in a community of caring societies"

ASEAN Vision 2020

- Meet the ever increasing demand for improved infrastructure and communications by:
- Developing an integrated and harmonized trans-ASEAN transportation network

ASEAN Vision 2020

- **Promoting open-sky policy**
- **Developing multi-modal transport**
- **Facilitating goods in transit.**

Hanoi Plan of Action (16 Dec '98)

- A middle term plan
- It specifies an array of activities designed to achieve ASEAN's Vision 2020

Hanoi Plan of Action: Main Thrusts

- Infrastructure Development
- Competitive Transport Services
- Capacity Building
- Transport Safety and Environment
- Private Sector Participation

ASEAN Transport Cooperation - Scope

- Air Transport
- Land Transport
- Maritime Transport
- Transport Facilitation

Hanoi Plan of Action: Transport Agenda

- **Trans-ASEAN Transport Network Development**
- **Facilitation of Goods in Transit and Inter-State Transport**
- **Multimodal Transport Operations**
- **Competitive Air Services Policy Development**
- **Maritime / Shipping Policy Development**
- **Harmonization of Road Vehicle Standards and Regulations**
- **ASEAN Highway Network Project**
- **Singapore-Kunming Rail Link Project**
- **Sectoral Negotiations in the Air and Maritime Transport under the 1995 ASEAN Framework Agreement on Services (AFAS)**

Transport Infrastructure 1999

Source: ASEAN Transport Statistics 1999

Country	Area (1000 km2)	Length of Road (km)	Length of Railway (km)	No. of Int. Port	No. of Int. Airport
Brunei	5.77	3,768	not applicable	3	1
Cambodia	181.00	34,000	632	2	1
Indonesia	1,919.00	268,030	4,616	131	18
Lao PDR	237.00	3,016	not applicable	not applicable	2
Malaysia	330.00	64,686	1,949	*6	6
Myanmar	677.00	27,966	4,746	9	1
Philippines	300.00	29,524	474	2	8
Singapore	0.64	3,066	N.A.	1	2
Thailand	514.00	51,339	3,979	10	29
Viet Nam	331.00	210,000	3,143	not available	2

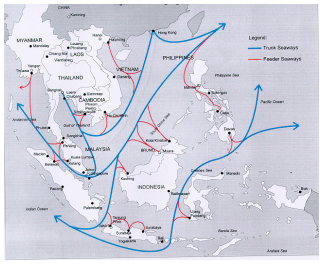
Existing ASEAN Transport Network

Source: ASEAN Transport Cooperation Framework Plan, 1999

Maritime Transport

- Maritime transport plays a critical role in moving intra- and extra-ASEAN trade.
- Improvement of ASEAN's shipping and port facilities and operating environment is of paramount importance.

ASEAN Maritime Transport System



Source: ASEAN Transport Cooperation Framework Plan, 1999

Present status of maritime transport in ASEAN

- Varying in logistics infrastructure and services development
- Lack of integration (between different modes of transportation and between member countries)
- Fragmented industries
- Uncoordinated approach to regional and national maritime transport development
- Lack of modern distribution channels: low intra-ASEAN containerization rate
- Lack of quality/skilled labour
- Varying sophistication of consumers, customers and vendors
- High degree of government involvement in CLMV

Top 35 maritime countries: fleet size

	World ranking	DWT	% of world total
Singapore	11	18 mil	2.37
Malaysia	22	7 mil	0.88
Philippines	26	5 mil	0.64
Indonesia	27	4 mil	0.58

Source: UNCTAD, Review of Maritime Transport, 2002

Top 20 container terminals, 2001

	World ranking	TEUs
Singapore	2	15.5 mil
Port Klang	12	3.8 mil
Manila	17	2.8 mil

Source: UNCTAD, Review of Maritime Transport, 2002

Intra-ASEAN containerized traffic

Year	Intra-ASEAN trade (in thousand TEU)	% change
1996	989	8.8
1997	1096	10.82
1998	1103	0.64
1999	1126	2.09
2000	1191	5.77

UNCTAD: Review of Maritime Transport, 2002

What is ASEAN doing in port and shipping co-operation?

- Hanoi Plan of Action:
  - to develop a Maritime/Shipping Policy for ASEAN
  - enhancing the competitiveness of ASEAN ports
  - further liberalization of maritime transport services; and
  - integration of maritime transport in the intermodal and logistics chain.

Formulation of a regional maritime transport policy:

- The *ASEAN Maritime Transport Sector Development Study.*
- To formulate a medium-term policy and development framework for the ASEAN maritime transport sector covering ports and shipping, which will serve as the guiding document for ASEAN cooperation for the period 2003-2008.
- The Study puts forward two broad policy and development goals in ASEAN maritime transport: (a) enhancing competitiveness of the regional maritime transport system, and (b) building capacity and narrowing gaps among member countries.

Achieving international standard in maritime safety and legislations/standardization of maritime standards and legislations:

- *IMO-ASEAN project on the Drafting and Updating of Maritime Legislation to support Adoption and Accession by ASEAN Member Countries to IMO Conventions*.

Creating a more liberal and competitive regional maritime transport sector

- Common ASEAN Near Coastal Voyages to allow seafarers manning vessels less than 3,000 GT to operate within the said defined limits for the ASEAN region and at the same time seafarers of such vessels in ASEAN countries to also operate within the near coastal voyage limits as prescribed in their respective maritime legislation.

Cooperation in maritime human resource development/capacity building to narrow the development gap

- Bilateral MOU for the mutual recognition of certificates of competency in line with the requirements of the 1995 amendments to the International Convention on the Standards for Training, Certification and Watchkeeping (STCW 95);
- The ASEAN-China Training Project for Vessel Masters, Chief Engineers and Safety Administrative Personnel on the Lancang-Mekong River (Phase 1) in Jinghong China from 9-16 May 2002;

Cooperation in maritime human resource development/capacity building to narrow the development gap (cont.)

- Completion of the four (4) pilot courses at the ASEAN Inland Waterways and Ferries Training Center in Palembang (Indonesia). These courses were on Port Management, Traffic Engineering, Infrastructure Management and Plan Evaluation.

Protecting the marine environment

- Holding of the DANIDA/DANCED sponsored Regional Workshop on Port Waste Management in Shah Alam, Malaysia on 17-18 February 2003.
- The draft TOR for the establishment of a sub-group on MARPOL/Port Waste Management (PWM) for deliberation at the next Working Group Meeting and for subsequent consideration/adoption in STOM.

Inclusion of NGOs and private sector in public policy formulation

- Engaging effective cooperation, dialogue and partnership between and amongst ASEAN port authorities, shipowners, freight forwarders and shippers' councils in mutually beneficial areas to develop and expand ASEAN shipping and trade.

Sharing and dissemination of maritime information

- Uploading in the ASEANWEB www.aseansec.org of the Directory of ASEAN Maritime Training Centers and Educational Institutions and the ASEAN Search and Rescue (SAR) Cooperation Contact Points;

ASEAN Framework Agreements in Transport Cooperation

- The ASEAN Goods in Transit Agreement
- The ASEAN Multimodal Transport (MT) Agreement
- The ASEAN Inter-State Transport Agreement

The ASEAN Goods in Transit Agreement essentially provides:

- Right of transit transport across the territory of one or more Member Countries from point of origin to final destination, including the right to load and discharge goods;
- Road transit transport vehicles registered in one Member Country will be allowed to provide transit transport services in the territory of other Member Countries.

The ASEAN Goods in Transit Agreement essentially provides:

- Transit transport shall not be subject to unnecessary delays or restrictions and shall be exempt from Customs duties and other charges; and
- Goods carried in sealed road vehicles, combination of vehicles or containers shall not be subject to Customs examination.

The ASEAN Multimodal Transport (MT) Agreement will :

- Provide the minimum requirements for registration of ASEAN multimodal transport operators (MTOs)
- Define the liability and limit of liability of multimodal transport operators and consignors.
- Unify and set out the legal principles for multimodal transport operations in ASEAN.

The ASEAN Inter-State Transport Agreement has the following essential elements:

- Allow road transport operators duly established in one Member Country to undertake goods transportation into or from the territories of other Member Countries;
- Grant the right to load and discharge goods destined for or coming from Member Countries.
- Permit Cabotage only on the basis of a special authorization from the host Member Country

Singapore – Kunming Rail Link Route

Air Transport

- Under the 1995 ASEAN Framework Agreement on Services (AFAS), the third package of commitments for the air transport sector has been concluded.
- All 10 member countries have commitments in Selling and Marketing of Air Transport Services, with eight making commitments in both Computer Reservation System Services and Aircraft Repair and Maintenance Services.

Air Transport

- ASEAN MoU on Air Freight Services is expected to be signed in the second half of 2002.
- This MoU is the first step towards the full liberalization of air freight services in the ASEAN region. It will allow the designated airlines of each member country to operate all-cargo services up to 100 tons weekly in 20 designated ASEAN airports.

ASEAN Inland Waterways Profile 1999

Country	Navigable Length (km)	No. of Vessels	Carrying Capacity (DWT)	Freight Transport (Million Ton)	Passenger Transport (Million Pax)
Cambodia	1,750	n.a.	n.a.	0.10	n.a.
Indonesia	20,456	85,719	1,019,689	6.28	15.66
Lao PDR	4,600	793	8,500	1.10	0.73
Malaysia	3,300	1,384	142,500	1.20	1.90
Myanmar	6,626	2,400	240,000	4.98	45.83
Philippines	1,033	n.a.	n.a.	n.a.	n.a.
Thailand	1,750	43,711	1,465,105	15.36	129.89
Viet Nam	11,400	752	239,502	22.70	145.00
Total	50,915	134,759	3,115,296	51.72	339.01

Source: ASEAN Transport Cooperation Framework Plan, 1999

ASEAN Major Rivers

- Mekong River: 4,880 km passing through China, Myanmar, Thailand, Lao PDR, Cambodia and Viet Nam
- **Red River and its tributaries: 1,700 km in Viet Nam**
- Chao Phraya River and its tributaries: 1,750 km in Thailand
- **Ayeyarwady River and its tributaries: 3,130 km in Myanmar and serves as a natural transport artery**
- Many rivers in South Sumatera, Kalimantan, Maluku, North Sulawesi and Irian Jaya in Indonesia

Emerging Dialogue Relations

CHINA, INDIA and JAPAN

in the areas of:

- POLICY CONSULTATION
- PROJECT COOPERATION

ASEAN – China Cooperation

- Land Transport Infrastructure and Facilitation
- Facilitation of Maritime and River Transport
- Expansion of Air Transport Services

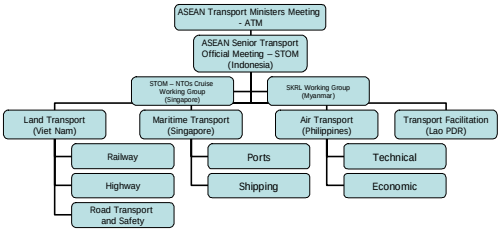
ASEAN – Japan Partnership

- Facilitating Cargo Distribution and Logistics
- Promotion of Safer and Sustainable Shipping
- Enhancing Air Transport Safety and Efficiency

ASEAN – India Cooperation

- Land Transport Integration, Interconnection and Technical Inter – Operability
- Facilitation of Maritime Transport Services
- Networking for Transport Education, Research and Development

Institutional Structure



3.3.2. Japan's Experiences in Domestic Fleet Development (Kimura Nobutaka – Member of JICA Advisory Committee)

Structure
of
The Corporation for
Advanced Transport &
Technology

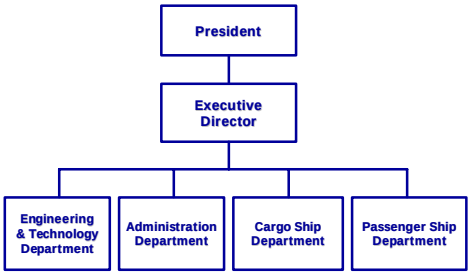
15 July 2003

KIMURA Nobutaka
JICA ADVISORY COMMITTEE

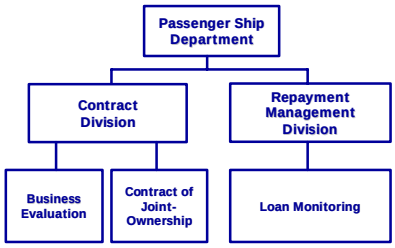
Corporation for Advanced Transport & Technology

- **Establishment : June 1957**
- **Capital : 18billion Japanese Yen**
- **Staff : 75 employees**

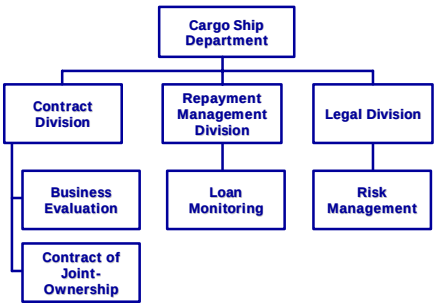
Organization



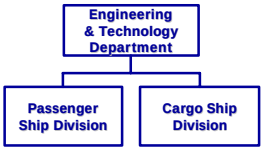
Activity of Passenger Ship Dept.



Activity of Cargo Ship Dept.



Activity of Technical Department

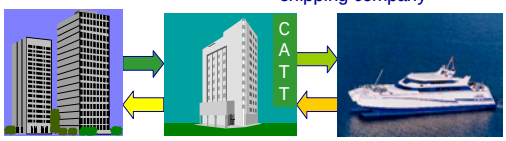


1. To make standard requirements for modern equipment, living environment of the crew.
2. Supervise ship building processes.
3. To solves mechanical trouble.

Money Flow

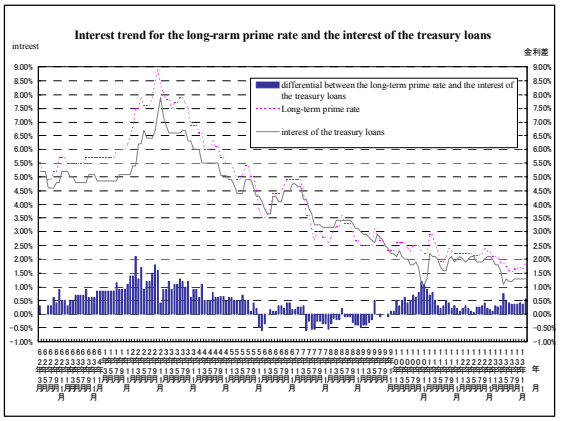
Procurement for low-interest Funds from MOF

Construction & Lease out to shipping company

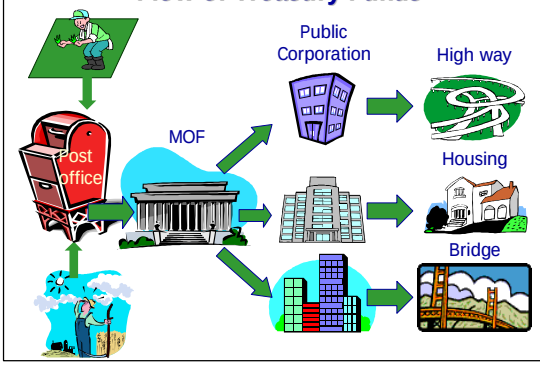


Pay back to MOF

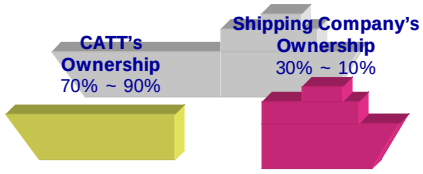
Get repayments as a leasing fees



Flow of Treasury Funds



Sharing of Ownership



Fundamentals of Passenger Ship Business in Japan

1. To start passenger ship business and to set fares are permitted by Government.
2. Governmental subsidies are provided to unprofitable shipping lines connecting remote islands. (4 billion Yen/year)

Policy Fundamentals in Domestic Shipping

1. Government to adhere to cabotage policy for the domestic transportation of cargo .
2. Government should adjust the total volume of domestic shipping fleet through the scrap & build policy.

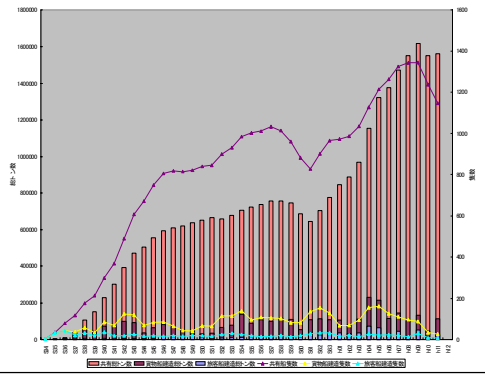
Evaluation of Cargo Shipping Business

1. Almost all the domestic ships in Japan are industrial products carrier
2. Shipping companies make long-term charter contracts with big industrial companies.

Technical Services

1. Shipping companies are responsible for ship maintenance and management.
2. They do not have enough technology.
3. We provide technical support in building planning, supervision of building processes, and to solve any problem after launching.
4. Corporation's ships are better than ships which build on the funds from other financial institutions.

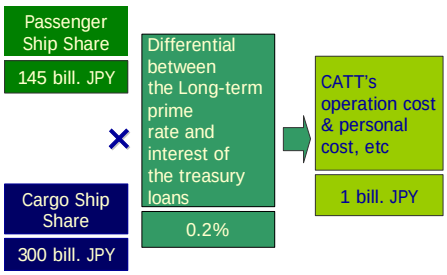
Trend of Joint-ownership Volume



Corporation's Fleets in Y2001

	Number of ships	Total Gross Tonnage	Corporation's Share Amounts
Passenger Ship	196	492.000 GT	145 bill. yen
Merchant Ship	824	1.000.000 GT	300 bill. yen

General management costs of CATT



Balance Sheet for FY2000

Incomes		Expenditures	
Leasing Fee	82 billion yen	Ship building cost	43 billion yen
Treasury loans	34 billion yen	Payment of debts & interests	72 billion yen
– – –	– – –	General management costs	1 billion yen
Total	116 billion yen	Total	116 billion yen

Assumption for calculation 1

1. Type of Ship: 1600DW cargo ship
2. Building Cost: 430 million Yen
3. Joint-Ownership period: 10 years
4. Loan Interest: 2.5% per year
5. Revolving funds: All fund is loan
6. Corporations & Banks have the same interest rate.

Assumption for Calculation 2

1. Crew Expenses: 776.000 Yen × 6 persons × 12months
2. Crew Expenses include meal expenses, crew insurance fee, etc.
3. Fuel oil is supplied by operator.
4. Other expenses include ship equipment, repairing costs, lubricating oil, insurance fee, real estate tax, general management costs, etc.
5. Charter money: 11 million Yen × 12 months

Cash flow for typical cargo ship

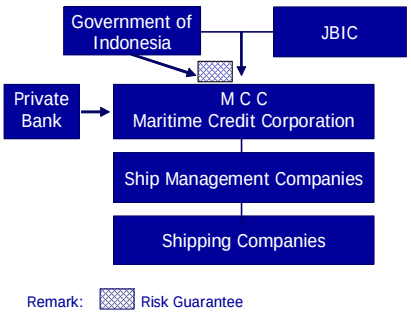
	First Year	2nd Year	3rd Year	
Charter Money	132	132	132	
Crew Expenses	55.86	56.42	56.98	
Other Expenses	14.03	15.31	20.6	
Debt Capital	42.57	42.57	42.57	
Debt Interest	10.75	9.68	8.62	
Balance	8.79	8.1	3.23	

Denomination : Million Yen

One Proposal in JICA M/P

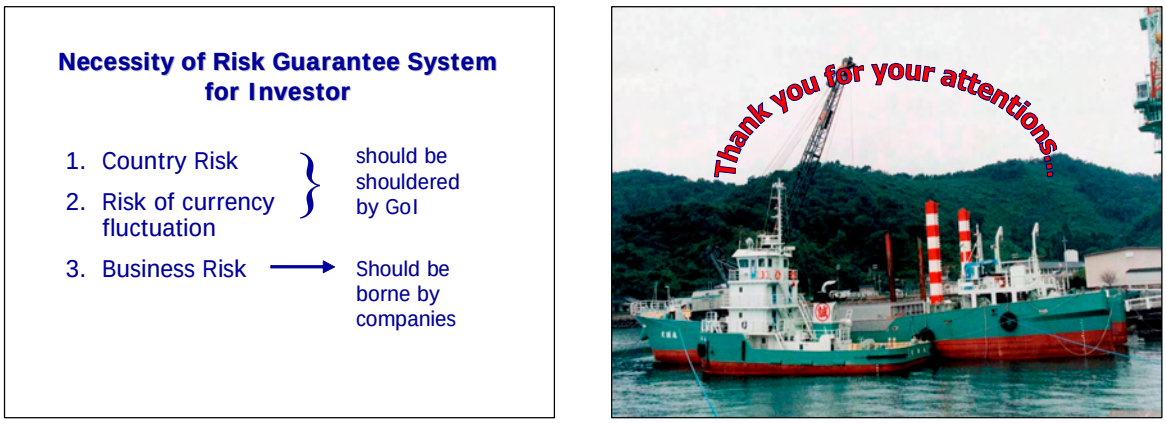
1. To establish Maritime Credit Corporation in Indonesia
2. To establish Risk Guarantee System in Indonesia.

Maritime Credit Corporation & Risk Guarantee System



Function of MCC

1. Own ships and lease out to shipping companies
2. Financing facilitation to shipping companies for building new ships
3. Guarantee to long term Private Loan



3.3.3. Indonesia's Experiences in Domestic Fleet Development – Shipping Line's Perspective (Oentoro Surya – President Director of PT. Arpeni Pratama Ocean Line/INSA)

Background

Indonesia is often called 'Benua Maritim (Maritime Continent)' as being the largest archipelagic country in the world. It requires a large number of various vessels for domestic and ocean-going transportation. Special-purpose vessels like dredging, offshore drilling, building construction, rigs, and pilot boats should support them.

The Indonesian fleet of vessels could be developed on the following conditions:

1. The Government willingness to develop the Indonesian fleets.
2. The use of Indonesian vessels by the domestic shippers/cargo owners.
3. Long term agreements between cargo owners and shipping companies.
4. The availability of cargoes on continual basis.
5. The setting up of regular liner.
6. Joint operations between domestic ship-owners and foreign ship-owners for oceangoing transportation.
7. Non-bank financial institutions specifically set up for new building and purchasing of vessels with low interest rates.
8. Special incentives in the form of tax reduction, etc.

Brief History

1821-1945 Period: Under the Colonial Dutch rule, the Indonesian domestic cargoes were carried by the Dutch shipping company, KPM (Koninklijke Paketvaart Maatschappij), whereas exportation and importation by Royal Inter Ocean Line. The KPM had various types of small-size vessels for carrying passengers, cargoes, and animals.

1945-1957 Period: In the beginning of independence, Indonesia still utilized KPM and Royal

Ocean Line for domestic and international transportation respectively. In 1955, seaports, *veems,* expedition and stevedoring were nationalized, whereas sea transportation was still carried out by the KPM. Then in *1957,* the KPM was nationalized. Some certain vessels were granted to the Indonesian Government. They were handled by the so-called PEPUSKA (Pemilikan Pusat Kapal-kapal), which then became PELNI (Pelayaran Nasional Indonesia). Some vessels were sold at lower price to local companies such as Sriwidjaya Raya Lines, PPSS (Perusahaan Pelayaran Sulawesi Selatan), PT Gapsu, PT Karimata, and MPS (Maskapai Pelayaran Sumatera).

1957-1969 Period: Some Dutch companies were allied to become Indonesian shipping companies, which among others are:

1. PT. Djakarta Lloyd
2. PT. Gesury Lloyd
3. PT. Trikora Lloyd
4. PT. Samudera Indonesia
5. PT. Bahtera Adhiguna (Ex Tunda Bara)
6. Etc.

1969-1984 Period: The Indonesian Government introduced the so-called Peraturan Pemerintah (Government Regulation) No. 1/1969 on seaports and shipping regions and PP No. 2/1969 on sea transportation for the development of the Indonesian shipping business. A shipping company was required to own three units of vessels in minimum. In this period, there had been rapid development of the Indonesian shipping companies and fleets reaching 246 companies with 1,589 units/1,992,000 dwt.

They could be specified as follows

	Companies	Vessels
Ocean going (Samudra)	6	64 units/955,000 dwt
Domestic (Nusantara)	46	361 units/418,000 dwt
Local	130	710 units/117,000 dwt
Special-purpose (Khusus)	64	454 units/6 19,000 grt

Shipping could be classified as follows:

1. The domestic shipping with the following routes: domestic route (route Nusantara), local route, Singapore route, pioneering route (route perintis), and tanker route.
2. The ocean going shipping with the following conference returned routes: Indonesia-Europe, Indonesia-Japan, Indonesia-Korea, Indonesia-Australia, and Indonesia-the United States.
3. The lumber agreement routes: Indonesia-Korea, Indonesia-Taiwan, and Indonesia-Japan vice versa.

In this period, the Indonesian shipping was supported by the so-called PT. PANN (Pengembangan

Armada Niaga Nasional) as a non-bank financial institution, which function was to finance the new building and purchasing of vessels at low interest rate.

Besides, stevedoring and general agency activities were bound to shipping business permit. And the Government introduced PP 18/1982 on the transportation of the Government-owned goods, which had to be carried by the Indonesian shipping companies' vessels.
In 1984, the number of Indonesian shipping companies was 264 with the following amount of vessels

	Companies	Vessels
Ocean going	6	38 units/ 545,000 dwt
Domestic	49	343 units/ 479,000 dwt
Local	133	761 units/ 85,000 grt
Special-purpose	76	668 units/ 889,000 grt

1984-1992 Period: In this period, the Government issued the following regulations:

1. Surat Keputusan Menteri Perhubungan (Decree of Minister of Communication) No. 57/1984 to abandon the operation of vessels above the age of 25 years.
2. Instruksi Presiden (Presidential Decree) No. 4/1985
3. PP 17/1988 (Paknov 88)

Many old vessels were scrapped, so that the number of vessels and their capacity were drastically reduced, in spite of the dramatic increase of the number of shipping companies. One could easily set up a shipping company, though it just owned one unit of vessel of 175 grt in capacity. Then, stevedoring was separated from shipping and terminal operator was set up.

Yet, Indonesia was in the face of the containerization era. The Indonesian shipping companies were unable to compete against foreign shipping companies in container tracking.

Therefore, many shipping companies went bankrupt and many shifted to agency activities. PT PANN had also changed its basic function to multi finance activities. In this period, one may witness the strengthening of conference, the loosening grip of Government, and the slow growth of fleet development. Yet, some shipping companies existed with their own efforts without the support and assistance from the Government.

My company, PT. Arpeni Pratama Ocean Line, established in 1975 has grown as one of the prominent Indonesian shipping companies. We have diversified our shipping service from carrying log/timber product and general cargoes to carrying bulk cargoes, particularly coals, and liquid cargoes, as well as running and ship management. Presently we operate 18 own vessels and, by March 2003, 13 chartered vessels over half a million dwt in total capacity. We have consistently set up and maintained close relationship with our shippers, cargo owners, financial institutions, and other stakeholders, and enhance our service quality and human resource and management professionalism subject to the IMO conventions and company's competitive strategies. In the

expansion of its fleets of vessels, the company has been making use of financial intermediaries in capital markets.

In this period, Indonesia had 278 shipping companies with the following fleets:

	Companies	Vessels
Ocean going	6	32 units/ 397,000 dwt
Domestic	49	286 units/ 450,000 dwt
Local	140	619 units/ 94,000 grt
Special-purpose	83	761 units/ 842,000 grt (Bulk Carriers)
		352 units/1,127,000 dwt (Tankers)

1992 till Present: the Government has been making a great effort to improve the Indonesian shipping industry by introducing Undang Undang Pelayaran (Shipping Laws) No. 2 1/1992 to develop the national fleet of vessels. It has tried to create incentives such as the abolishment of VAT on the purchase of vessels and spare parts. However, the economic and trade liberalization may have a great effect that has caused inconsistency on the implementation of the new regulation. There is also a movement to separate agency from shipping business (shipownership). Then, non-bank financial institution has been set up to finance the new building and purchasing of the second-hand vessels. Banking interest rate is still high. Therefore, the Government has not yet succeeded in raising the capacity of fleets of vessels.

The Indonesian national shipping companies are still lack of competitiveness. The foreign shipping tends to enhance its domination inside the Indonesian domestic transportation and the importation and exportation of goods from and to Indonesia. In 2002, the Indonesian vessels carried 89.9 million tons or 59.9% of 149.9 million tons of domestic trade, and only 22.5 million tons or *5.5%* of 413 million tons of Indonesian foreign trade. The deficit of sea transportation services is reportedly US$ 11 billion per annum.

At present, the number of Indonesian vessels is:

	Companies	Vessels
Ocean going	19	121 units/1,078,000 dwt
Domestic	820	2,361 units/1,548,000 dwt*
Special-purpose	118	
Tanker	31	205 units/1,127,000 dwt
Bulk	39	109 units/ 682,385 dwt
Offshore	37	327 units/ 784,479 dwt/gt/HP
Industrial	11	36 units/ 212,854 dwt/gt/HP

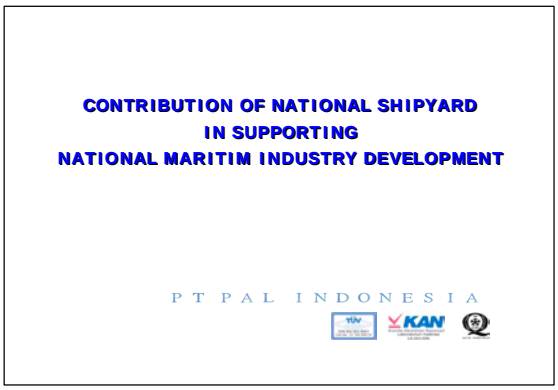
***** Consisting both Nusantara and local

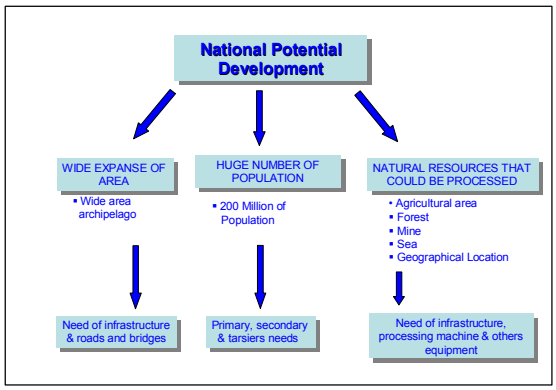
Closing Remarks

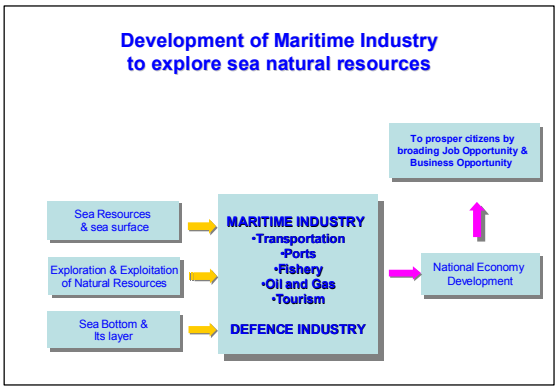
As previously stated, the development of the Indonesian fleets is to require the followings:

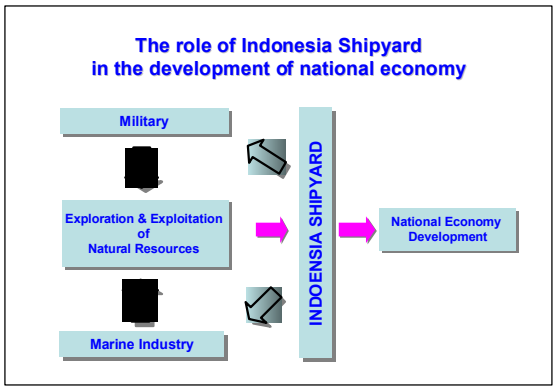
1. There should be a national integrated policy on shipping. In this regard, the executive and legislative bodies should have a great concern on the importance of fleets for a maritime country like Indonesia. They must have their political wills to develop the Indonesian fleets.
2. The Government should provide special treatment in the form of maritime subsidy, because the industry is low yielding, capital intensive, high technology, and high risk in nature.
3. A non-banking financial institution has to be set up to finance the new building and purchasing of the second hand vessels.
4. The Indonesian shipyards and dockyards should also be developed.
5. The issuance of regulations, which are in supportive to the Indonesian shipping.
6. A benchmark with policy patterns in other countries, like Japan, Korea, Singapore, and Malaysia) should better be carried out.

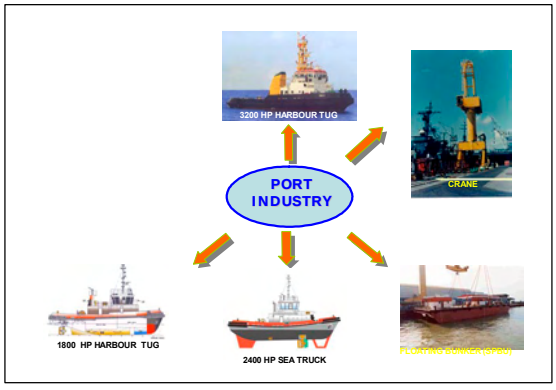
3.3.4. Indonesia's Experiences in Domestic Fleet Development – Shippyard's Perspective (Mr. Adwin Suryodiprojo – President Director of PT. PAL)

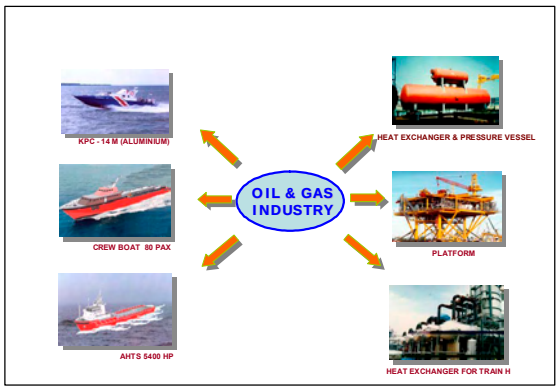


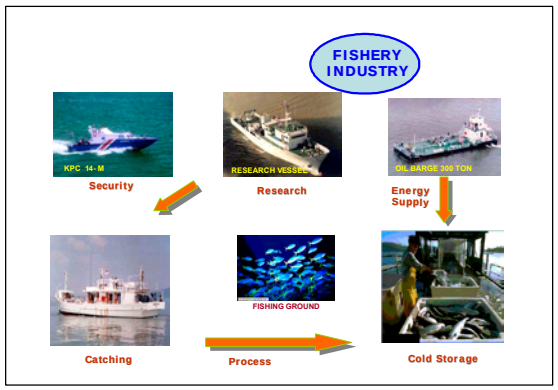


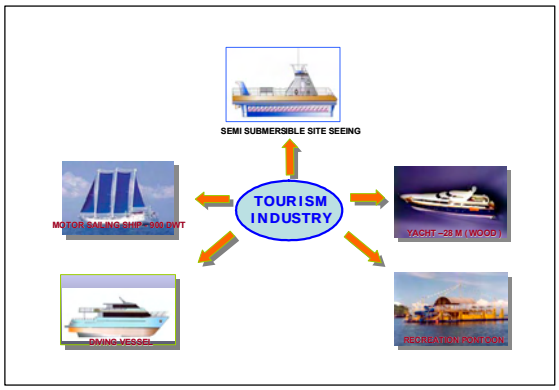












CONTRIBUTION & EXPERIENCE

1. THE CARAKA JAYA PROGRAMS

- 41 UNITS OUT OF 56 UNITS GENERAL CARGO, SEMI CONTAINER AND FULL CONTAINER (UP TO 4180 DWT) IN THE PROGRAM DELIVERED
- UP TO 9 NATIONAL SHIPYARDS INVOLVED AND DEVELOPED
- POSTPONED/STOPPED SINCE GOI LEFT THE PROGRAM TO SHIPPING SECTOR
- 14 UNITS OF IMPORT MATERIAL PACKAGE STORED AT 9 NATIONAL SHIPYARDS FOR MORE THEN 6 YEARS LOSSING TECHNICAL / PHYSICAL AND COMMERCIAL VALUES
- COULD ONLY BE SOLVED WHEN EVERYBODY INVOLVED COMMITTED TO PUT NATIONAL INTEREST OVER SECTORAL INTEREST

2. THE PALWO BUWONO PROGRAMS

1. 5 UNITS CONTAINER VESSEL (UP TO 1600 TEUS) DELIVERED.
2. EXECUTING SHIPYARD SUFFERRED FROM FINANCIAL ENGINEERING OF THE PROJECT INVOLVING MODIFIED CREDIT EXPORT SCHEME.
3. ROLE OF THESE VESSELS IN STRENGTHEN NATIONAL SEA TRANSPORTATION SYSTEM QUESTIONED.

3. PASSENGER TRASPORTATION PROGRAM

- 3 UNIT PAX 500 AND 1 UNIT PAX 200 DELIVERED, 1 UNIT FAST PAX 120 TO BE DELIVERED
- GOI FINANCING SCHEME IN DEVELOPING NATIONAL PASSENGER FLEET IE EXPORT CREDIT LIMITED LOCAL SHIPYARD PARTICIPATION IN THE PROGRAM

4. DEFENCE AND SECURITY PROGRAMS

- 12 FAST PATROL BOATS 57 M AND 22 FAST PATROL BOAT DELIVERED TO NAVY, POLICE CUSTOMS.
- 10 YEARS OVERHAUL A SUBMARINE COMPLETED AND DELIVERED
- LOOSE FINANCING SCHAME FROM OF NATIONAL BUDGET SYSTEM (ON TOP) GAVE NATIONAL SHIPYARD THE LIBERTY TO DEVELOP COMPETENCY MANAGE AND DELIVERED THE PROJECT SUCCESFULLY.
- BUILT COMPENTENCY IN DEFENCE INDUSTRY NEED TO BE MAINTAINED AND DEVELOPED FURTHER IE NATIONAL DEFENCE INDUSTRIEN GROW ONLY / MAINLY FROM NATIONAL NEED.

5. PORT'S TUG BOAT BUSINESS MODEL

- 2 UNITS PORT'S TUG BOAT DELIVERED AND 5 UNITS MORE TO DELIVERED TO PELINDO AND REGIONAL PORT AUTHORITY.
- BUSINESS MODEL INVOLVING SHIPYARDS, SERVICE OPERATOR AND BANK WHERE BANK PROVIDED WORKING CAPITAL LOAN TO THE SHIPYARD, SERVICE OPERATOR PAY THE PROCUREMENT IN INSTALLMENT ALONG THE SAME TENOR OR THE WORKING CAPITAL LOAN.
- THE MODEL PROVED WORKING PROPERLY WHEN THE OVERALL MODEL ANALYSED JOINTLY AND OFFTAKE POTENTIAL SHARED FAIRLY AMONG THE PARTIES.

WHAT SHIPYARDS LEARNED FROM CONTRIBUTION & EXPERIENCE

- NEED AN INTEGRATED POLICIES AND IMPLEMENTATION PROGRAM FROM UP STREAM UP TO DOWN STREAM OF INDONESIAN SHIPPING AND MARITIME INDUSTRIES
- DEVELOPED ALTERNATIVE AND COMPETITIVE FINANCING FOR SHIPPING FLEET RENEWAL AND INVESTMENT; WITH GOI ASSISTANCE

  GOVERNMENT'S INVESTMENT :
  - MULTILATERAL SOURCE RATHER THAN BILATERAL SOURCE (EXPORT CREDIT)
  - MAXIMIZE DOMESTIC SOURCE OF FINANCING

  PRIVATE SECTOR INVESTMENT :
  - INTRODUCTION AND FORMATION OF SHIPPING FINANCE INSTITUTION / BANK
  - GOVERNMENT ASSISTANCE IN ACHIEVING COMPETITIVE FINANCING COST AND SHARRING THE FINANCIAL RISKS
- NEED A CONTINOUS PROGRAM TO ALLOW COMPLETION LEARNING CURVES AND ECONOMIC OF SCALE FOR THE GROWTH OF MARITIME SUPPORTING INDUSTRIES

THANK YOU

3.4 Workshop on Shipping Business Modernization

3.4.1. Modern Shipping Management for Inter-island Freight Shipping (Sakae Yusei – JICA Study Team)

Modern Shipping Management for Inter-island Freight Shipping

Capt. Sakae Yusei

JICA - STRAMINDO

Inter-island Freight Shipping

Type	Number of Ships	DWT	@ DWT
- General Cargo	927	3,325,000	3,600
- Bulk Carrier	31	580,000	18,700
- Tanker	310	2,176,000	7,000
Total	1,268	6,081,000	4,800

(Except Tug Boats, Barges, Landing Crafts, and Pontoons)

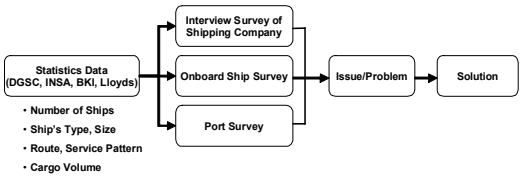
Source: BKI Report 2000

What is a Good Ship Operation?

Whose Portfolio Includes:
- Fixed Schedule
- Good Care of Cargoes
- Operation at Competitive Cost
- Friendliness to the Environment

How to improve Ship's Operation?

- Target
  → General Cargo
- Methodology



Onboard Ship Survey

- Container Vessel 17 vessels
- Conventional Vessel 27 vessels
  Total 44 vessels
- Period: Jan 2003 ~ May 2003



Objectives of Onboard Ship Survey

- Productivity of Vessel Operation
  - Ship's size, age, speed
  - Commissionable Days
  - Actual Working Days
  - Breakdown of Vessel Operation
  - Load Factor
  - Cargo Ship Productivity
- Ship Management and Navigation Safety
  - Insurance
  - Drawings, Instruction Books
  - Tools and Spare Parts
  - Planned Maintenance System

Result of Onboard Survey (No.1)

Indonesian Domestic

Classification	DWT	GT	Age	Ship's speed (at present)	Ship's speed at Sea Trial	Load Factor	Cargo Ship Productivity (ton mile/DWT)
Container Average	6,000	4,547	22	11.2	13.1	49.5	208
General Cargo	3,095	2,082	22	9.8	11.7	45.8	251

Japan Domestic

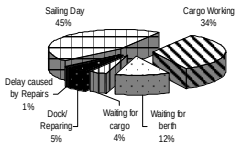
Classification	DWT	GT	Age	Ship's speed (at present)	Ship's speed at Sea Trial	Load Factor	Cargo Ship Productivity (ton mile/DWT)
Ro/Ro Average	4,724	3,677	9	19.1	20.6	85.0	550 ~ 600
Container	1,108	1,108	11	16.7	18.2	80.0	580 ~ 630

- *Age…* 22 years old
  → ***very old***
- *Speed…* Container 11.2 kts, General Cargo 9.8 kts
  → ***very slow speed***
  2 kts down from Sea Trial
  → ***ageing vessels and bad vessels maintenance***
- *Load Factor…* Container 49%, General Cargo 46%
  → ***very low***
- *Cargo Ship Productivity…* → ***Ton mile/DWT also very low***

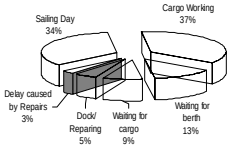
Result of Onboard Survey (No.2)

	Container		General Cargo		Japan	
	Days	%	Days	%	Days	%
Sailing	165	45	124	34	266	73
Cargo Working	123	34	135	37	90	25
Waiting for Berth (A)	44	12	47	13	0	0
Waiting for Cargo (B)	14	4	32	9	5	1
Dock/Repair (C)	17	5	17	5	4	1
Delay due to Repair (D)	2	1	10	3	0	0
Total (E)	365	100	365	100	365	100
Commission Days (E) – (C+D)	346	95	338	93	361	99
Actual Working Days (E) – (A+B+C+D)	288	79	259	71	356	98

Container



General Cargo



Cause of Low Operating Rate

- Waiting for Berth
- Waiting for Cargo
- Dock/Repair
- Delay due to Repair

Ship Management

No.	Question	General Cargo (27 Vessels)			Container (17 Vessels)		
		Yes	No	n/a	Yes	No	n/a
1	P&I Insurance and Hull Machinery Insurance	6	1	20	7	2	8
		74% of captains did not know if their ships were insured.			47% of captains did not know if their ships were insured.		
2	Drawings and instructions of manuals, books for ship board machinery and equipment	Yes	No	n/a	Yes	No	n/a
		17	10		16	1	
		37% of captains did not know where they were and almost all of such documents seemed unused.			94% of captains could show them on board, but some were written in Japanese or a European language.		
3	Tools and equipment for the workshop on board	Yes	No	n/a	Yes	No	n/a
		22	5		16	1	
		Almost all prepared them.			Almost all prepared them.		

Yes / No / n/a

Continued…

4	Spare parts and ship stores for machinery maintenance	Yes	No	N/a	Yes	No	n/a
		19	8		15	2	
		30% did not prepare enough kinds and number.			Almost all prepared them.		
5	Is the ship provided with adequate budget and appropriate planned maintenance system?	Yes	No	n/a	Yes	No	n/a
		14	13		16	1	
		Nearly 50% are dissatisfied.			Almost all were satisfied with the arrangement.		

Problem

- Insurance:
  Many captains did not know whether their ships were insured.
- Drawings, Instruction Books:
  They were written in Japanese or in a European language, crew did not understand them.
- Spare Parts
  The engine parts of 30% of general Cargo Vessels were insufficient.
- Planned Maintenance System
  50% of General Cargo Vessels are dissatisfied.

Safety Management

No.	Question	General Cargo (27 Vessels)			Container (17 Vessels)		
6	Checking draft, trim and stability of the ship to preserve the integrity of the ship	Yes	No	N/a	Yes	No	N/a
		14	13		17		
		Nearly 50% were not interested in them.			All conducted the checking and showed the record books.		
7	Passage Plan for the voyage and perform voyage under the plan	Yes	No	N/a	Yes	No	N/a
		12	15		17		
		More than 50% were not interested in the plan.			All carried it out according to the order of captain.		
8	Preparation of the updated charts required for the voyage	Yes	No	N/a	Yes	No	N/a
		13	14		16	1	
		50% did not prepare			Almost all prepared them.		

Safety/Ship Management

No.	Question	General Cargo					Container				
		1	2	3	4	5	1	2	3	4	5
11	Are the outside shell, upper deck and super structures maintained well or corroded?		1	12	14		1		8	8	
12	Are the navigation and bridge equipment operating well?	5	7	11	4				8	9	
13	Are the propeller and underwater plating fouled with seaweeds and /or shells?		21	4	2		1	12	4		
14	Are the mooring equipment and ropes maintained well?		12	12	3				11	6	
15	Is the engine room and engine bed kept swept and clean?		14	11	2			2	8	7	
16	Is the life saving equipment and apparatuses arranged in compliance with rules and kept in good condition?	1	13	11	2		1	1	6	8	1
17	Are the fire fighting equipment and apparatuses arranged orderly?	1	12	12	2		1	1	6	9	

Engine Control Panel in Japanese

Summary of Onboard Survey
– Problem Identification –

- Low productivity
- Ageing vessels
- Poor maintenance
- Limited spare parts
- Insufficient test and drill for safety
- Lack of indispensable charts
- Frequent engine troubles due to poor maintenance
- Language barrier
- Limited application of modern ship management (ISO 9000s, ISM – SMS)

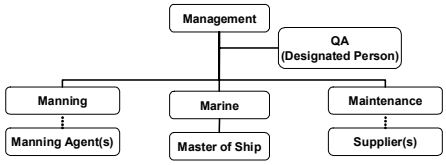
Problem and Solution

Problem	Cause	Solution
• Slow Speed • Reduction in a Speed	• Ageing vessels • Lack of introducing Safety Management System (SMS) • Poor maintenance of Engine and outside shell	➢ Fleet Replacement/ Development Plan ➢ Introduce SMS ➢ Same as above
• Waiting for Berth	• Management of Port • Lack of Port Facilities (Documentation, Berth Allotment, Berth Window, Communication with Agent/Ships) • Low Cargo handling Productivity	➢ Modernization of Port Management System Introduce of EDI System ➢ Same as above ➢ Improvement of Cargo handling System

Problem	Cause	Solution
• Cargo Handling Productivity	• Management of Port • Lack of Port Facilities and Equipments • Ageing vessels • Cargo handling system	➢ Modernization of Port Management System ➢ Redevelopment of Ports Reinforcement of Cargo handling Equipment ➢ Fleet Replacement/ Development Plan ➢ General Cargo Vessels - Container Vessel - Ro/Ro Vessel - Multi Purpose Vessel
• Waiting for Cargo	• Lack of communication between Shipping Agent and Forwarder/ Shipper • Examination for Documentation by Ports/Custom/Local Government	➢ Introducing New Communication System ➢ Port Management System EDI System
• Repair and Maintenance	• Ageing vessels • Lack of Safety Management System (SMS) • Inadequate maintenance budget • Limited spare parts	➢ Introducing SMS ➢ Same as above ➢ Same as above

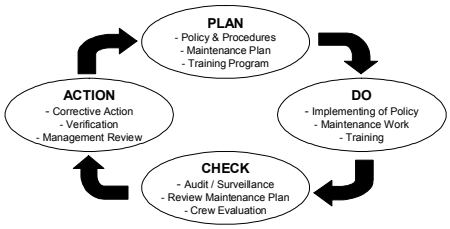
Safety Management System
– Key Functions of a Ship Management Company –

- A Ship Management Company is a group of professionals who maintain the ships and enhance the quality/performance of ships on behalf of the owners.
- A Ship Management Company provides ships with professionally organized, technical support from shore-based management



PDCA Cycle to Achieve Quality

A ship management company keeps ships on schedule and assets with Safety Management Systems (SMS) that ensure quality in every part of the operation.

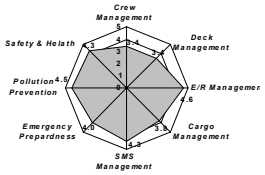


Ship Audit

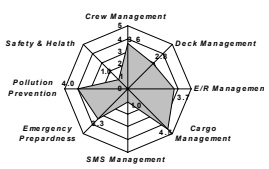



Ship Audit Result

<A Ship>
Has good balance. Good performance.

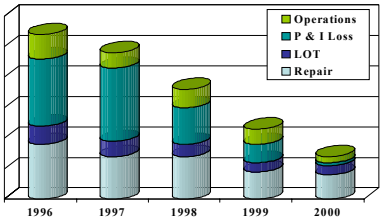


<B Ship>
Urgent rectification is needed

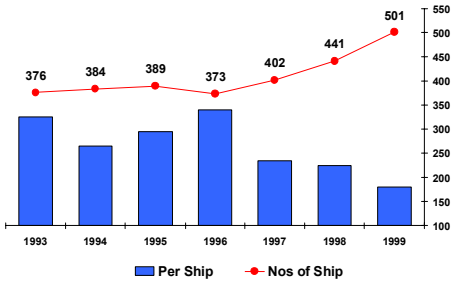


Has weaknesses in Safety Management System and Safety and Health

Amount of Loss by Accidents



Down Time Trend



General Cargo Route Network 2024

Innovative Transportation and Logistics Solutions

— Door to Door Service by Ro/Ro Ship —

Factory

Loading Cargo onto Truck

Wing Trailer

Port

Roll on to Ro/Ro Ship
- High Productivity
- Low Cost
- Safety

Sea

- High Speed approx. 20 knots

New Multipurpose Ship

Approximate Cargo Carrying Capability

• Cars Ro/Ro	400
• Four wheel drives	100
• Small trucks/vans	50
• TEU @ 15 MT	300
• Reefer TEU	50
• Break Bulk	3,000 RT

LOA	160.7 m
B	25.0 m
Draft	8.4 m
DWT	17,500 t
Speed	18.0 knots

Terima Kasih…

3.5 Workshop on Traditional Shipping Modernization

3.5.1. Past Experience on Introduction of Technology in Traditional Shipyard (Daniel Rosyid – ITS)

Sea Partnership Consortium-East Java Regional Centre
Marine Research Centre ITS Surabaya
E-mail: seagrant@its.ac.id

Abstract

The adaptability of traditional Indonesian shipyards to new technology is reflected, firstly, from the transformation of traditional boat building activities in Madura as a vehicle for a general, and wider industrial transformation in the coastal regions of Indonesia. The transformation is in this case introduced through improved boat building technology and skills improvement of local human resources by the introduction of a training facility. The facility pays a great deal of attention to the development of a more adaptive design and production methods of the traditional boat building industry taking into account the existing socio-cultural environment and local resources of Madura. This is also aimed at developing boat-building capacity to cope with increased demand for fisheries activities as a new engine of growth.

Secondly, it reflects on the redirection of existing institutions that provides education and training of various levels of skills related to naval architecture and shipbuilding in Indonesia. At present there are several such training facilities in Surabaya. Most of them -including ITS as an institution of higher learning-, however, have been focusing more on steel, large type of vessels to be built in large shipyard establishments, rather than wooden, small crafts to be built at simple, relatively low investment boat yards. This needs to be balanced to accommodate design and building skill development of small, wooden crafts.

The development of an adaptive design and production methods of the traditional, sail-using, wooden, boats is required, from an engineering point of view- to accommodate 1) the need for motorization to ensure regular, and facilitate planning of, shipping and fishing schedules which is mostly inter-island and offshore (beyond 12 nm) on one hand, and 2) the need for improved sailing technology to anticipate increasing cost of fossil-based fuel. The available design for boats of 15m or longer is no longer appropriate to cope with severe vibration problems resulting from the introduction of engine and propeller to drive the boats. This has resulted in significant reduction of their economic life amounting to 40% meaning 7 to 8 years or more reduction of useful life, and increased number of accidents mostly resulted from leakage of the wooden hull leading to capsizes. Shorter economic life of the boats may mean a more serious threat to sustainable forestry.

The present production methods of the traditional boats do not consider good

workmanship, and also is traditionally managed and therefore to a large extent limits its export potentials. This has resulted in poor quality and, frequently, endangering the existing environment through illegal woodcutting. The present design skill is only accessible to the very limited few of the "master" craftsman, thus making it difficult to develop a stronger and wider range of expertise sustainability. The training facility shall attempt to enhance the quality of the traditional maduranese boats up to an international standard of workmanship leading to, for example, export opportunity. The boat building training facility provides a physical focus to prepare local coastal community of Madura for the wave of industrialization once the Suramadu Bridge is completed in the near foreseeable future.

INTRODUCTION

The most important lesson Indonesians must learn from the present economic crisis is that centralized, land-orientated, large-sized corporations and foot-loose emphasis planning and development is both economically and socio-politically unsustainable. The way forward for the archipelago Indonesia is therefore a decentralized, land-marine balanced and small-business orientation planning and development. Higher learning institutions and training centres must also redefine their focus to accommodate opportunities for small-medium enterprises development.

The implementation of the new development paradigm, however, requires careful exercises. Within the general framework of industrialization in Madura -at its eastern end it is surrounded by approximately 70 islands (see Figure 1), mostly of Sumenep District- which is faced with some degree of cynicism by its religious leaders, it is realized that the industrialization should consider the socio-economic cultural aspects of Madura as well as its technical aspect. A more bottom-up, society-based development scenario is required (see Figure 2). Some industrial transformation model for Madura must therefore be one which make the best of local resources. Available industrial infrastructures need to be developed and enriched to strengthen the present agriculture-based industry.

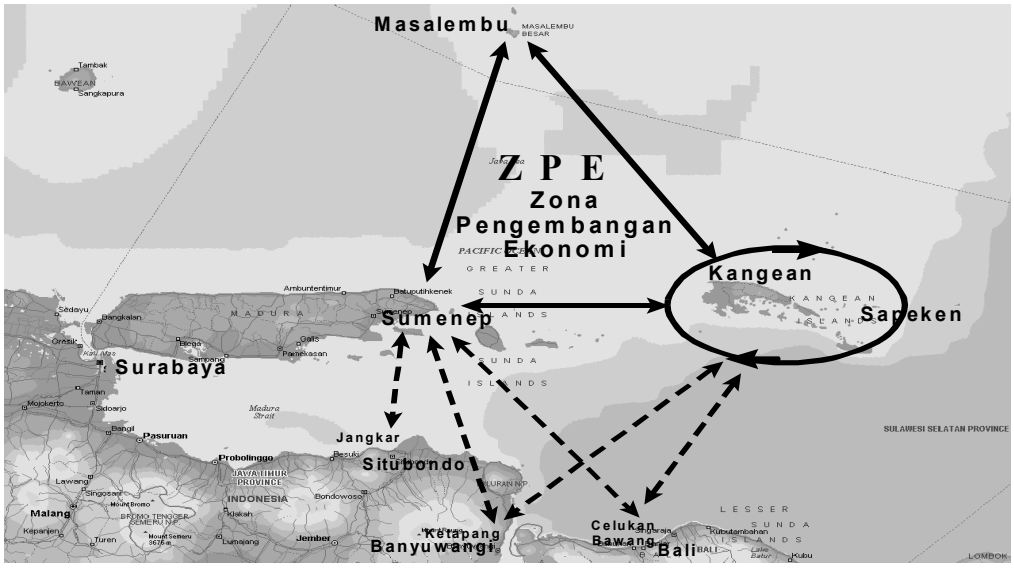


Figure 1. Madura and its surrounding islands of Sumenep

Madura has been an important area of traditional shipbuilding in Indonesia. Local boatyards spread over various places, especially in Bangkalan and Sumenep areas. The tradition has survived years of changing economic climate, and involves substantial amount of local workforces. Local, self-organized groups of craftsmen at the local traditional boatyard and islamic schools can be used as vehicles for the industrial transformation in Madura.

The traditional fleets called the People Shipping Fleet (Armada Pelayaran Rakyat -PELRA) holds an important role in the provision of national domestic shipping services. They contribute more than 15% of the national inter-island cargo transportation. PELRA functions as both supplementary and complementary to the national inter-island marine transportation.

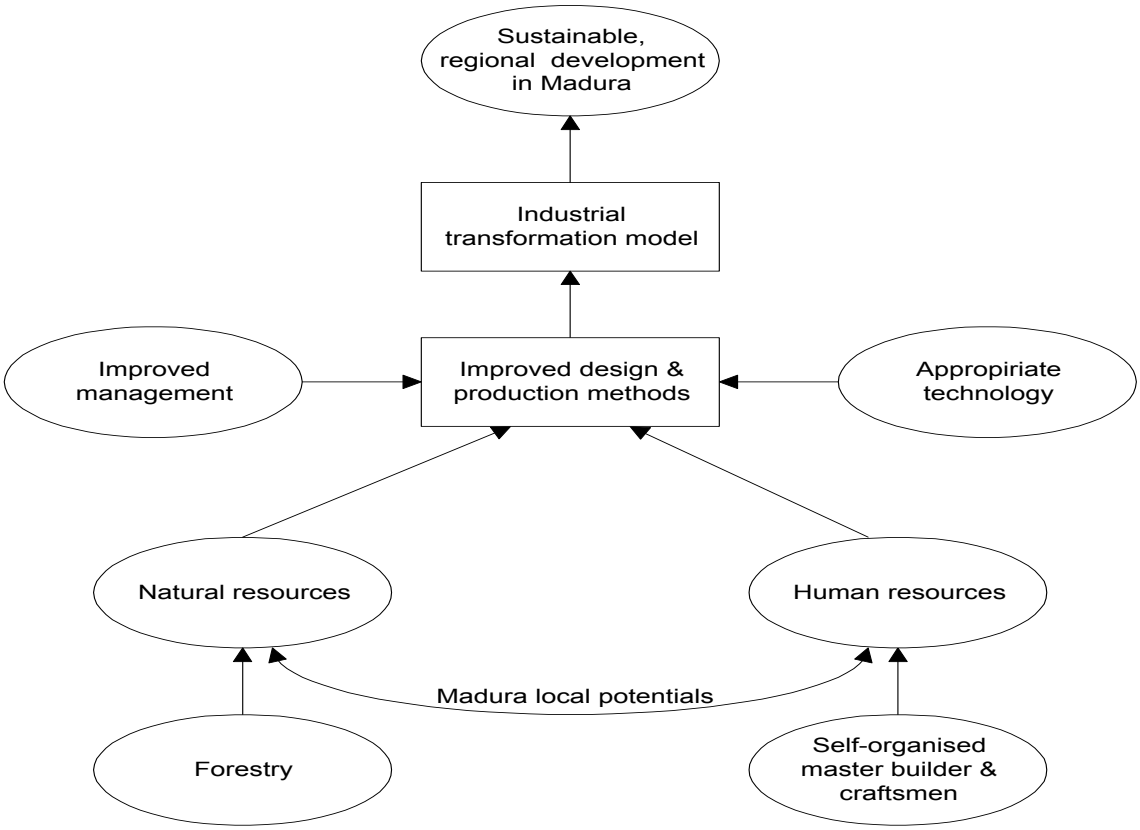


Figure 2. Industrial Transformation Model

The boats are traditionally driven using sail, and are designed, built using technologies inherited through generations (see Figure 3 for a Lete-lete type). Due to a traditional production management, the purchase of timber or wood material faces a continuous constraint on their provision and has lead to illegal wood cutting and therefore endangered the environment.

Due to the government program of Motorization (introduction of engine and propeller) to improve shipping schedule, marine accidents has risen considerably during the last 10 years of the motorization program. This has resulted in significant loss both economic terms and human casualties. The hypothesized problem in this case is that vibration is the major source of structural failure which leads to hull leakage and structural failure leading to capsize of the ships (see Figure 4). A study to improve their design through a standardization policy has been previously conducted.

However, the resulting prototypes have been considered very unsatisfactory by their potential users.

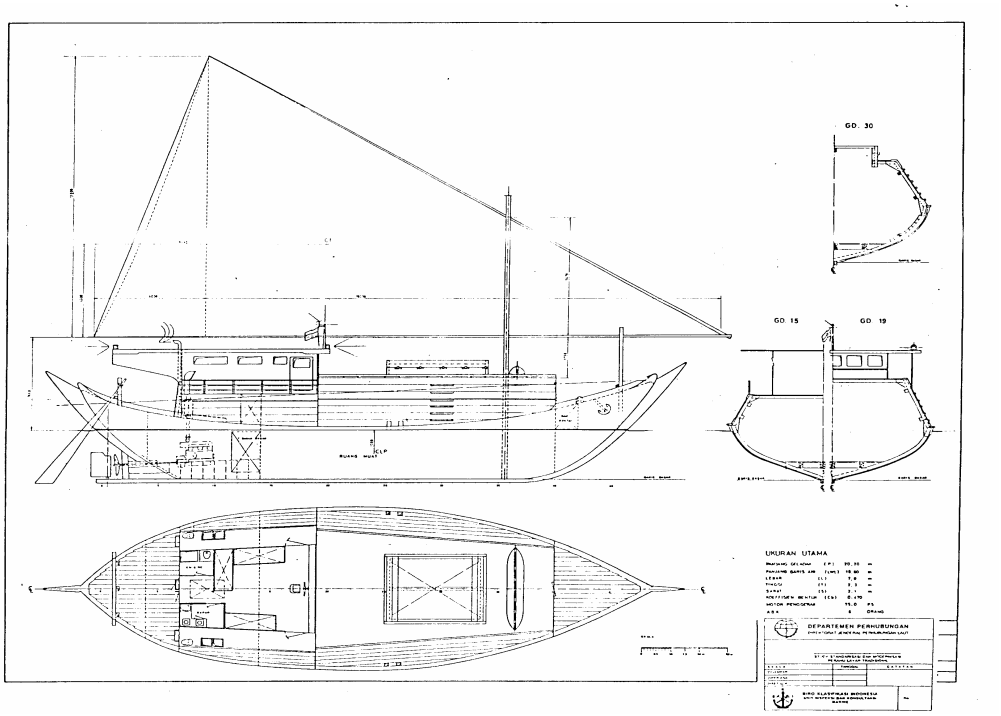


Figure 3. Traditional Maduranese Lete-lete

Modern wood ship technology which has been developed in Indonesia is lamination technology. The application of this technology has so far been restricted due to the need for relatively large size of investment. This has resulted in rather too expensive price of the ship in the view of the traditional shipping society. Furthermore, the transformation from traditional shipbuilding to the lamination industry involves a significant jump in technological input and skilled labor. Some other appropriate technology must therefore be developed.

A very recent preliminary survey on the Maduranese traditional boat building industry has been conducted by ITS. Potential boatyards in several locations in Madura have been identified. Potential production problems have been complied, and preliminary research problems have therefore been formulated.

TRADITIONAL MADURANESE BOATS

Madura is one of the principle maritime ethnic groups in the Archipelago. Its strength of a living tradition with a long history should be noted. Maduranese ships –constructed primarily of teak –jati- with their distinctive hull shapes, rigs, and painted designs can be found in many places far from home waters.

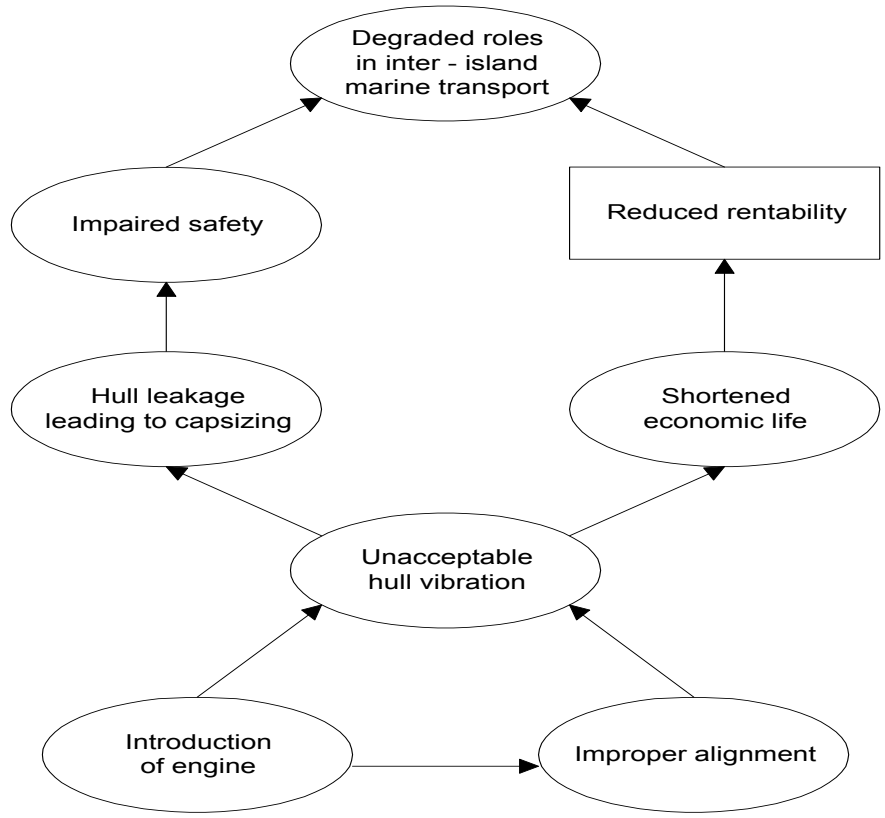


Figure 4. Problems of Traditional Maduranese Boats: effects of engine installation

Cargo vessels –notable here is the Janggolan type, the dimension may be 30 m in length, 9 m in breadth, and 4m in depth- work to all the emigrant Madurese communities particularly in connection with the Kalimantan timber trade, some are even built there. The Lete type is somewhat smaller in size. The Lambo type is of larger sizes. They can be frequently seen in ports such as Gresik and Jakarta. About fifty years ago, they certainly traded as far as Singapore (Blake, 1920, in Hooridge). Such a wide-ranging trade makes it difficult to track down the larger vessels as they spend a great deal of the year away from home waters.

Fishing vessels too can be wide ranging the waters of Bali being one distant water fishery exploited, presumably because of better marketing prospects! Some of the popular type is the "female" Lis-a-lis (as opposed to the "male" type of the Golekan), a small inshore fishing vessel of about 8 to12 m long suited to shallow and more sheltered waters, predominantly work with a gill net. Other popular type is the Mayang.These fishing vessels are much more easily tracked down to their individual homeports.

The development of the diversity of individual types of crafts were then complicated by the motorization. Although many vessels retain sail, motors are now very common, their introduction has not been without problems, and may in hindsight have been shortsighted, especially if one is to consider a very likely increase of fuel and machinery costs. These ships in spite of their spectacular appearance and undoubted efficiency as sailing vessels must now be regarded as anachronisms, as *they do not seem well adapted to the addition of even a modest*

engine. Most have small auxiliary engines and a mixed sail-motor vessel seems to offer the best chance for successful long-term operation in changing economic climate.

Sail construction uses polypropylene cloth and is capable of great technical improvement. Both the Lete and Nade types have technically efficient rigs with the added advantage of minimal spar windage under power. They all have the raised hatch with either a flat or an apex top that is typical of Maduranese boats.

Generally speaking the hull construction is generally very rough, the principle deficiencies seem to be in *the internal frame structure* and the use of *untreatened mild steel fastenings* alongside the traditional "treenails" (wooden dowels). These defects are shared in most of the craft seen under construction, and therefore subject to more comprehensive redesign, especially for the larger vessels.

However, we may find a nearly European standard of workmanship at particular places like in Pegerungan Island (close to Kangean Island). What is outstanding about the boats built there are their combined synthesis of good design, construction and finish that marks an exceptional craftsman within the limits of his environment and materials. Notable is the elegant and practical radiuses ands fore and aft to the raised cargo hatch and an excellent frame structure of alternating long floors and frames overlapping them to the topsides. There is still no clear on what the fastenings are, but since no marks of rust can be seen, the may well use treenails.

A common problem with the most ports in Madura is the shallow water imposes great design limitation. This is not the case for the Kangean and Puteran islands which have some deep-water facilities that would allow the development of fishing boats of deep draft for oceanic fisheries such as tuna long lining.

At present, we may see some Janggolan type of vessels being broken up. A very sad sight to see such a rich cultural heritage disappearing. In spite of excellent timber, ship life here is shorter, perhaps 10-15 years as opposed to perhaps 50 years that for the European boats. This might be the result of motorization which brings about unanticipated inherent engine-propeller induced hulll vibration, and also those resulting from poor shaft alignment and weak foundation. This subsequently leads to hull leakage, especially at the stern part of the skeg. However, this requires a more detailed investigation as a significant extension of working life could be very beneficial to the community.

In the previous surveys conducted as described by Poillet and Horridge, none of the vessels observed were engined, but now almost all are. It is not clear if this change is entirely beneficial, as this must have over doubled the unit vessel cost in many cases. Also the introduction of engines were made at a time of artificial deflated fuel costs. The economic crisis has approximately tripled the cost of fuel and it may well continue to rise ahead of income to bring it in line with world prices. In addition, the costs of imported engines and spares have risen sharply. Community incomes do not seem to keep place with these increases.

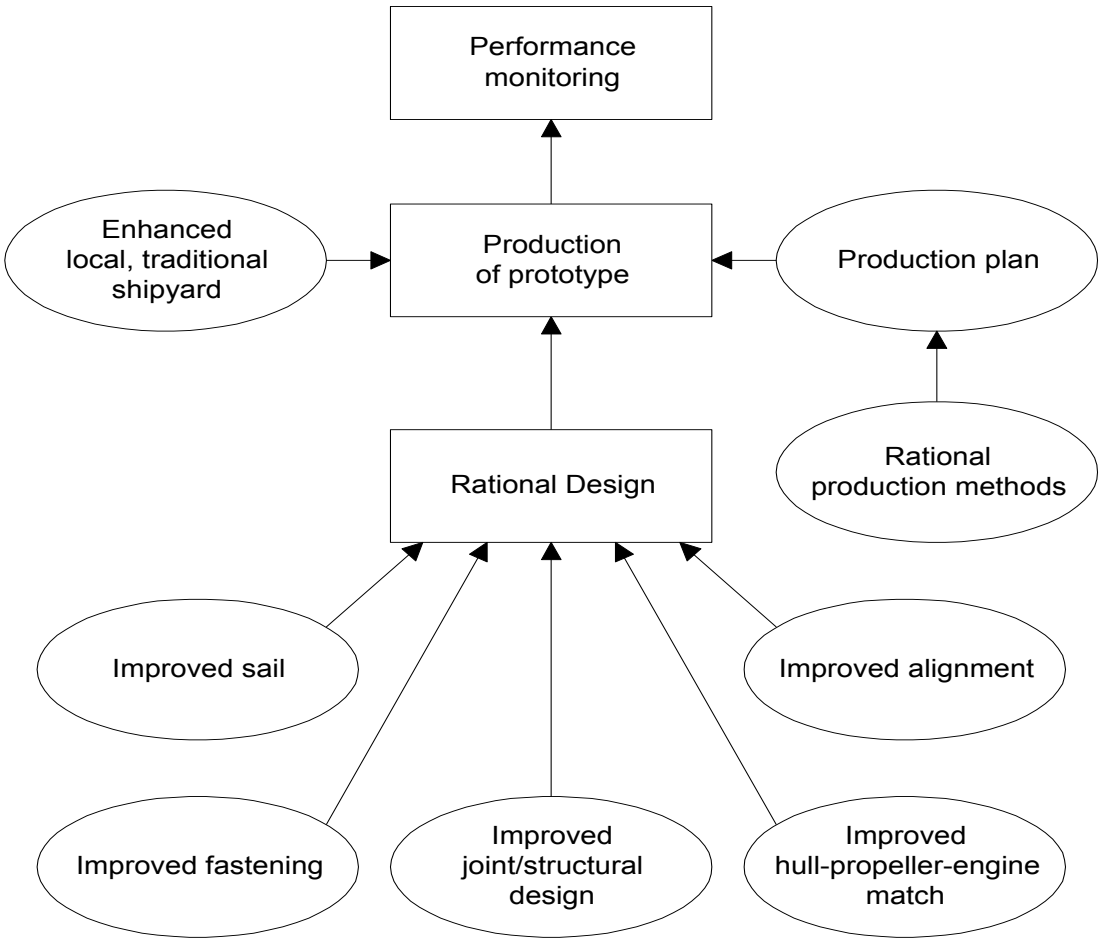


Figure 5. Boat Building Training Strategy

Certainly in the case of cargo vessel engines have also enabled much larger vessels to be built, may be at the expense of the viability of the smaller ones. The addition of better accommodation has been made possible, but there has been a sharp increase in accidents at sea largely due to the lack of pumping capacity during leakage as noted previously. Some may lead to insufficient damaged stability, or due to poor design of too high deckhouses.

AREAS FOR APPROPRIATE TECHNOLOGY DEVELOPMENT

The preliminary findings have given an understanding that is a good basis for further detailed technology introduction and training material (see Figure 5). There is no space in this paper to outline the processes in detail, but it may be useful to list areas where training in design and production /construction improvements could be beneficial. Some of these are quite basic and simple to implement, others will be much more difficult due to large cultural and educational shift required. All have profound social, economic, technological and environmental implications that at present are neither fully defined or understood. Just it is possible to introduce technological change does not mean that such changes will in all cases be beneficial. Fisheries are particularly vulnerable in this respect. Nonetheless, it is felt that it should be possible to very significantly increase a vessel working life, without increasing the costs by the same amount. An estimate

would be that if working life could be increased by a factor of 2 to 3 whilst initial cost by a factor of 1.5 at the maximum then the results would be most advantageous economically, as well as significantly reducing timber consumption for shipbuilding.

The centerline structure is generally quite adequately constructed of durable timber, Jati or Ulin being favorite. The timber, however, is often of insufficient size to get out the member required so swooped and bark are included and the member fails in its desired dimensions in places. The other areas requiring development is the design and construction of after deadwood and keel to form propeller aperture and provision for center line rudder. In several cases, this was just bolted on to the existing Pajala type Hull and had little structural integrity. An alternative solution would be to forget about this adaptation and install two smaller engines on either quarter. The rudder could be dispensed with as maneuvering in harbor could be with engines, at sea the traditional lateral rudders would be more than adequate. In cargo ships, the addition of a heavy keelson would be advantageous.

The vessels are built with the planking first. This process is identical to the Northern European tradition of clinker (i.e. overlapping), planking so there may well be historical lessons to be learnt in the process of technological change in those countries. This method means that the form of the vessel exists only in the mind of the master builder, and this may be a carefully guarded trade secret only passed to chosen apprentices.

Neither should the validity of such traditional knowledge be underestimated. Though this obviously works well in many cases, there are a number of disadvantages. Particularly in that it is impossible to predict hull shape or exactly replicate desired hull features. To build frame first may well be too large a step to make at this time, especially if it requires formal plans, empirical data, and ultimately Computer Aided Design. They may well however be a middle ground using either temporary moulds or partial initial framing in conjunction with scale builders models. It is also possible that this way of planking would work well if it was edge bonded using epoxy, the result could then be not unlike modern epoxy yacht construction. The relevance of modern timber/epoxy construction needs to be researched as this can carried out more successfully by small-scale enterprises than the older lamination techniques using resorcinol resin used in the PT.PAL Dockyard for their FPB28 patrol boats.

The main defect with the planking as it is presently practised is that there is a tendency to make the plank scarfs too short, and to place these joints to close in planks in proximity. A basic “shift of butts” rule for this construction would be advantageous, as the present arrangements induces areas of weaknesses that if they fall where there are framing defects may well be fatal. The advantages of a back rabbet in the keel and stem and stern posts needs to be explored. Another possible defect is that a European hull is stressed by the caulking between the planks and by the expansion due to saturation of the planking, this substantially aids the structures ability to resist imposed strains.

The frame and floor structure which is added after planking is particularly weak. The short scarf used to join the segments of the frames, futtocks, has almost no strength in and direction. The timber utilized is usually of insufficient dimensions to ensure the resultant frame is square and of equal size to its neighbors. This "failing" of timber stock to meet required dimensions is both a source of weakness, and of increasing hull weight and reducing internal volume needlessly.

These frame defects are partly mitigated by the use of closely spaced stringers, which in fact makes the latter problem worse. The whole question of internal framing, including that of a deck/hatch structures is vital to produce a hull with a long, safe working life and should be a central area for research. There are alternatives to traditional grown, built frames. They may be made up of shorter pieces of straight stock, particularly if epoxy were used. They can be laminated inside the vessel, or in the case of a very small boats stem bent. There is also a case for using a certain amount of forged steel knees, suitably galvanized to further strengthen the timber.

In many cases observed, the engine beds and installation were very poor. This may be the major cause of vibration even if the engine and shaft were properly aligned before launching, but was not rechecked when the hull had "set" some time after launching. This along with the lack of bearings to the stern tube could well account for excessive vibration.

Fastenings are the last major area of defect found. Mild steel is not expected to last more than five years before major wastage has occurred, total wastage within ten years. This is not improved by not sinking the heads into the planking and sealing them. The other end of the bolt and nut projecting from the stringer must be a major source of damage to the cargo where carried, eg. rice sacks.

Plank frame fastenings can of course be replaced, however the steel pins used between planks can not. Simply introducing a program of hot dip galvanizing into the yards, perhaps with a mobile plant would at least increase their working life to twenty years. This would be further enhanced by introducing specialized European ship fastenings, these could be forged locally. These include driven drift bolts and spikes as well as through rivets of soft iron. Through bolts were in fact only used sparingly. Stainless steel is both expensive and useless for underwater fastenings in a large timber structure as it quickly crystallizes and becomes brittle. The wooden treenails used, about 2cm diameter for plank edge fastenings are good, they could be better if set in epoxy. However, the same size used to fasten plank and frame is not. These make excellent low cost plank/frame fastenings but the diameter must not be less than ¾ of plank thickness, heads have to be cross wedged and epoxy would make the result perfect.

Given the strong cultural traditions of the islands as well as environmental issues discussed subsequently, any design innovations need to be approached with caution. This is particularly important in the case of artisnal fisheries where the links between technological innovation in boat design and environmental and economic collapse are poorly understood. In addition, such fisheries have extreme design limitations placed on them if operating, as is the case here, from open beaches or shallow harbors. There are however many possibilities of further

refining these design advantageously. There may be a case for developing decked boats capable of working distant waters, but the resource needs to be carefully quantified. Also such boats need deep-water harbors and quantity markets and were only developed in Europe as a response to the industrial Revolution.

In the case of cargo vessels there appear to be less constraints to innovation, even if the timber trade with Kalimantan collapsed due to deforestation, affecting the very large vessels; there will continue to be a large demand for general domestic cargo. Bearing this in mind it would seem that moderate sized vessels would be the best to concentrate on in the first instance. The design proposal for a 15-20m vessel seems a sound point of departure.

In all design development improvement need to be sought in economical and efficient operation as well as improving crew safety and comfort as well as overall ship safety. This should also respect the diverse and active maritime traditions of the island which have a continued major role in the future. This is also a factor that may well mean it will be difficult to limit the planned innovations to just two designs. Other different types of vessels need also be identified. Since tourism can be a potential economic sector, the design of a *marine tour vessel* can be explored. Another type is a *research vessel* which is capable of carrying out marine environmental and geological survey for shallow waters.

PUTTING APPROPRIATE TECHNOLOGY INTO TRADITIONAL BOATBUILDING

The effort to introduce better technology into traditional boat building is best done through actual imrpoved boatbuilding involving traditional boat builders. Some “informal” training for the traditional boatbuilders are nececssary. There are three boatbuilding training facilities available in Surabaya : 1) Pusdiklat PAL Indonesia which provides a wide spectrum of ship-building skills at senior high school level, with minor interest in wooden-boat building, 2) STM Perkapalan Sidoarjo which is very much similar to the one at PT. PAL, 3) ITS’ Shipbuilding Polytechnics which provides a vocational, university level skills in shipbuilding, and 4) Woodworking and Carpentry Workshop at the Department of Naval Architecture and Shipbuilding (NAS) of ITS. All these facilities have in general put steel, large type of vessels as their main focus, putting wooden, small boat building training as a very minor interest. Even at the NAS, wooden, small craft has been by tradition considered of minor importance.

A new facility to provide relevant skills improvements to the available boat building skills of the craftsmen and those who are interested in boatbuilding skill development has been prepared for a traditional Islamic school in Modung, Bangkalan (south coast of Madura). This has been initiated jointly by ITS and the East Java Electricity Distribution Company (PLN) which provides various assistance including funds through its community development programs. JICA is invited to further developed this training facility.The facility is positioned on a piece of land of approximately 500 m^2 within the school’s premises located nearby a river close to a sea waterfront. The target trainees are the 17-22 year disciples of the school and the local boat builders or craftsmen. The primary objective of the training, perhaps slightly different with the one adopted at

the Lowestoft International Boatbuilding Training Centre, East Anglia, is formulated as in the following:

1. To provide basic understanding of engineering drawing
2. To provide basic understanding of boat drawing and design principles
3. To provide basic joinery, carpentry, and wood working skills
4. To introduce various relevant modern materials for boat building, rules and regulations
5. To provide understanding and skills in efficient wooden boat production methods
6. To provide basic skills in electrical, electronics, mechanical, and hydraulics
7. To introduce basic production and quality management skills
8. To provide basic entrepreneurial skills

This paper opines that the existing boat building training facilities in Surabaya need to be redirected back to provide greater proportion of wooden, small craft building skills developments. Students at NAS-ITS need also to experience practical small, wooden boat building practices, probably through a boat design, produce, and race scheme. This scheme is to be started in September 2003 when 2 wooden tuna longlining fishing boats of 18m long –the owner of which is the Pemerintah Kabupaten Jembrana, Bali- are scheduled to be built in Pusdiklat PAL Indonesia involving traditional mandarese (Sulawesi), maduranese, and Balinese craftsmen and students of NAS of ITS. The design of these boats have been developed by the Small Craft Research group of ITS.

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3.6 Workshop on Shipping Investment and Ship Finance

3.6.1. Institutional Development for Favorable Shipping Investment Environments (Husseyn Umar* – Maritime Lawyer)

M. Husseyn Umar[*)]

Shipping has always been regulated in Indonesia, and over the course of time the industry's regulatory situation has taken the shape of various government shipping policies.

At the time of the Dutch Administration, before World War II and Indonesia's independence, the government played a determining role in shipping. In that period a private Dutch shipping company, "Koninklijke Paketvaart Maatschappy" (KPM) held the monopoly in serving trade and industry throughout the entire Indonesian archipelago comprising of thousands of islands as well as maintaining certain shipping services between Indonesia and its neighbours (Singapore and the Malacca States, Hongkong, Australia and South Africa).

To ensure the adequacy and regularity of the shipping services throughout the archipelago, an agreement was entered into by the Dutch Indies government and KPM which was called the Great Archipelago Contract. The agreement stipulated the terms and conditions under which the shipping services throughout the Indonesian archipelago were to be performed, including the fixing of tariff rates.

Besides KPM, there were other Dutch shipping lines that participated in Indonesian foreign trade, and native small sailing vessels (perahu), carrying small quantities of cargo played a significant role in serving trade in the remote islands of Indonesia by carrying transit cargoes to the accumulation ports served by the KPM vessels.

Policy Regulations

It was only in 1936 that the Dutch Administration in the Netherlands issued a regulatory law on shipping for Indonesia (Scheepvaartwet 1936) which mainly included the regime on cabotage and port. The law provides that interisland/coastal shipping is to be performed by Netherlands Indies (i.e. Indonesian) flag vessels or foreign flag vessels under dispensation. Further, the Law makes a distinction between coastal ports and sea-ports which are declared open for foreign trade. Other laws/regulations were pertaining to registration of vessels and marine safety.

When Indonesia gained its independence, the government of Indonesia abolished the monopoly held by KPM and the company, due to the then prevailing political situation ultimately ceased its operations in Indonesia.

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Since then, while the Shipping Law 1936 and related laws and regulations remain in force, the government has issued various regulations to promote the development of national shipping companies with an emphasis on servicing the inter-island trading. The government established two state shipping companies (Djakarta Lloyd for the deep-sea trade and Pelni Shipping Lines for the inter-island trade), and allowed private shipping companies to operate, resulting in their rapid growth. These shipping companies were subject to the government's licensing policy and were required to comply with certain requirements regarding capital, ship tonnage, skills etc.

For inter-island shipping, the government determined a system which allocated routes to the various shipping companies, and in order to look after the interests of the public, put controls on the inter-island freight rates level, as well as on the passenger fare tariffs.

At present, however, the government no longer has control on the freight rate system, providing only basic criteria and guidance to be taken into account by the shipping companies when fixing the rates. The rates themselves are, therefore, left to the market.

In the early 1960s when the number of shipping companies had grown exceedingly, the government was forced to impose stricter requirements as a means of limiting the number of companies operating. However, by the 1960s, the government adopted a more liberal attitude and policy towards the shipping industry. Tonnage requirements were no longer strictly observed, again causing a rapid growth in the number of shipping companies in operation.

Most of the shipping companies, however, had no ships and were reliant on the activities of agencies. This was due to the fact that ship financing has been an on-going problem for Indonesian shipping companies, with most bank financing terms offered being too heavy for Indonesian shipping companies.

Another worrying aspect for the government was that the large number of shipping companies operating was not correspondent with the growth of the national fleet. The above situation caused the government to continously reconsider its policy on shipping.

A Shipping Act was promulgated by the Indonesian parliament in 1992, for the purpose of restructuring the shipping industry in Indonesian which entered into force in 1994.

The new Shipping Act and its few implementing regulations set forth the following main provisions:

1. Only vessels owned by Indonesian citizens and Indonesian legal entities can be registered in Indonesia.
2. Shipping companies in Indonesia are subject to licensing requirements.
3. To engage in the Indonesian inter-island trade or foreign trade, a shipping company must own at least a vessel of 175GT.

4. Only shipping companies may act as a shipping agent. Shipping companies acting as the general agent of foreign shipping companies must at least own an Indonesian registered fleet of a minimum of 5.000GT.
5. Joint venture shipping companies must own at least an Indonesian registered vessel of 5.000GT.

At present, Indonesia has a merchant fleet of approximately 4.2 million dwt (in 2000). More ships are needed to support the Indonesian inter-island and foreign trade activities. The total volume of the Indonesian inter-island trade is approximately 152 million ton/m3, of which only about 50% is carried by Indonesian flag vessels, whereas the balance is carried by foreign flag vessels under charter. The concept of cabotage (that the coastal/domestic trade is to be carried by national flag carriers) as stipulated in the above mentioned Shipping Act cannot, so far, be fulfilled.

The volume of Indonesian foreign trade totals around 354 million ton/m3, of which only approximately 5% is carried by Indonesian flag carriers. The concept of having fair share participation in the national foreign trade leaves much to be desired.

As mentioned above, ship financing has always been the crucial problem in the development of the national shipping industry in Indonesia. As earlier said, shipping companies in Indonesia have practically no access to the bank's financing system and that unbearable high interest rate, short repayment period and over 150% collateral are factors which caused such situation.

In an attempt to overcome this problem, Indonesia has opened the door of its shipping industry to foreign investment by encouraging the establishment of joint ventures. Under the current system a foreign partner may take up as much as 95% participation, in cash or in kind, in the capital of the joint venture. A joint venture agreement needs to be entered into by the parties concerned, in which the management and administrative issues are determined. As aforesaid, a joint shipping company must own at least one Indonesian registered vessel of 5,000 GT.

As far as its operations are concerned, under the Shipping Act a joint venture shipping company is regarded as a national shipping company.

Furthermore, under the Indonesian foreign investment regulations, a joint venture shipping company is entitled to import duty and value added tax facilities relating to the importation of capital goods and any raw and intermediate materials required for the implementation of the investment and subsequent operations. A joint venture shipping company is also entitled to ship and registration duty exemption in accordance with the pertinent regulations.

Since financing problem is the dominant factor that has been hindering the fleet development of the country, of course the problem need to be solved and improved.

Apart from the above, it is also important to improve the business environment surrounding the shipping industry.

Legal certainty is one of the factors which may affect the business condition of the industry. The relatively frequent changes of policies and inconsistency in the implementation of laws and regulations may contribute to the less favourable situation.

The Indonesian National Shipowners Association (INSA) considered that the intention of the government to completely revise the Shipping Law No. 21 of 1992 as too premature due to the fact that the few implementing regulations have only been quite lately enacted so that, the provisions of the Law have never been fully implemented. This is the more so since while the government has passed many laws and regulations on shipping and related matters in the field of public law, such as laws and regulations pertaining to shipping industry licensing, port and harbour, marine safety, including seafarers, pollution etc., it appeared that the government has no or very little interest in the private/commercial law aspects of the shipping industry. The private law aspects of shipping mostly relates to the international maritime commercial regime, which is reflected in various international conventions.

Private Maritime Law

The Indonesian private maritime (shipping) law forms part of the Indonesian Commercial Code, which, dated back from 1848 and which was originally identical with the Dutch Commercial Code of 1838. As far as the maritime law part is concerned, the latest revision was made in 1934, following the revision of its Dutch counterpart. The maritime law part of the Indonesian Commercial Code remains unaltered until now. The inclusion of the provisions of the Hague Rules which took part in 1952 in the Dutch Commercial Code was not adopted by Indonesia.

The Commercial Code is considered as a lex specialis vis-à-vis the Civil Code as the lex generalis. Principles of the general private law embodied in the Civil Code are applicable when the Commercial Code is silent on certain issues or specifically refers to the provisions in the Civil Code. The contract of carriage has as its basis the principles of contract law in the Civil Code. The general provisions concerning hypothec (mortgage) for instance, are applicable to ship hypothec.

In addition to the above, there are ad hoc laws or regulations which the Commercial Code refers to, such as the regulations concerning registration of ships and rights on ships and the regulations pertaining to the nationality of ships. Under the Indonesian law, only ships owned by Indonesian citizens or Indonesian companies can be registered in Indonesia. Ship hypothec or mortgage in Indonesia is only eligible for ships which are registered in Indonesia. In addition to the above, it is to be noted that most of the provision with respect to sea transport in the Commercial Code are applicable to transport in rivers and inland waterways.

In the case of the Indonesian maritime law, Dutch case laws (jurisprudenties) dated before the enactment of the new codification laws, as well as writings of authoritative Dutch scholars are often used as references in the interpretation of the corresponding Indonesian Code's provisions.

The Dutch law is part of the Civil Law system, which understandably is different from the Common Law system, in that the two systems do not always give the same answers to the same questions. The legal terminologies in the Civil Law system are not always easily and accurately translated into an English version of the Common Law system and vice-versa. Many examples could be cited in this respect. One of those examples is the concept of mortgage in the Common Law system and hypothec in the Civil Law system.

This fact is particularly true and it is important to underline this since Indonesia is one of the few countries in this part of the world which resorts to the Civil Law system, whereas a substantive amount of Indonesia's trading counterparts are Common Law countries.

Particularly in international shipping or maritime transport, the influence of shipping practices in Common Law countries are quite evident.

International Commercial Shipping Regime

Indonesia does not ratify any of the international conventions on carriage of goods at sea. However, the provisions of international shipping regulations, such as The Hague or Visby Rules could be made applicable to the Indonesian international/foreign trade through the implementation of the concept of choice of law. The Indonesian national shipping line PT Djakarta Lloyd, for instance, includes The Hague Rules as a paramount clause in its bill of lading. In order to take benefit of international financing facilities a few Indonesian shipping companies take the benefit to register their vessels abroad, in particular under the flag of convenience registration.

In the light of the urgent need for inviting funding for fleet development, by persuading the government to pursue the improvement of the financing terms for the shipping industry, INSA took the initiative to establish a working group to prepare a draft bill on maritime claims and ship mortgage. Such working group consists of members of INSA and the Directorate General of Sea Communication's officials. A draft bill has been prepared and submitted to the Directorate General of Sea Communications which is now under discussion at the ministerial level Paralel to that INSA has proposed for the ratification of the U.N. Convention on maritime liens and mortgages.

Mortgages and hypothecs are charges on a ship created by agreement between the borrower and the lender or by unilateral declaration of the borrower to secure the payment of sum of money. The borrower in the mortgagor the (grantor of the hypothec) and the lender is the mortgagee (the holder of the hypothec). Mortgages and hypothec usually are used to secure the repayment of the long-term loan required to finance the building or the purchase of a vessel (generally speaking mortgages are the word in common law countries and hypothecs are in civil law countries. This draft bill if enacted as law may attract domestic and foreign bankers/creditors to provide loans to the shipping companies against the mortgaging/hypothecation of the vessel. The draft bill provides that Indonesian registered vessels and bare-boat chartered vessels (provided that the registration in the original flag country be suspended/deleted) can be subject to mortgage/hypothec in Indonesia. The draft bill also provides the execution of the mortgage/hypothec when the mortgagor/hypothec

grantor is in default. However, in this connection, it is important to note that in order to secure the effective enforcement of the regulation pertaining to ship mortgage/hypothec, the law on ship registration and the law pertaining to arrest of vessel need to be reviewed.

Indonesia now adheres to the concept of closed registration of vessels. Reviewing the relevant provision by allowing the bareboat chartered vessel be registered in the Indonesian registry will contribute to the accumulation of national shipping tonnage by not only depending on direct purchase of vessels requiring huge amount of investments.

Arrest of vessel

To secure an effective and efficient enforcement procedure when the mortgagor is in default, there is a strong need for the government to review the current law of procedure with respect to arrest of vessel. As a matter of Indonesian law arrest of vessel, which is categorized as attachment of property, is to be part of a civil claim. The provision embodied in the (Old Dutch) Law of Procedure (RV) requires a rather complicated and lengthy procedure to follow before legal execution and forced sale can be conducted.

It is therefore, important for the government of Indonesia to ratify the U.N. Convention on Arrest of Vessels (1952) and review the respective law of procedure accordingly.
The International Convention on Arrest of Vessels 1952 provides that the claims in respect of which a vessel may be arrested are the following:

a. Damage caused by any ship either in collision or otherwise,
b. Loss of life or personal injury caused by any ship or occurring in connecting with the operation of any ship;
c. Salvage;
d. Agreement relating to the use or hire of any ship whether by charter party or otherwise,
e. Agreement relating to the carriage of goods in any ship whether by charter party or otherwise,
f. Loss of or damage to goods, including baggage carried in any ship,
g. General average,
h. Bottomry,
i. Towage,
j. Pilotage,
k. Goods or materials wherever supplied to a ship for its operation or maintenance,
l. Construction, repair or equipment of any ship or dock charges and dues,
m. Wages of masters, officers or crew,
n. Master's disbursements, including disbursements made by shippers, charterers or agent on behalf of the ship or its owner,
o. Disputes between co-owner of any ship as to the ownership, possession, employment, or earning of that ship, and
p. The mortgage or hypothecation of any ship.

The first aim, protection of creditors, is achieved by requiring Art. 10) that prior to the forced sale, the competent authority of the state where the sale is to take place should give at least thirty (30) days written notice of the time and place of such sale to all holders of registered mortgages and hypothecs.

While this requirement is reasonable, in real business, the arrest of ships has been done preceding the forced sale. On this arrest of ship, contents of Articles 2, 3, 4 and 6 of the Convention stipulate as under, will be self-explanatory.

Article 2: A ship flying the flag of one of the Contracting States may be arrested in the jurisdiction of any of the Contracting States in respect of any maritime claim.

Article 3: A claimant may arrest either the particular ship in respect of which the maritime claim arose, or any other ship that is owned by the person who was, at the time when the maritime claim arose, the owner of the particular ship, even though the ship arrested is ready to sail.

Article 4: A ship may only be arrested under the authority of a Court of the appropriate judicial authority of the Contracting States in which the arrest is made.

Article 6: The rules of procedure relating to the arrest of a ship, the application for obtaining the authority referred to in Article 4, and to all matters of procedure which the arrest may entail, shall be governed by the law or the Contracting State in which the arrest was made or applied for.

From the above, it is clear that a holder of mortgage (hypothec) can arrest the ship (ships) in any of the Contracting States and that the application of arrest is varied depending on the country where the arrest is carried out. Ultimately, the most important thing is the provision of the law of procedure with regard the execution of the arrest and the application of the forced sale which should be quick and effective.

It is to be noted that a new Convention on arrest of vessel has been adopted in 1999. This new Convention provides some flexibility with respect to the list of claims in respect of which a vessel may be arrested, namely in relation to damage covering environmental claims. The new Convention is applicable to all vessels whether or not they are seagoing and whether or not they are flying the flag of a state party to the Convention.

Since the 1952 Convention has been ratified by 70 countries which would mean that its application is supposedly has been widely accepted, the Indonesian government may consider to adopt this Convention or the new Convention due to its flexibility. In addition, the issue on arrest of vessel becomes a serious matter in Indonesia in connection with various kind of alleged violation of law conducted in Indonesian waters. It is a matter of fact that under the various laws and regulations, various authorities, such as the port administrator/harbour master, the customs, the police and the Indonesian Navy have certain power to take the necessary action against the alleged act of

violation committed under those specific laws and regulations. Some examples could be cited in this regard, such as accidents committed by a vessel against government's properties, such as collision against harbour wharfs or government's vessels, vessel accident causing loss of life or personal injuries, the so-called illegal logging, illegal sand mining, illegal fishing, alleged pollution etc. Quite frequently occurred that the authorities tend to impose criminal charges to almost any alleged violation of law at sea. There were even cases where the authority refused to release a vessel which has been released from arrest by court order.

Furthermore, there are general tendency in practice here in Indonesia that the public authority as mentioned above interfere although the case in question is basically a matter of private law. As an example as a matter of Indonesian law a vessel can only be arrested under a court order. The port administrator or the harbour master has no right to detain a vessel unless based on marine safety reason. However, quite frequently ship detention is imposed by such authority as a mean of pressure on the disputing parties (in a collision case) to come to a settlement, in particular if it involves a foreign vessel. Such practice is in fact an illegal and discriminatory practice. The port administrator/harbour master or any other public authority should not interfere the settlement process between the parties concerned which normally involves the insurers of the parties concerned by taking into account international shipping practices. Those mixed-up situations with respect to detaining or arresting of vessels, should be seriously addressed by the Indonesian government and parliament not only for legal certainty reason, but also in order to avoid abuse of power by the respective public authorities.

Responsibility and Liability

Another issue which is important to the shipping company and sea-borne trade is the shipowner/carrier's responsibility and liability including the limitation of liability. As earlier mentioned Indonesia has not ratified any of the international conventions on carriage of goods at sea, either the Hague Rules, Hague-Visby Rules or the Hamburg Rules.

The Indonesian Code of Commerce provides a package liability limit of 600 guilders (article 470) and a tonnage liability of 50 guilders per cubic meter. (Article 474 and 541) for the Shipowner/carrier.

Question my arise as to how those figures should read, whether in Rupiah which will then result in a ridiculously low value because of the heavily depreciated value of the Indonesian Rupiah, or in old Dutch guilders considering the provision was inherited from the Old Dutch Indies Code of Commerce. An interpretation could be analogously applied by referring to a Supreme Court Jurisprudency (case decision) regarding the application of pre-World War II gold value to an old debt expressed in Old Dutch guilder. The appropriate amount is to determined by relating the monetary amounts to the gold standard value. The debt or the nominal obligation which is in old Dutch guilders is converted into gold value using the rate, prevailing at the time when the nominal amount was determined (i.e. nominal figure of the obligation). This gold value is in tern translated back into present currency value.

The Central Jakarta District Court on request of a party in dispute has in 1994 ever made a calculation of the application of article 541 (on collision) of the Commercial Code based on the above mentioned formula which turned out that 50 Old Dutch guilders is equal to Rp. 567.840. However, since the disputing parties came to an amicable settlement, no decision has been made in relation to the case.

Further, to the best of our knowledge, no precedent is known as to the application of the limitation provisions in court decisions.

It is important for Indonesia to consider to ratify the Hague or Hague-Visby Rules and Shipowner Liability Convention (1957) and to gain international confidence in the country's shipping business and national flag ships.

Carrier-Shipper Relationship

The sea-borne trade in which the shipping companies are engaged, is in fact a business relationship between carriers and shippers. Therefore, a close relationship between the carriers and the shippers need to be established and be well maintained. Both parties are interested in the adequacy and regularity of shipping Services, the profitable stability of freight rates and the clarity of shipowner/carrier's responsibility and liability.

However, in practice, for a long time the shipping companies have been complaining of the decreasing trend of freight rates in certain trade/routes. In such situation, the shipping companies may consider to come to an agreement on sailing schedules and rates to be quoted to shippers. In view of the provisions of Law No.5/1999 concerning prohibition of monopoly practices and unfair business practices, the shipping companies recently have been summoned by the Business Competitive Supervisory Commission on the charge that the agreement made between the shipping companies without involving shippers is allegedly violating the provisions of Law No.5/1999. It is therefore important to note, that close relationship between the shipping companies and the shippers need to be established and maintained either directly or through their respective associations.

The existing shippers organization (Dewan Pengapalan Indonesia-Depalindo) may be reactivated in this regard in cooperation with INSA.

Besides, it is of great importance to undertake a study whether the shipping industry could be excepted from the provisions of the above Law No. 5/1999 since transportation is an industry that does not always work for the benefit of the public at large since fierce competition between shipping companies may lead to a deterioration of service and stable financial situation. The reality that competition is not feasible in all circumstances in transportation has caused the US Government to change its policy from regulation of monopoly to the regulation of competition.
The Indonesian government and parliament should look into this matter seriously.

In conclusion, it is to be said that the improvement of the legal certainty in the shipping business in Indonesia and the ratification and enforcement of the international commercial regime, such as regime pertaining to maritime liens and mortgage, arrest of vessels and regime on shipowners/carrier's responsibility and liability, will prove a useful policy measure in raising international confidence in Indonesia's shipping business and national flag ships.

3.6.2. Institutional Development for Favorable Shipping Investment Environments (Uematsu Hideaki – JICA Study Team)

Towards Better Industrial Environments

Hideaki Uematsu

As Mr. Husseyn Umar pointed out, the introduction of international maritime legal regime needs to be done in order to create a business environment which can attract foreign and domestic banks and investors. This is a thing which must be done first of all, but this thing alone may not be sufficient for securing plenty amount of money-inflow as expected. To realize constant inflow of investment by banks and investors, the profitability of inter-island shipping business needs to be stable. A long time ago, there were the days when the world's shipping business was symbolized by such word as "adventure sailing" in which lots of risks were involved. If the ship could overcome the difficulties over the ocean, it could make a large profit, and that was the reason why many investors of the then shipping nations put out their money for such ships. All these have become the things of the past. There can be no fortune-making one-time profit in shipping now. Therefore, for banks and investors the stability of the profitability of borrower shipping company is definite prerequisite condition for putting out their money.

Then, how can such prerequisite condition be in place in the inter-island shipping of this country? In one word, it may be the "restructuring of the industry". However, the components of the structure are varied and the problem is not so simple as to be described easily. Besides, I am not a person who knows the details of Indonesian inter-island shipping industry very well.

So, to begin with, let me introduce to you recent Japanese efforts in designing regulatory measures meant for the improvement of business structure of Japanese coastal shipping in the days of nation-wide deregulation. I do this, because I feel Indonesian inter-island shipping and Japanese coastal shipping have many characteristics in common.

This August in Tokyo, a committee named "Investigation Commission on Coastal Shipping System" submitted a report titled "Concrete System Design in Reviewing Business Regulation" to the Ministry of Land, Infrastructure and Transport which had requested the Commission to conduct the investigation. The 16 member Commission consisted of 3 university professors, chairmen of 7 coastal shipping associations each, president and a director of Japan Seamen's Union, and Director-General of Maritime Bureau of the Ministry and 3 other officials of

the same Bureau.

This report analyzes the value and problematical point of the Japanese coastal shipping like this. "Coastal shipping, as the major artery of physical distribution, is indispensable in 21st century as well, and as the key transport mode of this country, has to continuously contribute positively to various national needs in the early days of the new century, including such requirements as efficient physical distribution and environmental protection. But the market structure of the coastal shipping is characterized by its pyramid shape with cargo owner entities at the top of it, in which such phenomena as subordinative relation to particular cargo owners each and multi-layered transaction relationship between ship-operators and ship-owners are observed. Such a market structure, in one aspect, has a merit in securing stable and safe transport, but on the other hand, increases the closedness of the coastal shipping market, and becomes hindrances to the activation and expansion of the market."

Standing on such basic understandings, the report has struck out various concrete measures to bring about competitive, efficient market. The report emphasizes particularly among other things, "Subordinative relation to particular cargo owners, multi-layered transaction relationship, etc., namely pyramid shaped market structure with cargo owner entities at the top" has often lead to the possibility of the abuse of the superior position, and broadly observed stiff and closed transaction customs, and accordingly it has turned out obstruction against the full swing of appropriate competitive market mechanism".

Then the report concludes in this connection that it is necessary to adjust relationships among cargo owners, ship operators and ship owners, and describes the relevant measures to be taken like this. Firstly, as for transaction among ship operators and ship owners, delivery and preservation of documents should appropriately be carried out in accordance with so-called "Subcontractor Law". In Japan, there has been "Law for the Prevention of Delay in Paying Prices to Subcontractors" i.e. so-called "Subcontractor Law", covering transactions in manufacturing and repairing businesses. As this Law has become applicable to all service industries from next year onward, relationship among ship operators and ship owners in coastal shipping industry should also be regulated by the said Law. That is one of the conclusions of the report.

And the next measure, in terms of cargo-owners, is really worthy to note, I think. As for transaction between cargo owners and ship operators, the report declares that normalization is to be attempted by strengthening the application of the Anti-monopoly Law. And, as a matter of fact in line with this judgment, Japan Federation of Coastal Shipping Associations, at its Committee for the Prevention of Unfair Transaction, is presently progressing their investigation, with reference to other industries' cases, on what transaction patterns of cargo owners are to be considered as "unfair transaction way" stipulated in Article 19 of the Anti-monopoly Law,. On the basis of the coming results of this investigation, the Ministry of Land, Infrastructure and Transport is expected to contact with the Fair Trade Commission to attain common understandings in the matter.

To invoke the Anti-trust Law positively concerning the relationship with powerful cargo

owning shippers is a new idea even for Japanese coastal shipping industry. But there is a clear reason why they have to resort to this way now.

Up to 1996 coastal shipping in Japan had been exempted from the Anti-trust Law and freight rate conferences had been officially admitted. Once such exemption was abolished in accordance with national deregulation policy, and then unfair transactions originating from the gap of economic power between shippers and carriers became to be apparent. Beating down the freight rates on the pretext of poor profitability of shippers' side, or forcible lowering of freight rates which had been once agreed upon, are said being observed as patterns of such unfair transactions.

As I said before, Japanese coastal shipping is characterized by its multi-layered structure. Primary contractor operators, secondary operators, tertiary operators, and bigger or smaller owners. Primary contractor operators sublet their contracts to secondary operators, and then secondary operators to tertiary operators. So even if the afore-said "Subcontractor Law" is applied on relationships between primary contractor operator and secondary operator, or between secondary operator and tertiary operator or owner, if transactions at the top, I mean, transactions between strong cargo owners and primary contractor operators, are not in order, no material results are expected. Fairness at downstream cannot be secured without fairness at upstream. This is the one of the key judgment of the report. By the way, it is said the same kind of phenomena are happening in trucking industry in Japan, after the deregulation.

Now, out of various policy designs contained in the said Report, let me hereby introduce to you a few of administrative or regulatory measures which might prove of some reference to you in terms of today's subject "better investment environment".
These are

(1) "Shipping companies are required to have appropriate funds program at the start of its business",
(2) "The Ministry is to continue to calculate and publicly announce appropriate lifting capacity.", and
(3) "Every shipping company is required to file its business report continuously with the Ministry."

Let me add some more explanations on each of these three points.

Firstly, on the funds program:

To date, starting of coastal shipping business in Japan is subject to the Ministry's permission, and the applicant is required to satisfy three requisites, namely, requisite of ship owning, requisite of business stability, and requisite of appropriate business operation. This permission system is expected to be changed into "registration" system in near future. In reference to this coming regulatory change, the report says that most of above permission requisites should be abolished. However, the report says requisite of "appropriate funds program", which has been a part of business stability requisite, should be maintained as before as a requisite subjected to

examination by the Ministry. The possibilities of such requirements as tendering of cargo guarantee documents or ship-chartering contracts is also maintained in this connection as before.

Secondly, the calculation and public announcement of appropriate shipping capacity by the Ministry:

As I told you at the time of our seminar in last July, Japanese coastal shipping had long been affected by a supply-demand imbalance, or over-tonnage. To cope with such excess capacity situation, every year, the Ministry of Transport, now the Ministry of Land, Infrastructure and Transport, has been determining the appropriate level of lifing capacity by vessel type, so that it can work as a medium –long-term guideline for coastal shipping community in terms of building vessels. The appropriate lifting capacity figures were set for six different types of vessel respectively, namely general cargo ships, earth products carriers, cement tankers, pure car carriers, oil tankers and special tank ships. In figuring out an appropriate lifting capacity, supply-demand situation and other economic factors were taken into account. To be specific, future traffic volumes of principal cargo items such as iron and steel, construction materials, cement, petroleum products, coal and automobiles were estimated, and thereafter respective ship type's fleet tonnages necessary to carry the estimated quantities of the traffic were calculated as appropriate lifting capacity tonnage.

In 1996, the Japanese Cabinet established an over-all deregulation policy to the effect that any of governmental intervention for supply-demand adjustment should be abolished in the field of transport.

Although such being the case, the report of this time clearly states that the public announcement of the appropriate lifting capacity is to be continued for the time being.

The reasoning of this is explained like this. "The construction or deployment of ships is liable to be done in line with the peak of the demand, while the transport demand fluctuates subject to business trends. But, once a ship is built, it is operated for a long period of 15-20 years because ship's building price is high and its depreciation period is long. This has been the coastal shipping's market structure that is likely to result in demand/supply gap of almost constant excess in lifting capacity. Therefore shipping business entities are required to use prudent judgments before building ships, and in this connection, some kind of index to be referred to is desired to be available.

The report says in addition, explaining this decision, "With current easiness in obtaining relevant information from shippers' bodies in mind, and recognizing the current index has gained external confidence, continuously for the time being, as a part of information offering service by the administration, the country (the Ministry of Land, Infrastructure and Transport) is to continue the calculation and public announcement of appropriate lifting capacity."

The third and the last point I wish to introduce to you from this report is that it says "All the shipping business entities are obliged to file their business reports with the Ministry", with

additional comment that "As for the exact formulas of the business report, those should be necessary minimum in order to lighten a burden of business entities. And in this regard, investigation shall be done from now among the parties concerned."

As the reasoning of this new regulatory measure, the report explains, "As for the business a field on which entry regulation is applied, administration has an external accountability. And also in order to carry out proper policy judgment, it is necessary and indispensable for administration to grasp the actual condition of business entities."

Well, I have recently heard that container vessel operators in this country have come to an agreement with respect to sailing schedules and rates to be quoted to shippers. And, unfortunately, the operators were summoned by the Business Competition Supervisory Commission, with the charge that the operators have violated Law No.5/1999 concerning prohibition of monopoly practices and unfair business practices, and the matter is still pending.

In a sense, I think, this might be a very good opportunity for ship-operators here to bring this matter for open, public discussion.

In Japan, up to 1996, the coastal shipping operators, in the same manner as deep-sea shipping operators, had been exempted from the application of the Anti-monopoly Law, with exception of cases which were deemed still unfair.

Well, I might have spent too much time on just one report. So, before concluding my speech, let me touch upon three other examples of Japan, Europe and the Philippines, all of which indicate some kind of adjustment efforts in terms of the supply-demand balance in coastal or inland water transport services.

Firstly, Japan's case:

Efforts to bring about better supply and demand balance had been done almost over 30 years by Japan Federation of Coastal Shipping Associations, through the scrap-and –build system named "Fleet Tonnage Adjustment Business". This Fleet Tonnage adjustment system was to scrap ships at a fixed ratio in proportion to new building tonnage of the relevant shipowner. This system had been based on some articles of the Coastal Shipping Association Law and had been excluded from the Antimonopoly Law. This tonnage adjustment in the form of scrap and build system has been abolished since March 1998. And yet presently, some tentative measures for the likewise purpose have been introduced to encourage those who quit shipping business or scrap their ships. Though it is named "Tentative", many people expect that this measure will be continued for coming 15 years or so.

Secondly, European Union's case:

There has been "Community-fleet capacity policy" in terms of inland navigation of European Community. This policy was established in 1989 for the structural improvement in the

inland waterway transport sector. (By the way, in this EU regulation, inland waterway means the linked inland waterway networks of Belgium, Germany, France, Luxembourg, the Netherlands and Austria). The objective was to reduce fleet over-capacity and avoid the emergence of new overcapacity, by introducing the "old for new" rule for a period up to then April 1999. "Old for new" meant scrapping of designated ratio of old vessels is required as the precondition of building a new vessel. This ratio had been set year by year in varied levels in accordance with supply/demand balance situation of the market. And then this policy application was renewed to be effective for further 5 years up to April 2003, with an additional condition that "old for new" ratio must gradually reduced to zero by 29 April 2003.

Though the "old for new" ratio has been declared to be zero at the end of this April, the system itself is still maintained as a standby mechanism which might be activated at the time when there is a serious disturbance of the market. Even now the owner of a vessel must pay the special contribution or acrap an amount of old tonnage when placing a firm order for the construction of a new vessel or making an application for import, or when the new vessel or imported vessel is taken into service.

EU Member States must establish an internal water-way fund, which is fed by the contributions paid under "old for new" rule and this fund can be used at Community level for promotion or social measures aimed at persons wishing to leave the inland waterway transport sector, or measures to stimulate groupings.

Finally, the Philippines' case:

Although the Philippines' deregulation is often talked about, the MARINA is still carefully watchful on the new entrant to liner routes. Its Memorandum Circular No. 161 in November 2000 stipulates rules on entry into routs as flows:

It says firstly that all routes/links shall have at least two (2) operators. Then says, "All routes/links which have been served by any operator for an aggregate period of at least five (5) years shall be open for entry to additional operators provided that the entry thereto will not result to ruinous competition. Competitions are ruinous --- when an existing operator/s in a given route carries less than the average annual break-even load factor as determined by the MARINA."

In addition, the MARINA's Situation Report 2003 explains its basic position in such a way "From the government's perspective, --- it may be important to try and determine at what stage of the industry's development (as well as the national economy's) would full deregulation be suitable and advisable.

Ladies and gentlemen, I would be happy if the above explanation of mine can prove of some reference to you in understanding that there may be many kinds of things which administration can or should do for raising economic position, profitability and stability of coastal or inter-island shipping industry, even in the days of national trend of deregulation.
Thank you for your attention.

3.6.3. Development of Indonesia's Sea Transportation Fleet: Reliable Data (Petrus Sumarsono – BAPPENAS)

By Petrus Sumarsono[1]

Introduction

It is obvious that sea transportation has a key role in Indonesian economy. In 2001 sea transportation had transported 99 % of export-import in terms of weight, which was 337.9 million ton, and 95 % of the value of export-import, which was US $ 87.2 billion (Table 1: Trend of Export and Import By Mode 1996-2001).

Table 1: Trend of Eksport - Import By Mode 1996 - 2001

	1996				1997				1998			
	Million ton	%	Value (US$ Billion)	%	Million ton	%	Value (US$ Billion)	%	Million ton	%	Value (US$ Billion)	%
Export by air	0,20	0,09	1,90	3,82	0,80	0,31	2,80	5,24	0,90	0,37	3,80	7,79
Export by sea	214,00	99,91	47,90	96,18	253,60	99,69	50,60	94,76	244,00	99,63	45,00	92,21
Total Export	214,20	100,00	49,80	100,00	254,40	100,00	53,40	100,00	244,90	100,00	48,80	100,00
Import by air	0,30	0,51	4,00	9,32	1,10	1,86	4,00	9,62	0,40	0,78	1,70	9,83
Import by sea	58,50	99,49	38,90	90,68	58,00	98,14	37,60	90,38	50,80	99,22	15,60	90,17
Total Import	58,80	100,00	42,90	100,00	59,10	100,00	41,60	100,00	51,20	100,00	17,30	100,00

	1999				2000				2001			
	Million ton	%	Value (US$ Billion)	%	Million ton	%	Value (US$ Billion)	%	Million ton	%	Value (US$ Billion)	%
Export by air	1,60	0,68	2,40	4,94	1,00	0,44	3,40	5,48	1,48	0,54	2,85	5,06
Export by sea	233,30	99,32	46,20	95,06	224,10	99,56	58,70	94,52	270,96	99,46	53,47	94,94
Total Export	234,90	100,00	48,60	100,00	225,10	100,00	62,10	100,00	272,44	100,00	56,32	100,00
Import by air	0,80	1,29	2,10	8,75	1,00	1,49	3,40	10,15	0,45	0,68	1,41	4,55
Import by sea	61,40	98,71	21,90	91,25	66,30	98,51	30,10	89,85	65,10	99,32	29,56	95,45
Total Import	62,20	100,00	24,00	100,00	67,30	100,00	33,50	100,00	65,55	100,00	30,97	100,00

Source: BPS, Statistic International Trade Eskport - Import (various year 1996-2001)

In addition, 77.1% and 15.6% out of US $ 30.9 billion of Indonesian import were raw/support material and capital goods respectively (Table 2: Import Value by Broad Economy Categories and Its Share to Total Import). It is hard to imagine what happens to Indonesian economy if sea transportation does not work well. Not only will the export-import but also manufacturing activities will be disturbed. The revenue of foreign currency will decline and many manufacturing companies will stop their production. At the ends, unemployment is going to increase. When the Indonesian economy is not able to accommodate unemployment, the social unrest will arise.

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Table 2: Import Value by Broad Economy Categories and Its Share to Total Import (1996 - 2001)

US$ Million

Year	Consumption Goods	%	Raw / Support Material	%	Capital Goods	%	Total
1996	2.806	6,5%	30.470	71,0%	9.653	22,5%	42.929
1997	2.166	5,2%	30.230	72,5%	9.284	22,3%	41.680
1998	1.918	7,1%	19.117	71,2%	5.808	21,6%	26.842
1999	2.468	10,3%	18.475	77,0%	3.060	12,7%	24.003
2000	2.719	8,1%	26.019	77,6%	4.777	14,3%	33.515
2001	2.251	7,3%	23.879	77,1%	4.832	15,6%	30.962

Source: BPS, Statistic of International Trade Eksport - Import 1996-2001

Knowing that sea transportation has a key role in Indonesian economy, the government of Indonesia (GOI) should adopt policies that guarantee not only the smoothness and safety of sea traffic in Indonesia but also the increase of the national fleet's market share. With the export-import cargo around 300 million ton and the domestic cargo around 150 million ton indicates that there is abundant opportunities for shipping industry to develop. The problem is how the national fleet can compete for the maritime cargo transport and how the GOI could set up policies which create a sound business climate in shipping industry for the national fleet.

In this paper we focus on the development of Indonesia's maritime cargo fleet. Therefore, passenger fleet and pioneer fleet will not be discussed in this paper. For the sake of this discussion, the shipping in Indonesia is divided into two principal categories namely inter-island shipping or domestic shipping and international shipping or export-import shipping. The sources of the data used in this paper are mainly from Bank of Indonesia, Badan Pusat Statistics (BPS) and Directorate General of Sea Communication (DGSC).

International Shipping

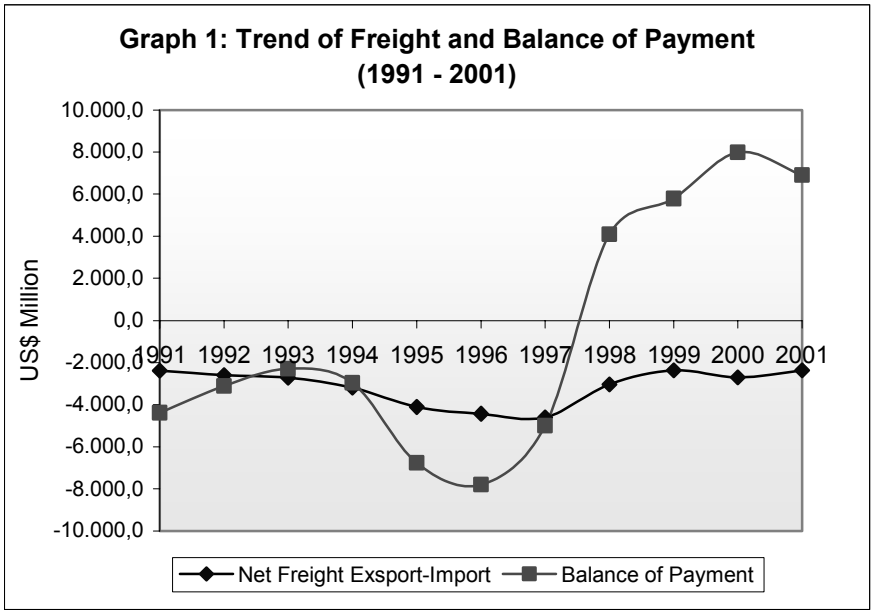
All the time we hear that freight as a major element of Balance of Payment has contributed a deficit to the BOP. It is true. From 1991 to 2001 freights were a deficit with average US $ 2.5 billion (Table 3 Trend of Freight and Balance of Payment). On the other side, BOP was deficit from 1991-1997 but started surpluses in 1998 (Graphic 1 Trend of Freight and Balance of Payment). This condition indicates that there is no strong relationship between a deficit contributed by freight and balance of payment. Moreover the value of deficit contributed by freight is

Table 3: Trend of Freight and Balance of Payment (1991 - 2001)

Year	Net Freight Export-Import	Balance of Payment
1991	-2.385,0	-4.392,0
1992	-2.601,0	-3.122,0
1993	-2.730,0	-2.298,0
1994	-3.189,0	-2.960,0
1995	-4.118,0	-6.760,0
1996	-4.430,0	-7.801,0
1997	-4.606,0	-5.001,0
1998	-3.050,0	4.097,0
1999	-2.365,0	5.783,0
2000	-2.709,0	7.991,0
2001	-2.367,0	6.900,0

Source: Bank of Indonesia, Statistic of Economic & Financial, December 2002.

insignificant value because it was less than 5 % in average of the value of international shipping. This reality does not mean that efforts to increase the national fleet's market share in export-import are unnecessary. The reality reminds us that the efforts to increase its market share should be done carefully so that they will not intrude on the smoothness of export-import activities. Therefore, the GOI should recognize the characteristics of international trade before it sets up its policies.



The characteristic of the international shipping or export-import in Indonesia as follows:

1. Terms of trade whether CIF (Cost, Insurance and Freight) or FOB (Free on Board) is decided by an agreement between exporter and importer or buyers and seller. The government does not have a role key to determine what kinds of the terms of trade. Actually, it does not matter what kinds of terms of trade is chosen. The most important thing is how the national fleet is selected to transport the export and import commodities by the exporter or importer that has the right to nominate a ship.
2. The weight of export and import is unbalance. Yearly, the weight of export is almost four times than those of import. This condition provides a more competitive advantage to the foreign fleet than the national fleet. The reason is that the coming vessels with cargo to Indonesia will have a wider opportunity to obtain cargo when they return.

In the last six-year (1996-2001) BPS and DGSC published data for International shipping or export-import. These data were quite different. (Table 1: Export-Import by mode in 1996-2001 and Table 4: Market Share Of National and Foreign Fleet in the International Shipping 1996-2001). The least difference was 15 million ton in 1998 and the biggest gap is 75 million ton in 2001. In general, data from DGSC were higher than those of BPS except data in 1997. The differences are significant for planning especially for fleet development. Since the BPS' data are less than those of DGSC are it is better to use the BPS's data for fleet development. Unfortunately, BPS does not present the market share of foreign and national fleet. For the sake of discussion, we adopt DGSC data for distribution of market share in international shipping between national and foreign fleet.

Table 4: Trend of Export - Import and Market Share of National and Foreign Fleet 1996 - 2003

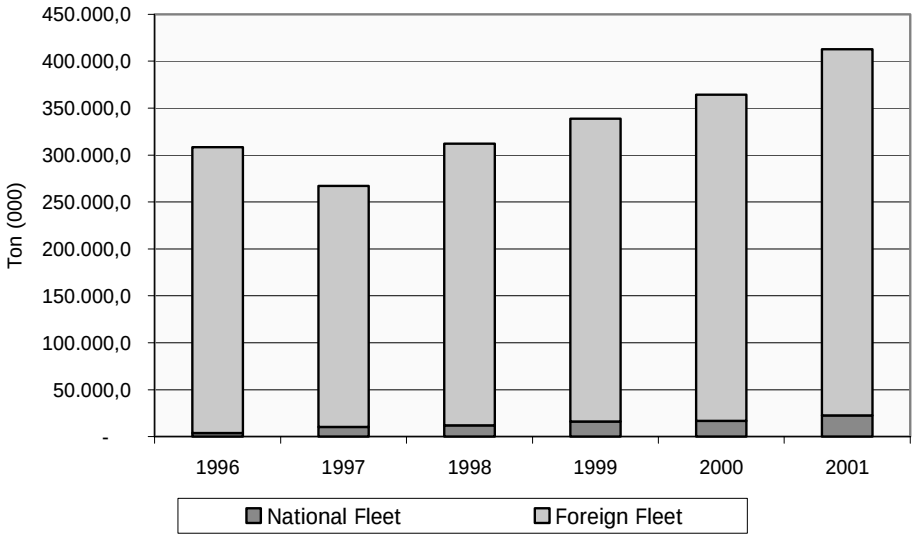
(Million Ton)

Year	EXSPORT						IMPORT						TOTAL EXSPORT - IMPORT					
	National Fleet	%	Foreign Fleet	%	Total	%	National Fleet	%	Foreign Fleet	%	Total	%	National Fleet	%	Foreign Fleet	%	Total	%
1996	1.445,5	**0,57**	251.222	**99,43**	252.668	**100,0**	2.370,4	**4,24**	53.543,5	**95,76**	55.914	**100,0**	3.816	**1,24**	304.766	**98,76**	308.581	**100,0**
1997	5.226,3	**2,25**	227.538	**97,75**	232.764	**100,0**	5.056,9	**14,74**	29.257,4	**85,26**	34.314	**100,0**	10.283	**3,85**	256.795	**96,15**	267.079	**100,0**
1998	6.190,1	**2,54**	237.178	**97,46**	243.368	**100,0**	5.799,3	**8,46**	62.775,4	**91,54**	68.575	**100,0**	11.989	**3,84**	299.953	**96,16**	311.943	**100,0**
1999	13.369,9	**4,71**	270.399	**95,29**	283.769	**100,0**	2.866,5	**5,21**	52.133,8	**94,79**	55.000	**100,0**	16.236	**4,79**	322.533	**95,21**	338.769	**100,0**
2000	11.012,1	**5,32**	195.911	**94,68**	206.923	**100,0**	5.823,5	**3,69**	151.784,0	**96,31**	157.607	**100,0**	16.836	**4,62**	347.695	**95,38**	364.531	**100,0**
2001	19.911,3	**5,62**	334.575	**94,38**	354.487	**100,0**	2.568,2	**4,41**	55.673,7	**95,59**	58.242	**100,0**	22.480	**5,45**	390.249	**94,55**	412.729	**100,0**
1996 - 2001	57.155	3,63	1.516.823	96,37	1.573.979	100,0	24.485	5,70	405.168	94,30	429.652	100,0	81.640	4,07	1.921.991	95,93	2.003.631	100,0

Source: Directorate General Sea Communication, Data Angkutan Laut Tahun 2001, Jakarta 2002.

In 2001 from market share point of views the national fleet contributed only 5.5 % in term of weight (Graph 2: Trend of Market Share of National & Foreign Fleet in International Shipping 1996-2001).

Graph 2: Trend of Market Share of National & Foreign Fleet in International Shipping 1996-2001



Meanwhile the number of vessels that were involved in international shipping was only 25 vessels with total capacity only 234.974 DWT (Table 5: Vessel Involved in International Shipping 2001.) They served only to Asia and Europe. Comparing between the capacity and the weight whether use data from DGSC or BPS which counted 412.7 million ton and 337.9 million ton respectively, it is indispensable that Indonesia needs foreign fleet to transport export-import cargo. It is hard to push the national fleet to obtain a higher market share. Not only is the capacity small but also there are OECD's Code of Liberalization concerning shipping which prevent the GOI to involved directly fostering the national fleet in the international shipping. (Table 6: Trend of National and Foreign Fleet Capacity in International Shipping).

The reason is that in broad term OECD's Code of Liberalization government should:

1. Apply no pressure on shippers as to choice of ship to carry their cargoes, this choice should be a matter of a normal commercial considerations.
2. Restrain from discriminating against those of their importers/exporters who wish to "ship foreign" by imposing export/import licenses, refusing to grant them foreign exchange or force them to employ home-flag vessel
3. Even the government-controlled organizations should conduct their business on the basis of normal commercial principles.

Table 5: National Fleet on Export - Import Activities in 2001

No.	Name of Vessel	DWT
1	Caraka Jaya Niaga III	3.650
2	Andhika Ashura	6.955
3	Gema Pertiwi	64.780
4	Permai II	7.600
5	MS Sinar Kudus	8.911
6	MV Amarta Jaya	6.840
7	Andhika Perdana	6.774
8	MV Jatiwangi	4.700
9	MV Kota Berlian	15.011
10	MV Kota Megah	7.028
11	MV Kota Mewah	15.509
12	MV Kota Suria	12.549
13	MV Kota Sabas	12.189
14	MV Kota Berani	14.995
15	MV Kota Maju	15.509
16	BG Global 39	974
17	BG Sumber Jaya 8	1.164
18	BG Global 5	1.138
19	BG Global 1	1.013
20	BG Global 2	974
21	MV Ivory Ace	8.706
22	MV Permai	7.600
23	Rose Marine	493
24	Andhika Lines	8.774
25	BG Global 9	1.138
Total		234.974

Source: DGSC, Distribution of Export - Import 2001

Table 6: Trend of National & Foreign Fleet Capacity for Export-Import 1996 - 2001

Year	National Fleet			Foreign Fleet		
	Unit	DWT	Average	Unit	DWT	Average
1996	25	322.307	12.892	6.314	128.240.296	20.310
1997	21	357.970	17.046	6.629	134.652.310	20.313
1998	21	357.970	17.046	6.134	119.403.253	19.466
1999	33	283.405	8.588	6.248	121.019.087	19.369
2000	46	315.498	6.859	7.406	205.232.017	27.712
2001	25	234.974	9.399	7.406	205.232.017	27.712

Source: DCAC, Data Sea Transport 2001, Jakarta 2002.

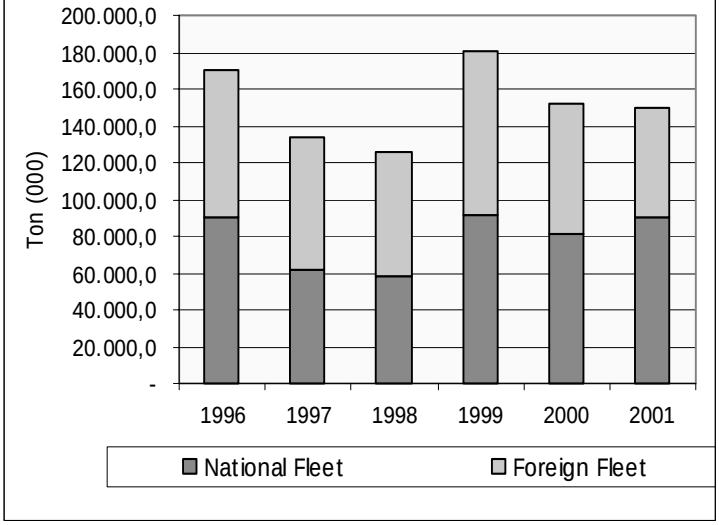
Domestic Shipping

Table 7: Inter-Island Cargo Loading and Unloading At Indonesian Ports 1991 – 2000 (000 tons)

Year	Loading	Unloading
1991	75.674	94.504
1992	87.107	111.664
1993	94.000	112.462
1994	111.131	123.332
1995	178.554	136.068
1996	160.953	141.150
1997	147.769	148.055
1998	113.487	119.792
1999	113.633	122.368
2000	127.740	137.512

Source: BPS, Transportation & Communication Statistic, 2002

Graph 3: Trend of Market Share of National & Foreign Fleet in Dometics Trade1996-2001



Activities in domestic shipping are smaller than those in international shipping. According to DGSC the inter-island cargo was 149.9 million ton in 2001. It was less than half of export-import activities that counted for 412.7 million ton. Although BPS hasn't published the similar data but it confirmed with this reality. According BPS in 2000 the inter-island cargo loading was 127.7 million ton that was also less than half of the export-import activities, which transported 290.4 million ton (Table 7: Inter-island Cargo loading and Unloading at Indonesian Ports 1991-2000 from the latest data published by BPS in 2002). Meanwhile based on DGSC data in that year the inter-island cargo loaded 152.1 million ton that was less than half of the export-import, which counted for 364.5 million ton. The difference of the inter-island cargo was almost 25 million ton (152.1 ton and 127.7 million ton). The difference is significant for planning especially for fleet development.

With the smaller economic of scale and less complicated compare to international shipping, domestic shipping should be easier to be handled by the national fleet. The GOI should promote national fleet to fight over that market share. As indicated by DGSC that from 1996 to 2001 the national fleet's market share was only 51.9% (Graph 3: Trend of Market Share of National and Foreign Fleet in Domestic Cargo). Considering cabotage principle that disallows foreign fleet to transport the inter-island cargo in Indonesia actually Indonesia has the right and opportunity to develop the national fleet for domestic cargo as many as possible.

By comparing the national and foreign fleet capacity in term of unit and DWT (Table 8: Trend of National and Foreign Fleet Capacity in Domestic Shipping) it is recognized that the foreign fleet have a higher capacity per vessel. That is the comparative advantage of the foreign fleet. Therefore, if the government of Indonesia has desired to implement the cabotage principle, the government should have the policies that will replace the smaller vessels with the bigger vessel at least the capacity is similar to those of foreign fleet.

Table 8: Trend of National & Foreign Fleet Capacity for Domestic
1996 - 2001

Year	National Fleet			Foreign Fleet		
	Unit	DWT	Average	Unit	DWT	Average
1996	6.156	6.654.753	1.081	288	3.279.781	11.388
1997	5.214	6.358.605	1.220	396	4.180.102	10.556
1998	5.290	6.463.051	1.222	396	4.180.102	10.556
1999	5.405	6.568.213	1.215	396	4.180.102	10.556
2000	5.404	6.658.213	1.232	396	4.180.102	10.556
2001	5.416	6.573.013	1.214	396	4.180.102	10.556

Source: DGSC, Data Sea Transport 2001, Jakarta 2002.

Necessity of National Fleet Development & Budget Limitation to the National Fleet Development

Considering the cargo volume, both international and domestic, and the capacity of national fleet the GOI should pay attention to how national fleet can be assisted to develop. Unfortunately during the last five year the ability of GOI's budget to invest in transport infrastructure is decline. (Table 9: Transportation Developments in The National Budget 1999/2000-2003).

Table 9: Transport Development in National Budget
1999/2000 - 2003

(in Billion Rrupiah)

NO.	Fiscal Yead / Budget Classification	I	II	III	IV	V
		(1999-2000)	2000	2001	2002	2003
1.	National Budget	219.603,8	197.030,3	315.756,0	344.008,8	370.591,8
2.	Development Budget	82.448,3	41.605,7	43.987,3	52.299,1	65.129,8
	- % national budget	37,5%	21,1%	13,9%	15,2%	17,6%
3.	Transportation Development Budget	8.356,4	3.213,4	4.768,3	7.578,1	8.964,3
	- % development budget	10,1%	7,7%	10,8%	14,5%	13,8%
4	Road Development Budget	5.243,5	1.748,1	2.120,0	4.116,1	4.593,6
	- % transportation development budget	63%	54%	44%	54%	51%
5	Land Transport Development Budget	1.580,2	567,4	880,4	1.169,3	1.889,1
	- % transportation development budget	19%	18%	18%	15%	21%
6	Sea Transport Development Budget	452,1	481,7	945,2	913,2	1.306,4
	- % transportation development budget	5%	15%	20%	12%	15%
7	Air Transport Development Budget	1.080,6	416,2	822,7	1.379,5	1.175,2
	- % transportation development budget	12,9%	13,0%	17,3%	18,2%	13,1%

Source: UU No. 29 Tahun 2002 tentang APBN TA 2003
- UU No 7 Tahun 1999 tentang APBN 1999/2000
- UU No 2 Tahun 2000 tentang APBN 2000
- UU No 35 Tahun 2000 tentang APBN 2001
- UU No 19 Tahun 2001 tentang APBN 2002

Tahun 2001 direncanakan total anggaran Rp 315.756, 0 miliar termasuk didalamnya dana perimbangan Rp 81.676,5 miliar
Tahun 2002 direncanakan total anggaran Rp 344.008,8 miliar termasuk didalamnya dana perimbangan Rp 94.531,5 miliar dan Rp 3.437,0 miliar
Tahun 2003 direncanakan total anggaran Rp 370.591,8 miliar termasuk didalamnya dana pembangunan daerah Rp 116.877,7 miliar

From the table it can be seen that the development budget was decline from Rp 82.4 trillion in 1999/2000 to Rp 65.1 trillion in 2003. The trend of development budget was decrease. Fortunately, the allocation of sea transportation was constantly increased. The increase was caused by procurement of three-passenger vessels type 3000 passenger. For the future it is difficult to expect that sea transportation sector will get a higher allocation except there is a political will not only from executive but also from parliament. Meanwhile the operational and maintenance cost in transportation was increase (Table 10: Routine Budget in Transportation Sector 1999/2000-2003).

The routine budget for sea transportation was the highest among transportation sector. These conditions impose the government to let the national fleet to develop by itself.

The government can assist the national fleet to develop by providing accurate data. Until now, there are confusing data from DGSC, BPS and BI. The data cannot be reliable to be used by private companies to develop their businesses. First, the differences among the data are quite big and significant. Second, they do not present the data in a complete formula. For instance, the BPS's data do not provide the detail concerning market share of the national and foreign fleet. Meanwhile DGSC's data do not provide the value of cargo. Moreover Bank of Indonesia does not provide the detail of freight. How much foreign currency had been paid to foreign fleet and how much money the national fleet had received. In addition, it is needed data that show the vessel productivity. Shipping companies should provide these data. Therefore, it is necessary for the three government institutions and INSA (Indonesia National Ship owner Association) to formulate the data needed for the development of the national fleet. Hopefully, project proposals that are

established from the reliable data concerning a procurement of merchant vessel could be more bankable.

Table 10: Routine Budget for Transportation Sector 1999/00 - 2003

(in Billion Rupiah)

No.	Fiscal Year / Budget Classification	I (1999-2000)	II 2000	III 2001	IV 2002	V 2003
1.	National Budget	219.603,8	197.030,3	315.756,0	344.008,8	370.591,8
2.	Routine Budget	137.155,5	155.424,6	271.768,7	291.709,7	305.462,0
	- % National Budget	62,5%	78,9%	86,1%	84,8%	82,4%
3.	Routine Budget for Transportation	311,7	264,1	320,2	355,0	426,1
	- % Routine Budget	0,2%	0,2%	0,1%	0,1%	0,1%
4	Routine Budget for Road Transportation	35,3	17,1	17,4	19,1	22,1
	- % Routine Budget	11%	6%	5%	5%	5%
5	Routine Budget for Land Transportation	34,3	30,2	39,0	41,6	35,2
	- % Routine Budget	11%	11%	12%	12%	8%
6	Routine Budget for Sea Transportation	179,2	158,0	192,3	214,4	268,0
	- % Routine Budget	58%	60%	60%	60%	63%
7	Routine Budget for Air Transportation	62,8	58,8	71,5	79,9	100,8
	- % Routine Budget	20,2%	22,3%	22,3%	22,5%	23,7%

Source: UU No. 29 Tahun 2002 tentang APBN TA 2003
- UU No 7 Tahun 1999 tentang APBN 1999/2000
- UU No 2 Tahun 2000 tentang APBN 2000
- UU No 35 Tahun 2000 tentang APBN 2001
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3.6.4. Philippines' Experience in Public Ship Finance (Samuel C. Custodio – Former Director, DOTC, Philippines)

FINANCING FOR THE DOMESTIC SHIPPING INDUSTRY-
The Philippine Experience

Samuel C. Custodio
Philippines

The Philippines

- An archipelago of about 7,000 islands
- Three main island groups: Luzon, Visayas and Mindanao
- Situated between the South China Sea and the Philippine Sea
- Situated South of China, East of Vietnam, Northeast of Sabah, North of Sulawesi

Indonesia and The Philippines

Maritime Transport in the Philippines

- Major Ports
  - Manila
  - Cebu
  - Davao
  - Batangas
  - Cagayan de Oro
  - Iloilo
  - Subic
  - Ozamis
  - General Santos

Maritime Transport in the Philippines

- Primary Routes
  - Manila to:
    - Cagayan de Oro
    - Cebu
    - Davao
    - Dumaguete
    - Gen. Santos
    - Iloilo
    - Zamboanga
  - Cebu to
    - Cagayan de Oro
    - Dumaguete
    - Iloilo
    - Zamboanga

Philippines' Experience in Public Ship Finance

- Domestic Shipping Modernization Program – Package I (DSMP I)
- Domestic Shipping Modernization Program – Package II (DSMP II)
- Ideas for the Future

Domestic Shipping Modernization Program – Package I (DSMP I)

- Events leading to DSMP I
- Particulars of DSMP I
- Status of DSMP I
- Effects of DSMP I on the domestic shipping industry

Events leading to DSMP I

- Shipping industry became moribund due to years of governmental neglect
- No new investments were made due to very low profit margin
- Ship operators cut back on maintenance and safety
- Worst maritime disasters happened
  - Dona Marilyn
  - Dona Paz

Events leading to DSMP I

- Presidential Task Force on the Inter-Island Shipping Industry was created on 22 November 1988 "to formulate short-term measures and medium-term plans for the improvement of the inter-island shipping industry…"
- Task Force submitted recommendations on 19 April 1989

Presidential Task Force on the Inter-Island Shipping Industry

- Recommendations
  - Safety
    - Competence of Crew
    - Vessel Seaworthiness and Safe Voyage
    - Delineate responsibility for maritime safety
  - Cost and Adequacy of Shipping
    - Partial Deregulation of the Fare Structure
    - Update Basis of Fare Determination
    - Deregulation of Entry into Particular Route
    - Reduction in the Cost of Vessel Acquisition and Operation

Presidential Task Force on the Inter-Island Shipping Industry

- Recommendations
  - Cost and Efficiency in Port Services
    - Demonopolize Port Cargo Handling Services
    - Rationalize Cargo Handling Rates
    - Revise Private Port Policy
    - Consolidate Voyage Clearance
    - Accelerate Privatization of Public Ports
    - Accelerate Completion of Development Projects at North Harbor (Port of Manila)
    - Charge progressive Berthing Fees

Presidential Task Force on the Inter-Island Shipping Industry

- Recommendations
  - Institutional Recommendations
    - Create a Ports and Shipping Advisory Council
    - Create and Admiralty Court
    - Strengthen and Expand the Functions and Responsibilities of the Relief and Rehabilitation Units of the National Disaster Coordinating Council

Events leading to DSMP I

- Development Bank of the Philippines undertook the Industry Restructuring Program
  - Pulp and Paper
  - Textile
  - Cement
  - Steel
  - Shipping

Domestic Shipping Modernization Program I (DSMP 1)

- Project Purpose
  - To provide financial assistance to enterprises engaged in domestic shipping and shipping support industries to promote the improvement of the efficiency, reliability, safety, affordability and overall service quality of the domestic shipping industry

Particulars of DSMP I

- Loan Amount = JY 15,000 M
- Loan Agreement No. PH-P151
- Bank = Overseas Economic Cooperation Fund (OECF) now Japan Bank for International Cooperation (JBIC)
- Interest Rate of Loan = 3% p.a.
- Eligible Borrowers:
  - Filipino Citizens
  - Domestic Corporations

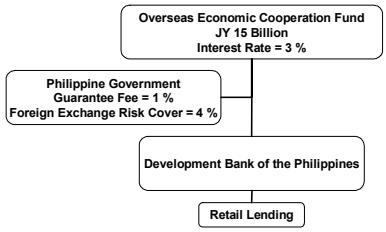
Particulars of DSMP

- Eligible Projects:
  - Shipping
  - Shipyard
  - Cargo Handling
  - Related Terminal Facilities
- Lending Interest Rate:
  - WAIR – 2 but not lower than 12%, fixed
  - WAIR – 2 but not lower than 12%, variable

Terms and Condition of the Sub-loan

- Denomination: Philippine Peso
- Maturity: 3 – 15 years inclusive of grace period
- Grace Period: Up to 5 years
- Limits: From minimum of PhPeso 500,000 up to equivalent of JapY 1.5B
- Eligible Expenses: up to 80% of project cost

Framework of DSMP I



Status of DSMP I

Item	Foreign		Local		Total	
	Est.	Actual	Est.	Actual	Est.	Actual
Sub Project	14,838	12,406	4,946	8,226	19,784	20,632
Consulting Services	162	129	55	88	217	217
Total	15,000	12,535	5,001	8,314	20,001	20,849

Figures in Million Japanese Yen

Status of DSMP I

Vessel Type	Number	%	Value	%
Cargo	12	23%	555.72	17%
Fastcraft / Passenger / Cargo	19	36%	1,305.70	40%
Tanker	11	21%	704.81	22%
Tugboat/Barge	6	11%	319.75	10%
Shipyard / Terminal	5	9%	343.80	11%
Total	53	100%	3,229.78	100%
New	21	40%	1,057.18	33%
Expansion	32	60%	2,172.60	67%

Money Figures in Million Philippine Pesos

Status of DSMP I

Region	Number	%	Value	%
Batangas	7	13%	376.55	12%
Cebu	11	21%	1,109.30	34%
Manila	11	21%	882.13	27%
Others	24	45%	861.80	27%
Total	53	100%	3,229.78	100%

Status of DSMP I

Year	1995	1996	1997	1998	1999	2000
Approved Loans (in Million Pesos)*	1,463.00	1,040.30	727.14	241.01	550.00	400.00
Weighted Average Interest Rate	11.5	12.3	12.9	15.0	10.0	9.7
Ave. Forex Rate (Yen to Peso)	.2997	.2405	.2297	.2644	.3458	.3351

* Including approved loans not yet implemented/released

Effects of DSMP 1 on the Domestic Shipping Industry

- Out of the 53 subloans
  - 8 are start-up companies
    - 1 was foreclosed
  - 10 posted decline in net profit
    - 4 between -1% to -3%
  - 35 posted gains in net profit
    - 12 more than 100% increase
    - 10 between 50% and 100%
    - 10 between 20% and 50%

Effects of DSMP 1 on the Domestic Shipping Industry

- 10 Subloans are in arrears
  - Total amount P391.6 M
  - Seven companies
    - 2 posted gains in net profit
    - 1 posted a decline in net profit of -1% only
    - 4 start-up companies
      - 1 foreclosed

Effects of DSMP 1 on the Domestic Shipping Industry

- End-users' view of subloans
  - DSMP 1 is a big help to the shipping industry.
    - They were able to secure long-term financing for their various projects
  - DSMP 1 was an educational experience
    - Before DSMP 1, they were only concerned with cost of acquiring very old second-hand vessels
    - DSMP 1 guidelines made them realize the importance of safety and efficiency of vessels
    - They also learned the proper way of rehabilitation of vessels to have safe and efficient vessels
    - They realized the advantage of acquiring younger vessels

Effects of DSMP 1 on the Domestic Shipping Industry

- End-users' view of subloans
  - Attractive rates and affordable terms of the Program meant more wanted to avail themselves of the subloan
    - When DBP started to require real estate collaterals, the end-users found it very hard to comply
  - The technical advice provided by the DSMP Project Team was a great help in the project development of end-users.

Effects of DSMP 1 on the Domestic Shipping Industry

- Effects on end-users
  - DSMP 1 influenced the mindset of end-users on the advantages of having their vessels classed
    - Before DSMP 1 ship owners were hesitant to have their vessels class because of cost considerations
    - Advantages in terms of repairs, seaworthiness, insurance and prestige associated with classed ships are now well appreciated
  - End-users now realize that viability of operations lies in the efficient utilization of the vessel

Effects of DSMP 1 on the Domestic Shipping Industry

- Effects on end-users
  - End-users became more discriminating
    - They now ask for plans and specifications, machinery and equipment listing, survey reports and general vessel condition before negotiating
    - They now consider adaptability of vessel to intended service areas, cargo volume, cargo type and passenger density
    - Vessel design, stability weight factor and class approval are checked before vessels are converted

Domestic Shipping Modernization Program – Package II (DSMP II)

Particulars	DSMP 1	DSMP 2
Loan Amount Re-lending T & TA	JY 15 B 14.838 B 0.162 B	JY 20 B 19.500 B 0.500 B
Mode	Retail	Retail and/or Wholesale
Policies Target Sub-sectors	Shipping; Shipyard; Cargo Handling & Port Terminal Facilities	Expanded to include Port Dev't,/ operations, Maritime Schools, etc.

Domestic Shipping Modernization Program – Package II (DSMP II)

Particulars	DSMP 1	DSMP 2
Policies Product	Long-Term Loan	Diversified to include Equity Investment and Leasing
Eligible Borrowers	Filipino-owned enterprises engaged in the business of shipping, shipyard operations, cargo handling and port/ terminal operations	Expanded to include LGUs, schools, universities and relevant training Institutions

Domestic Shipping Modernization Program – Package II (DSMP II)

Particulars	DSMP 1	DSMP 2
Emphasis	Transport Chain	Geographical Area Development and Safety
	Efficiency	Efficiency, Safety and Productivity
	Adaptability Transport chain and appropriate shipping technology	Development Impacts Geographical Area Development

What of the Future?

- Creation of a Maritime Equity Corporation
  - Currently under study by MARINA
  - Need to move away from a banker mentality
  - Partnership between the Government and the Domestic Shipping Industry
  - Patterned after the Maritime Credit Corporation of Japan
- Continued support for the Domestic Shipping Industry

3.7 Second Seminar on Building Public-Private Partnership in Domestic Shipping Development through Implementing STRAMINDO Action Plan

3.7.1. Action Plan 1: Expanding Ship Investment Schemes (Sasanuma Mitsuhiro – JICA Study Team)

SEMINAR On Action Plan For Ship Finance

Sasanuma Mitsuhiro
JICA - STRAMINDO

SEMINAR On Action Plan For Ship Finance

1. Mechanism of Development Finance in Indonesia
   - (1) Infrastructure – Asset of the country
   - (2) Public utilities – SOEs
   - (3) TSL through GFI – Private sector
2. Mechanism of Ship Finance
   - (1) Public owned ship – Government
   - (2) Public owned ship – SOEs
   - (3) Public owned ship – Transport SOEs
   - (4) Privately owned ship – Foreign companies
   - (5) Privately owned ship – Domestic companies

3. Present Situation of Ship Finance
   - (1) Government owned ship – Government budget
   - (2) SOEs owned ship – OOF
   - (3) Transport SOEs owned ship – OOF
   - (4) Foreign company owned ship – Foreign private loan
   - (5) Domestic company owned ship – Foreign & domestic private loan
   - (6) Small domestic owned ship – Own fund

4. Problem of Ship finance
   - (1) Government fund – Limited resources
   - (2) ODA – No resources
   - (3) OOF – Limited resources
   - (4) Foreign bank loan – Guarantee problem
   - (5) Domestic bank loan – High interest rate

5. Rationale for strengthen Ship finance
   - (1) Rationalization of Shipping sector
   - (2) Restructuring of Shipping sector
   - (3) Promotion of Privatization
   - (4) Modernization of Fleet
   - (5) Tertiary shipping support
     (Balanced development of the country, poverty reduction – livelihood support socio economic development – health, education, security)
   - (6) Shipping related industry development
     (GNP contribution, export promotion, job creation, B/P support)

6. Action plan for strengthening Ship finance
   - 6.1 ODA for various purposes
     - (a) ODA – Project (Procurement of Model ship)
     - (b) ODA – TSL (Rehabilitation and improvement of existing fleet)
     - (c) ODA – Project (Procurement of Pioneer ships)
     - (d) ODA – TSL (Support for tertiary shipping)
     - (e) ODA* – Equity investment (SMHC, shipyard etc)
     - (f) ODA – TSL (for Forwarders)
     - (g) ODA – TA (Planning, implementation, capacity building)

     * FDI Counterpart fund

     (1). Top priority project of the country
     (2). Feasibility and effectiveness confirmed
     (3). Last resort
     (4). Project content confirmed
     (5). Ready for implementation

6.2 OOF for the procurement of all kinds of vessels
(1) Improvement of fiscal management of the government satisfy IMF conditionality
(2) Establishment of shipping sector development policy
(3) Strengthening of transport SOEs (Accountability, fiscal autonomy)
(4) Separation of transport division from SOEs (Guarantee by paternal SOEs)

6.3 Foreign private loan for the procurement, rehabilitation and improvement of trunk line vessels
(1) Promulgation of ship mortgage and arrest law
(2) Guarantee scheme provision

6.4 Domestic private loan for the procurement, rehabilitation and improvement of tertiary line vessels
(1) Decreasing of interest rate
(2) Guarantee scheme provision

6.5 Foreign direct investment for shipyard, port and port or forwarding facilities
(1) Business climate improvement
(2) Deregulation
(3) Provision of counterpart fund (Government, private, ODA)

3.7.2. Action Plan 2: Modernizing and Maintaining Domestic Fleet (Katsurada Toshisada, Nomori Etsuo – JICA Study Team)

STRAMINDO SEMINAR

Action Plan II
Modernizing and Maintaining Domestic Fleet

KATSURADA & NOMORI

15th January, 2004
JICA STUDY TEAM

Modernizing and Maintaining Domestic Fleet

Action Plan 1 — Building and Assignment of Most Suitable Vessels on Regular Inter-island Routes

Action Plan 2 — Introduction of Ship-Management System

ACTION PLAN 1

Needs for Designing of Model Ships

Future Transport Demand in Liner Services
- Concentration to 13 major ports
- Characteristics of Sea Transport Conditions
  - ? Shallow Draft of Several Ports
  - ? Long Inter-island Routes

↓

Fleet Assignment Issues
- To meet massive traffic demand effectively
- To meet the needs for quicker delivery
- To serve small and scattered demand

Model Ships (1)

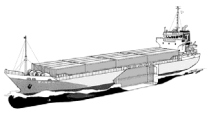
a. Shallow and Wide Container Ship
   - Calm water of Java Sea
   - Existence of Major River Ports in Sumatra, Kalimantan, Sulawesi

b. Ro-Ro Ship
   - Short to Medium distance container routes
   - Transport Demand of High-value goods

c. Multipurpose Ship
   - Long inter-island routes
   - Various types of cargo demand

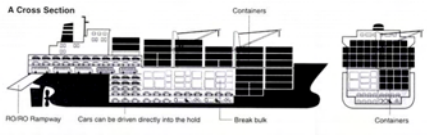
Model Ships (2)

Container Ship



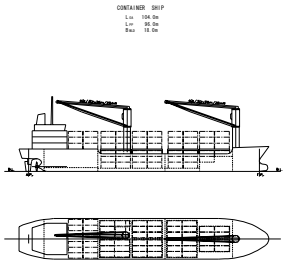
Ro-Ro Ship

Multipurpose Ship



Ship Design Plan (1)

Container Ship (C-96 shallow draft)

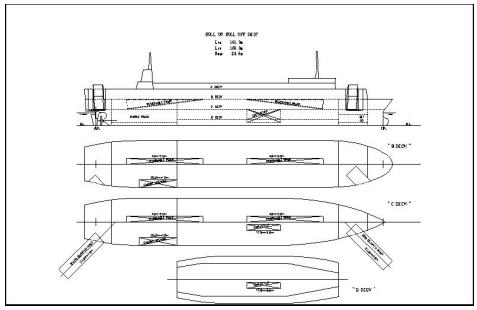


Principal Particular of Container Ship

NAME	C-96			C-125		C-154 d=8.5m without DC Crane	C-154 d=8.5m
Loa(m)	104			135		164	164
Lpp(m)	96			125		154	154
Bld(m)	18			25		25	25
Doa(m)	7.8			12.5		13.6	13.6
Draft(m)	5.5			5.0		8.5	8.5
GT(International)	6,000			13,500		17,000	17,000
Cruising Range(sm)	2,500	2,500	2,500	2,500	2,500	3,500	3,500
Cruising Speed(knot)	14	15	16	15	16	19	19
Main Engine (Low Speed Engine)	1set			1set		Low speed 1set	Low speed 1set
Max. Out Put(KW)	3,250	4,550	6,500	5,500	7,700	13,440	13,440
Nor. Out (KW)	2,925	4,095	5,850	4,950	6,930	12,096	12,096
Container(TEU)	300			568		1,002	954
IN HOLD	106					508	476
ON DECK	194					494	478
Cargo Deadweight(t)	3,000			6,800		12,000	11,900
Total Deadweight(t)	4,000			8,700		16,000	15,900
Hull Weight(t)	1,820					5,950	5,960
Container Handling Equipment Deck Crane	40t/30t×26m/28mR 2sets			40t/30t×27m/29mR 2sets		Full Cellular Type without DC Crane	40t/30t27m/29mR 3sets
Bow Thruster	1			1		1	1
Electric Diesel Generator(EG)	450 KW 3sets			550KW 3sets		750KW 3sets	750KW 3sets
FOC(t/day)(Including E.G)	16.9	22.2	30.0	28.2	35.1	58.5	58.5
Bhilding Cost(million yen)	1,320	1,460	1,660	1,910	2,030	3,030	2,900

Ship Design Plan (2)

Principal Particular of Ro-Ro Ship

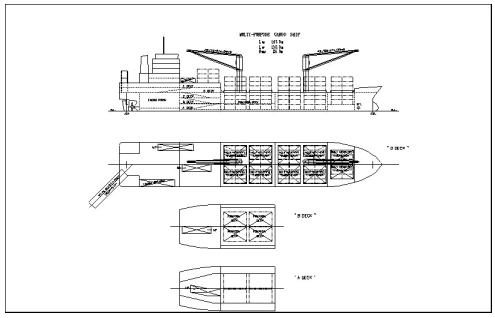


Principal Particular of Ro-Ro Ship

NAME	RP-105			R-150 d=7.0 m
Loa(m)	114			161
Lpp(m)	105			150
Bld(m)	21			24.5
Doa(m)	7.4			8.5
Draft(m)	5			6.5
Nos of car Deck (tier)	1			2
GT(International)	10,000			16,000
Cruising Range(sm)	2,500	2,500	2,500	3,500
Cruising Speed(knot)	15	16	17	20
Main Engine (Low Speed Engine)				
Max. Out Put(KW)	3,300	3,850	5,500	12,000
Nor. Out (KW)	2,970	3,465	4,950	10,800
Passenger	250 P			0
CHassis (12mL) (@30t)	25			125
Car (4.5 mL)	20			125
Cargo Deadweight(t)	800			4,000
Total Deadweight(t)	1,600			6,000
Ro-Ro Equipment				
Bow Quarter Ramp	27m x 7m 1set			27m x 7m 1set
Stem Quarter Ramp	27m x 7m 1set			27m x 7m 1set
Removable Hold Ramp	0			40m x 3m 2set
Fixed Hold Ramp	0			0
Car Lifter	0			18m x 3m 1 set
Bow Thruster	1			1
Electric Diesel Generator(EG)	450 kw 3sets			750 kw 3sets
FOC(t/day)(Including E.G)	19.2	23.4	30.8	53.7
Bhilding Cost(million yen)	1,960	2,000	2,130	3,200

Ship Design Plan (3)

Multi Purpose Cargo Ship



Principal Particular of Multi Purpose Cargo Ship

NAME	HB-120			HB-138 d=7.0m
Loa(m)	129			147
Lpp(m)	120			138
Bld(m)	20			25
Doa(m)	10.7			10.7
Draft(m)	5			7
GT(International)	7,000			12,500
Cruising Range(sm)	2,500	2,500	2,500	3,500
Cruising Speed(knot)	15	16	17	20
Main Engine (Low Speed Engine)	1 set			1 set
Max. Out Put(KW)	3,850	4,950	6,600	12,000
Nor. Out (KW)	3,465	4,455	5,940	10,800
Container(TEU)	198			462
in hold (tier)	90(4)			184(4)
on deck (tier)	108(2)			278(3)
Truck (9 ml)	15			20
Car (4.5 m)	171			330
Cargo Deadweight(t)	2,500			4,500
Total Deadweight(t)	3,500			6,350
Ro-Ro Equipment				
Stem Quarter Ramp	26m x 5m 1set			26m x 5m 1set
Fixed Hold Ramp	3 Sets			4 Sets
Car Deck Panel (2nd Deck)	4 Sets			4 Sets
Container Handling Equipment Deck Crane	40t/30t x 27m/29mR 2 sets			40t/30t x 27m/29mR 2 sets
Bow Thruster	1			1
Electric Diesel Generator(EG)	450 kw 3sets			550 kw 3sets
FOC(t/day)(Including E.G)	19.2	23.4	30.8	53.7
Bhilding Cost(million yen)	1,740	1,810	1,900	2,460

Comparison of Container and Ro-Ro

Ship's Type	Container	Rating	Ro-Ro	Rating
Gross Tonnage	17,000	S	16,000	S
DWT (ton)	12,000	A	6,000	
Ave. Ship's Speed (knot)	17.2		18.0	A
Loading/Discharging Efficiency	10~15 units/hr x 2 cranes (280~420 ton/hr)		Truck 50 unit/hour (50 unit x 20 ton = 1,000 t/hr)	A
Round Voyage Days 1/	5.3		4.2	A
Freight	1.5~1.7 milRp/20'FCL		2.5~2.7 milRp/truck (12t)	A
Port Charge/call	9.8 million Rp.	S	9.6 million Rp.	S
Stevedorage	*FCL* 3,000/14 t = 214 unit 214 x 0.1638 = 35 milRp *Empty* 150 x 0.1158 = 17.37 milRp *Total* *52.37 milRp*		3,000 ton / 0.3 = 10,000 m^3 10,000 m^3 x 0.005 = 50 milRp *50 milRp*	A
Fuel consumption/day	58.5 tons		53.7 tons	A
Container Per diem	954 unit x $1.75 x 8,400 x 3 = 42.1 mil Rp.	?	Depend on ratio of shipper's truck	?
Building Cost	2,900 mil Yen	A	3,200 mil Yen	

Note: 1/ Simulation result of future operation on Surabaya – Makassar route
A: More Attractive Condition, S: Almost Same Condition, ?: Uncertain Condition

Matrix of Ship Types of Routes

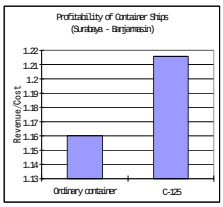
Route	Ro-Ro	Lo-Lo (Container)	Multi Purpose
Shallow draft and Short distance＜500'	A	P	x
Shallow draft and Long distance＞500'	x	A	P
Middle draft and Short distance＜500'	A	A	x
Middle draft and Long distance＞500' on heavily demanded routes	x	A	P
Middle draft and Long distance＞500' on moderately demanded routes	x	P	A

Note: A – Attractive Vessel, P – Practical Vessel, x – Not practical Vessel

Profitability of Model Ships

Profitability of Shallow and Wide Container Ship

Route	Route1 Surabaya-Banjarmasin	
Ship Type	Ordinary container	C-125
Distance(miles)	268	268
Ship size (DWT)	3069	8708
Speed (knot)	15	15
Commissionable days	346	346
Total days per RT	5.16	6.42
Total Number of RT	67	54
Total Cargo Carried(TEU)	16,197	37,497
Capital Cost	6,498	16,808
Fixed Operation Cost(mil Rp/yr)	2,337	4,854
Distance related cost(mil Rp/mile)	2,158	2,310
Cargo related cost	5,315	10,499
Call related cost	295	442
Sub-total	16,586	34,985
Container perdiem	2,856	8,282
Total Cost/vessel yr (million Rp)	19,442	43,188
Ave.tariff(million Rp/TEU)	1.4	1.4
Total Freight Revenue (million Rp)	22,550	52,496
Revenue/cost	1.169	1.216



Implementation Schedule of New model Ships

Work Items	2004	2005	2006	2007	2008	2009
Institutional and Financial Arrangement						
Preparation of Basic Design						
Preparation of Detailed Design						
Tendering Procedure						
Ship-building by Foreign Shipyard as a Package deal Project						
Ship-building by Local Shipyard						

Package Deal: Joint venture ship-building between well experienced foreign shipyard and local shipyard

ACTION PLAN 2

Introduction of Ship-Management System

Needs of Improvement of Ship-Management

Problems

Problems due to current seafarer management system
- Difficulties in retaining sea farers willingness to work and concentration
- Decrease in operating rate of and capacity of equipment due to the lack of maintenance
- Increase in equipment failure and subsequent increase in repair cost
- Declining overall ship performance

Problems due to current ship maintenance system
- Few companies know the current conditions of their ships
- Long period of preparation for repairing ships
- Declining overall ship performance

Improvement Issues

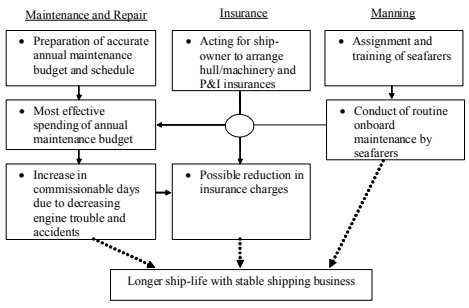
- Improvement of seafarer management
- Re-education of seafarers
- Restructuring of ship maintenance
- Establishment of Ship Management System

Docking Days

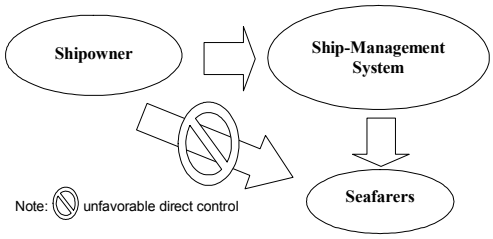
Major Shipyard	Shipyard A	Shipyard B	Shipyard I	Shipyard K	Shipyard L	Shipyard DI	Medium Shipyard	Shipyard D2	Shipyard F	Shipyard J	Shipyard M	Shipyard G
cargo	25.53	18.52	55.26	10.83	34.79	16.78	cargo	17.54	55.63	5.82	n.a.	22.08
tanker	40.75	18.86	50.00	12.05	59.71	10.00	tanker	18.50	39.36	4.56	27.00	n.a.
container	29.42	19.78	n.a.	12.81	n.a.	n.a.	container	n.a.	n.a.	n.a.	n.a.	n.a.
passenger	13.41	9.58	31.50	9.14	31.49	n.a.	passenger	40.83	21.00	22.33	35.00	12.25
ferry ro2	23.74	17.87	46.18	10.40	n.a.	28.57	ferry ro2	23.94	68.00	13.40	n.a.	n.a.
tug boat	33.56	19.60	32.47	7.13	36.45	25.20	tug boat	27.05	18.00	20.14	10.14	20.25
lct	17.67	17.67	22.00	12.36	16.68	n.a.	lct	32.29	n.a.	7.75	8.00	n.a.
barges	121.00	14.46	61.25	10.75	25.43	59.00	barges	31.67	24.46	n.a.	7.00	27.13
fishing	16.90	n.a.	98.33	15.18	23.00	19.27	fishing	9.24	n.a.	n.a.	n.a.	n.a.
bulk carr.	n.a.	20.00	n.a.	n.a.	n.a.	n.a.						
average	35.78	17.37	49.62	11.18	32.51	26.47	average	25.13	37.74	12.33	17.43	20.43

Minor Shipyard	Shipyard C	Shipyard E	Shipyard H
cargo	26.27	n.a.	5.46
tanker	n.a.	n.a.	31.67
container	n.a.	n.a.	n.a.
passenger	n.a.	n.a.	n.a.
ferry ro2	26.00	16.00	27.33
tug boat	34.11	13.49	26.25
lct	282.00	17.62	n.a.
barges	50.63	23.57	1.78
fishing	n.a.	n.a.	n.a.
average	83.80	17.67	18.50

Possible Ship-Management Service Areas and Expected Interactive Effects



Conceptual Relation among Shipowner, Ship-Management System and Seafarers



Introduction of Ship-Management System

Function of Ship-Management System

Responsible for : Ship Maintenance and Repair
Insurance Management
Crewing (Assignment and Education)

Benefits for Shipping System

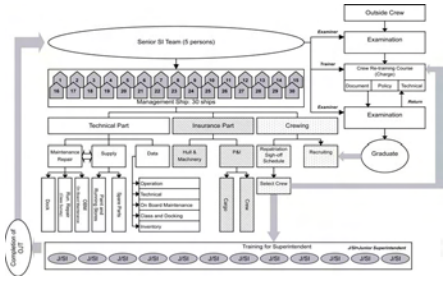
- Reduction of Docking Period or Increase of Commissionable days
- Keeping Good Condition of Ships within Estimated Maintenance Budget
- Extension of Ship Life

Training of Superintendents

Year	2002	2014	2024
No. of Vessel over 3,000 dwt/grt 1/	912	1,356	1,807
No. of Senior Superintendents 2/	152	226	301

Note: 1/ Cargo vessels over 3,000 dwt and passenger vessels over 3,000 grt
2/ Workload assumption – 6 vessels per senior superintendent

Operational Functions of A Ship-Management System

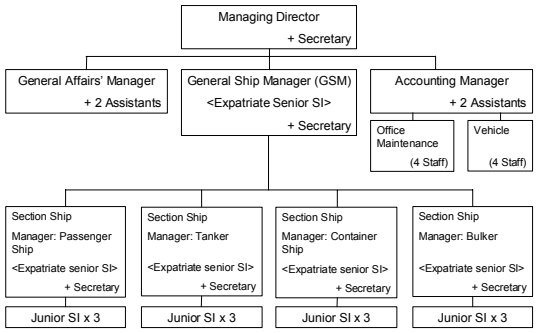


A Model Ship-Management System

40 staffs including 5 senior superintendents (SI) taking care of 30 vessels (of more than 3,000 DWT)

The ship management fee will be US$ 5,000/month/vessel

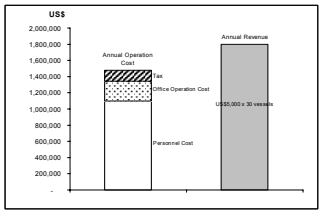
Organizational of A Model Ship-Management System
(Staffing Plan: 40 personnel)



Note: SI – Superintendent

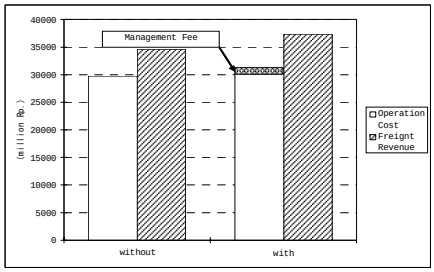
Financial Prospect of A Model Ship-Management System

Item	US$	Remarks
Total Revenue	1,800,000	US$ 5,000/month x 30 vessels
Total Expenditure	1,341,120	
Personnel Cost	1,101,120	Refer to Table 16.2.2
Office Operation Cost	240,000	Refer to Table 16.2.3
Gross Profit Margin	458,880	
Enterprise Tax	134,720	Tax Rate (30%) on over Rp. 100 mil.
Net Profit	324,178	18,0% of total revenue



Profitability Increase due to Ship-Management

Comparison between With and Without Ship-Management contract
Container Ship 5,000 DWT (10 yrs old)



Implementation Schedule of Ship-Management System

Work Items	2004	2005	2006	2007	2008	2009
Legislative Arrangement of Ship-Management Company						
Preparation of License, Guideline, and SI Certificate						
Provision of Ship-Management Services within SMHC						
Establishment of Ship-Management Companies over the Country						

THANK YOU…

3.7.3. Action Plan 3: Advanced Management Education (Nagaya Toshiaki – JICA Study Team)

Modernization of Shipping Industry and Advanced Education

STRAMINDO SEMINAR
Nagaya Toshiaki

January 15, 2004

1

Problem to be understood

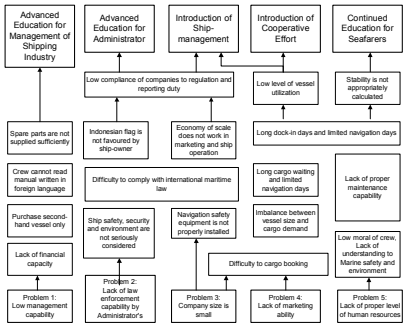
- Is financing difficult ?
  If so , Why ?
- Old ship is the problem ?

→ Government program is not enough ?
→ Fund supply is not enough ?

If we properly understand the problem, we have half solved them. -- Carlos Ghosn president of Nissan Motor Co.,

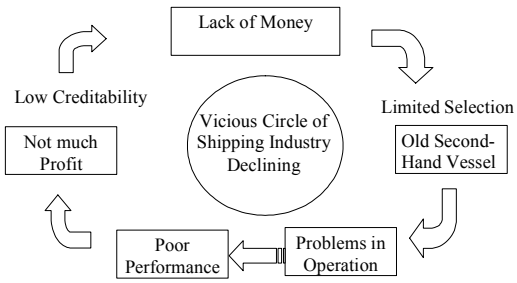
2

Problem Analysis of the Shipping industry in Indonesia



3

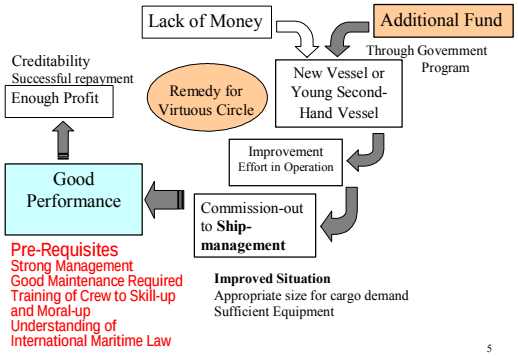
Present Condition of Declining Shipping Industry



There is a vicious cycle : No improvement

4

Virtuous Circle- Type 1 (Pump-Priming scheme)



5

The fact is …

Bank is not willing to lend money…

Because…

Repayment in the future is not sure.

Why ?

Because there are Lack of

1) Management Capacity,

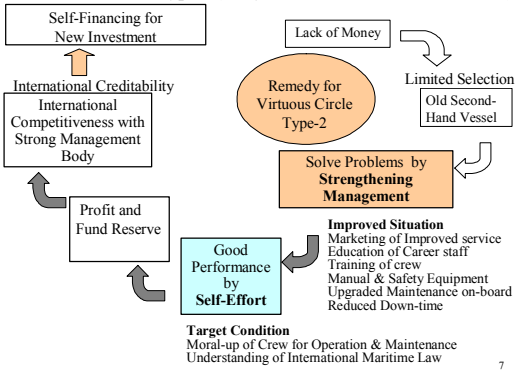
2) Collateral,

3) Company size

…. etc

6

Virtuous Circle-Type 2 (Body-Builder Scheme w/ Self-Effort)



7

Company Credibility supported by National Credibility

Everybody needs to change

- **Company** needs to change
  - ➡ Family Business to Corporate Business
- **Government** needs to change
  - ➡ Strong Leadership & Grand Vision
- **New system** to be introduced
  - ➡ Ship-management

8

Company Needs to change

- Majority of Shipping company
  Operate as Owner-Operator
  Often : Cargo owner

Now
Family Business

- Focus on the cargo carrier service
  Development of Marketing and Systematic operation
  Good Relationship with employee
  [Trust & Trusted]

Corporate Business

Human factor is key to developement

Government Needs to change

- Strong Leadership on International conventions: IMO, MARPOL, ISPS
  Operation Reporting
  ➡ Fairness in law enforcement

Protectionism

- **Planning** of Development strategy of shipping business in Indonesia
  ➡ Implementation of STRAMINDO Action Plan
  Benefit to Shipping Company and National Economy

International Competitiveness
International Credibility

New system to be introduced

Ship-management as a new business Incubator

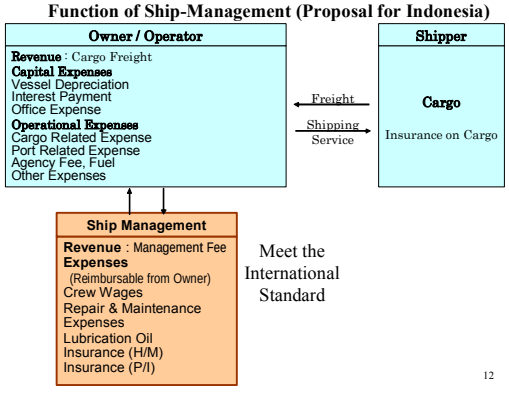
➡ Advanced Management Education
Expert course to develop Ship-management Specialist (Superintendent: SI)

➡ Supporting Consortium : (encouraged)
Companies to join the operation of Ship-management company and Advanced Education

PPP: Public Private Partnership

11

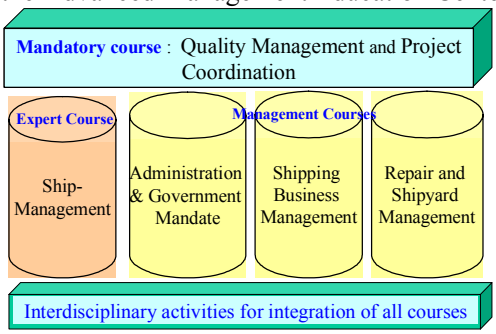
Function of Ship-Management (Proposal for Indonesia)



Meet the International Standard

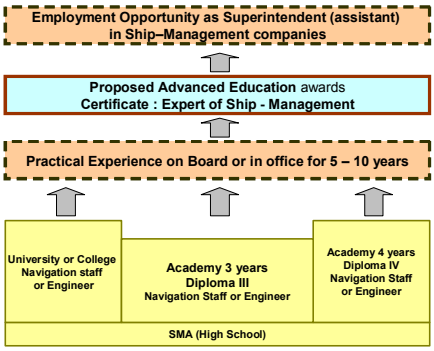
12

Courses in the Advanced Management Education Center



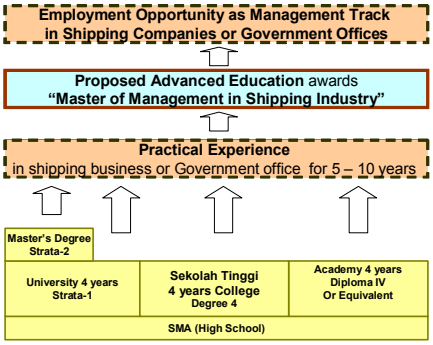
13

Career Track for Ship-Management Candidates



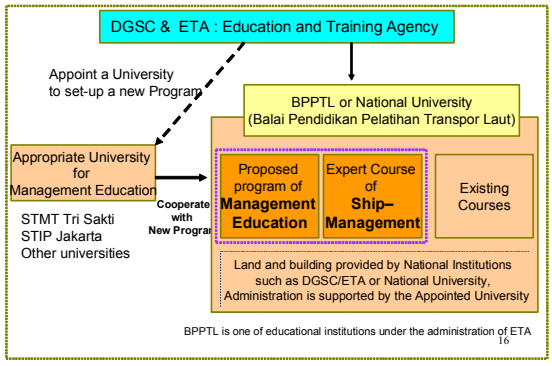
14

Career Track for Candidates of Management Courses



15

Establishment Scheme of Management Education



16

Ship-Management

- Planned Maintenance and Procurement
- Technical Management for Ship Operation
- Budget Control Accounting and Reporting
- Organizational Control and Human Resource Management

17

Administration & Government Mandate

- Legal issues and Maritime Administration
- Insurance & Risk Assessment(concept and practice)
- Environmental Issues in Shipping Industry
- Port Management, Cargo handling operation, and Development Planning

18

Shipping Business Management

- Business Management and Marketing
- Logistic system and Economics
- Operation Planning, Costing and Accounting
- Finance and Risk Management

19

Operation, Repair & Shipyard Management

- Repairing and Ship Building Supervision
- Procurement Management
- Human factors for safety and productivity
- Operational Analysis and Solution Technique

20

Interdisciplinary Activities

- Case Studies of Business Development
- Conventions and Symposium
- Inter-modal Transportation & New Technologies
- Field Work and OJT

21

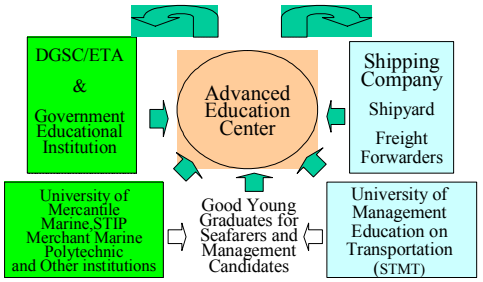
Target of Advanced Education

• Shipping Company	Top Manager & Director
• Government office	Gov. Administrator
• Shipyard & Port Operation	Operation Manager
• Ship-management Company	Superintendent

•Existing Education for Ship Operation — Deck Officers, Engineers; Ratings

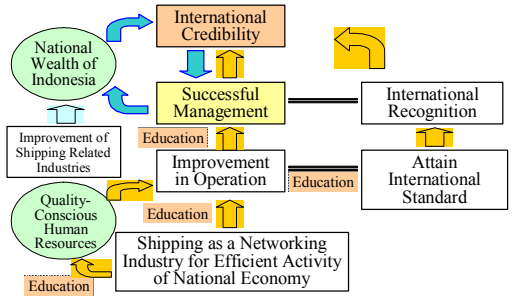
22

Advanced Education Center as a Meeting Plaza for the future



23

Future Vision of Shipping Industry with National Development



24

3.7.4. Action Plan 3: Advanced Management Education (Capt. Indra – ETA)

Study on the Development of Domestic Sea Transportation and Maritime Industry in the Republic of Indonesia (STRAMINDO)

Advanced Management Education

Seminar on
"Building Public-Private Partnership in Domestic Shipping Development through the Implementation of STRAMINDO Action Plan"
Jakarta, 15 January 2003

Review

The Overall Study Objectives

To increase the share of Indonesian flagged vessels in domestic shipping by providing improved shipping service to shippers and passengers on all domestic shipping routes.

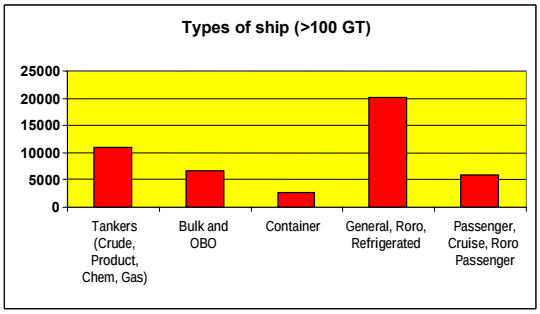
The Specific Objectives

1. To formulate Master Plan (up to year 2024);
2. To prepare Action Plan for the implementation of priority projects;
3. To facilitate technology transfer.

2

Illustration

World Fleet



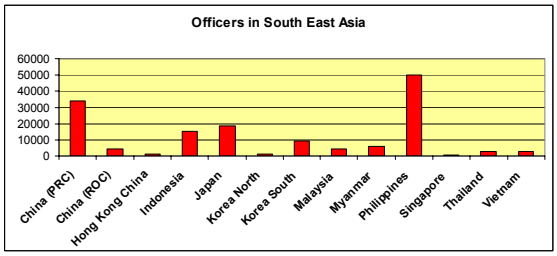
3

Source: Ton Van Essen, STC Rotterdam, 1 August 2003

	Country	Number of vessels >1000GT		
		National Flag	Foreign Flag	Total
	Others	2285	1092	3377
1	Russia	2142	348	2490
2	China	1621	551	2172
3	Norway	905	737	1642
4	Japan	809	2093	2902
5	Greece	752	2495	3247
7	Netherlands	748	202	950
8	USA	502	926	1428
9	Germany	498	1445	1943
10	Italy	489	142	631
11	Indonesia	489	108	597
12	Turkey	465	82	547
13	Singapore	459	277	736
14	Korea (Republic of)	455	441	896
15	Denmark	418	297	715
16	UK	405	454	859

Source: Ton Van Essen, STC Rotterdam, 1 August 2003

½ of the world fleet is owned in Europe, but most of officers are in Asia



Shortage of Officers (BIMCO/ISF 2000)
in 2000: 4% of 400.000 = 16.000 seafarers
in 2010: 10% of 460.000 = 46.000 seafarers (competition)

Source: Ton Van Essen, STC Rotterdam, 1 August 2003

5

Competency Tables **STCW '95**

Competence	Knowledge,understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Plan and conduct a passage and Determine position	Celestial navigation Ability to use celestial bodies to determine position Terrestrial and Coastal navi Ability to by use 1. 2. 3 4.dead and the Note:ECDIS to be included	In service experience Training ship experience Simulator training Laboratory equipment training	The information obtained from navigational charts and publications is relevant, interpreted correctly and ly applied. All potential ational hazards are ccurately method of fixing are appropriate circumstances. under all safety. largest scale charts are used and e latest information

6

Is there any consequences
on achieving those competencies
through the Competency Based Training
and
Competency Based Assessment ?

7

Example calculation for a Maritime College

		new price Euro	depreciation period Year	floor space m2	maintenance per year percentage of new price	maintenance costs per year	Annual costs excl. Labour
1.	Deck department						
1.1	Navigation aids simulation	2.000.000	10	60	8	160.000	363.000
1.2	Real Nav. Equipemnt	1.300.000	10	30	8	104.000	235.500
1.3	Ship handling simulator	3.200.000	10	60	8	256.000	579.000
1.4	Computer based training	1.500.000	10	40	5	75.000	227.000
1.5	Radar Simulator	2.300.000	10	30	8	184.000	415.500
1.6	Computer lab	150.000	5	50	5	7.500	40.000
1.7	English language lab	50.000	10	50	5	2.500	10.000
2.	Radio department						
2.1	GMDSS sim	500.000	10	50	8	40.000	92.500
2.2	Real equipment	100.000	10	15	8	8.000	18.750
3.	Engine department						
3.1	Marine engine workshop	2.000.000	15	110	5	100.000	238.833
3.2	Engine simulator	1.500.000	10	50	8	120.000	272.500
3.3	Automation equipment	400.000	10	20	3	12.000	53.000
3.4	Engine workshop equipm.	50.000	15	20	3	1.500	5.833
3.5	Hydraulic, pneum. & elect. Demo equip	100.000	10	20	3	3.000	14.000
3.6	Physics & Chemistry lab.	250.000	10	50	5	12.500	40.000
4.	Compl.						
4.1	Ship models	70.000	15	50	0	0	7.167
4.2	Tanker training equip	100.000	15	550	5	5.000	39.167
4.3	Library	480.000	15	50	5	24.000	58.500
4.4	Spare parts all dep.	200.000	10	20	5	10.000	31.000
4.5	transport	20.000	5	0	5	1.000	5.000
5.	Transport and installation						
5.1	Transport and installation	2.500.000	10	0	0	0	250.000
	Totals	**18.770.000**					**2.996.250**

8

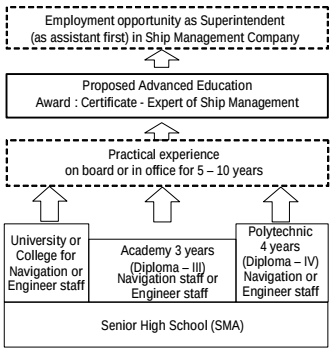
The fact is ...

Bank is not willing to lend money due to....
Repayment in the future is under uncertainty.
Why ?

Because there are Lack of
1) Management Capacity,
2) Collateral,
3) Company size
.... etc

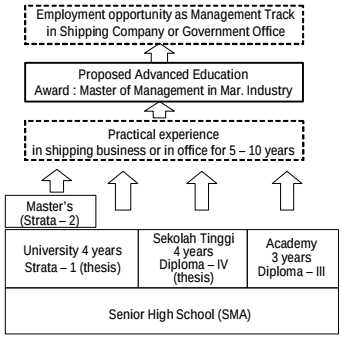
9

★ Expert Course for Ship-Management



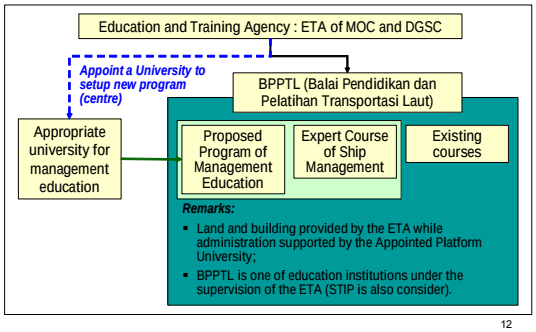
10

★ Management Course



11

Establishment Scheme for
Advanced Management Education



12

Courses to be Prepared

Mandatory course : Quality Management and Project Coordination

Expert Track
- Ship-Management

Management Track
- Administration and Government Mandate
- Shipping Business Management
- Repair and Shipyard Management

Interdisciplinary activities for integration of all courses

13

Ship Management

- Planned Maintenance and Procurement
- Technical Management for Ship Operation
- Budget Control Accounting and Reporting
- Organization, Human resource management.

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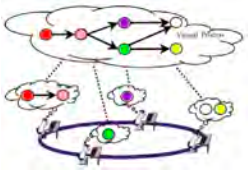
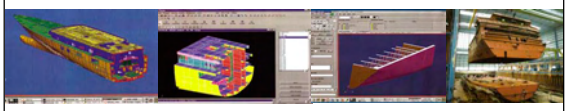


16

Repair and Shipyard Management

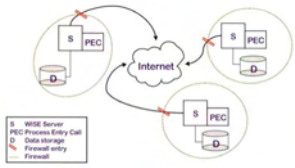
- Repairing and Ship Building Supervision
- Procurement Management
- Human Factors for Safety and Productivity
- Innovation Management



17

Interdisciplinary Activities

- Case Studies of Business Development
- International Trend and Inter-modal Transportation
- Conventions and Symposium
- Field Work and OJT (On the Job Training).



18

Sustainability

Illustration

International Competition of Seafarers Market :

- Top 25% companies are willing to pay the price for good quality crew.
- The Bottom 20% companies do not care.
- 55% companies in between are marginal influenced by the pressure of shippers or by regulatory action.

19

Cost of Training for Crew and Staff

Ratio of training to operational cost

Educational & Training Expense / Total Operating Cost	= 0.5 %	Current World Average Reported

Future Target expected : 2 %

Source:
Capt. Pradeep Chawla, LSM Manning & Training Conference in Manila, IFSMA Dec. 2003

20

Alternative

Japan's ODA Charter

Basic Policies :

(1) Support **self-help** efforts
(2) Perspective of "**Human Security**"
(3) Assurance of **fairness**
(4) Utilization of **Japan's experience** and expertise
(5) **Partnership** and collaboration with the international community.

21

(1) Support **self-help** efforts

Japan's ODA is to support the self-help efforts of developing countries based on good governance, by extending cooperation for their human-resource development, institution building, ...

(2) Perspective of "Human Security"

Japan will implement ODA to strengthen the capacity of local communities through human resource development.

22

(3) Assurance of fairness : fair value of people to gap rich & poor, gender issues;

(4) Utilization of Japan's experience and expertise;

(5) Partnership and collaboration with the international community.

Japan will actively promote the South-South Cooperation.

23

System of Formulation and Implementation of ODA Policy

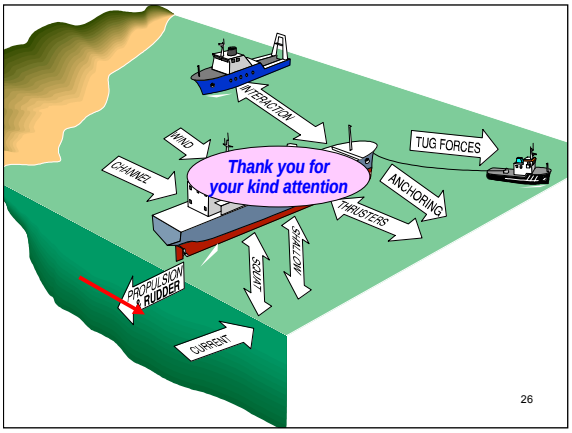
- Coherent formulation :
- Japan will be mindful of the balance between hardware-type and **software-type** cooperation;
- Human resource development;
- Development education.

24

Matters Essential to Effective Implementation

(1) Enhancement of Evaluation;
(2) Ensuring appropriate Procedures;
(3) Prevention of Fraud and Corruption
Ensure the transparency of the activity-selection and implementation process, and to prevent fraud, corruption, and improper diversion of aid;
(4) Ensuring the safety of ODA personnel.

25



26