



日本財団
The Nippon Foundation

**Report of the Experts Meeting
on Promoting Co-operation
of the Marine Casualty Investigation
in Asia**

(25–26 June 2008, Tokyo, Japan)

Marine Accidents Inquiry Association

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Introduction

The Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (IMO Marine Casualty Investigation Code) was adopted on 16 May 2008, and will come into effect on 1 January 2010.

In these circumstances, there is an urgent need that the Marine casualty investigation system, including investigation methods and the reporting techniques, should also be developed in the Asian region.

It is important that the sharing of information and deepening of understanding on the Casualty Investigation Code should be made for the prevention of marine casualty.

This meeting was held to promote cooperation on marine casualty investigations in the Asian region, with the support of the Japan Marine Accident Inquiry Agency, and under the sponsorship of The Nippon Foundation.

Marine Accidents Inquiry Association

Kaji-senta building 5th floor

4-5 Koujimachi, Chiyoda-ku, Tokyo 102-0083 Japan

E-mail: maia-f@par.odn.ne.jp

The Marine Accidents Inquiry Association was established on July 1, 1968, and is under the jurisdiction of the Ministry of Land, Infrastructure, Transport and Tourism.

The purpose of the Marine Accidents Inquiry Association is to commit to develop marine affairs, by contributing marine accident preventive measures by conducting studies and surveys about marine accident inquiries and cases of marine accident inquiry, and conducting appropriate management of marine accident inquiries by protecting the rights of people concerned.

1. Agenda

1. Opening of the Meeting
2. Welcome Speech (Japan)
3. Introduction of the Meeting (Japan)
4. IMO Marine Casualty Investigation Code (Chairman of MAIIF)
5. Presentation on MAIIF Activities (Chairman of MAIIF)
6. Presentation on MAIFA Activities (Chairman of MAIFA11)
7. Country Presentation (Investigator of Each Participating State)
8. Summary (Japan)
9. Closing of the Meeting



Participants

2. Programme

1st day: 25 June, 2008

Meeting at “Fune no Kagakukan” : Museum of Maritime Science

09:00 Registration

09:30 Opening of the Meeting (Marine Hall, 4F)

- Opening Remarks by Capt. Tetsuo Yokoyama, Commissioner of JMAIA, Welcome Speech by Mr. Syuji Fukumoto, Deputy Vice-Minister of MLIT, Introduction of the meeting

09:40-12:00 Session I

- Adoption of Agenda, IMO Marine Casualty Investigation Code, MAIIF Activities, MAIFA Activities

12:00-12:10 Group Photo Session

12:10-13:30 Complimentary Buffet Lunch

(Chinese restaurant KAIWO, 4F)

13:30-17:30 Session II

- Country Presentation (Investigator of Each Participating State in alphabetical order)

18:00-20:00 Reception Hosted by Japan Marine Accidents Inquiry Association (Mermaid Hall, 5F)

2nd day: 26 June, 2008

Meeting at “Fune no Kagakukan” : Museum of Maritime Science

09:30-11:00 Session III

- Country Presentation, Summary, Closing of the meeting

12:00-13:15 Complimentary Buffet Lunch
(Chinese restaurant KAIWO, 4F)

Excursion

13:30-17:00 Visit to the National Maritime Research Institute
(Mitaka, Tokyo)

27 June, 2008

Departure for Tokyo Narita Airport

3. List of Participants

(Nation, Name, Title of present official position, Organization represented)

Australia

Mr. Peter Thomas Foley

- Director-Surface Safety Investigation
- Australian Transport Safety Bureau

People's Republic of China (China)

Mr. Dao jiu Ma

- Deputy Director, Department of Safety Management
- China Maritime Safety Administration

Mr. Guang Lu Zhi

- Deputy Director General, Shanghai Maritime Safety Administration
- China Maritime Safety Administration

Mr. Guo Xin Ye

- Deputy Director, Zhejiang Maritime Safety Administration
- China Maritime Safety Administration

Hong Kong Special Administrative Region of the People's Republic of China (Hong Kong)

Capt. San Tai Harlan LI

- Surveyor of Ships(Nautical)
- Marine Department, Government of Hong Kong Special Administrative Region

India

Capt. Derrick Frank Vaz

- Nautical Surveyor-cum-Deputy Director General (Technical)
- Mercantile Marine Department, Mumbai and Directorate General of Shipping, India

Republic of Indonesia (Indonesia)

Mr. Hermanu Karmoyono

- Chairman of Sub Committee Marine Accidents Investigation
- Indonesian National Transport Safety Committee

Malaysia

Mr. Muhammad Shuhaimi Abd.Rahman

- Marine Officer
- Marine Department of Malaysia

Mongolia

Mr. Galsandongog Damdin

- Head of Mongolia Maritime Administration
- Mongolia Maritime Administration Ministry of Road, Transport and Tourism

Union of Myanmar (Myanmar)

Capt. Htay Lwin Oo

- Deputy Director
- Department of Marine Administration

Republic of the Philippines (Philippines)

Mr. Alfred Eglesia Bautista

- SBMI Law Member / Admin Officer
- Board of Marine Inquiry Philippine Coast Guard

Republic of Korea (Korea)

Mr. Byeong Yong Jo

- Judge
- Korean Maritime Safety Tribunal

Mr. Byung Joon Lim

- Marine Investigator
- Korean Maritime Safety Tribunal

Russian Federation (Russia)

Capt. Grigoriy Mitrofanovich Sadovoy

- Senior State Marine Casualty Investigator
- Marine Administration Port of Vladivostok

Republic of Singapore (Singapore)

Capt. Mohamed Harun Ja'afar

- Senior Marine Surveyor (Investigation)
- Maritime and Port Authority of Singapore

Kingdom of Thailand (Thailand)

Mr. Rijjapoj Saisa-ard

- Harbour Master Officer
- Harbour Master Division, Marine Safety and Environment Bureau, Marine Department

United States of America (USA)

Dr. John Sherman Spencer

- Director, Marine Safety
- National Transportation Safety Board

Cdr. Mark Eyler

- Deputy Commander, Coast Guard Activities Far East
- United States Coast Guard

Mr. Walter Douglas Rabe

- Chief, Marine Investigation Division (Chairman of MAIIF)
- United States Coast Guard

Socialist Republic of Vietnam (Vietnam)

Mr. Ha Ngunyen Hai Phan

- Vice Director of Maritime Safety Department
- Vietnam Maritime Administration

Japan

Capt. Tetsuo Yokoyama

- Commissioner
- Japan Marine Accident Inquiry Agency (JMAIA)

Mr. Tetsuya Yamamoto

- Investigator General
- Japan Marine Accident Investigators' Office (JMAIO):

Mr. Hideo Osuga

- Deputy Commissioner
- JMAIA

Capt. Yoshiaki Nagahama

- Judge
- JMAIA

Mr. Satoshi Shibata

- Director for International Policy Co-ordination
- JMAIA

Capt. Tatsuya Kojo

- Manager of International Affairs Team
- JMAIO

Prof. Shunpei Kato

- Professor Emeritus
- Tokyo University of Science

Prof. Haruo Shigeta

- Professor
- Aoyama Gakuin University

Dr. Kenkichi Tamura

- Director of Navigation & System Engineering Department
- National Maritime Research Institute

Capt. Nobuyuki Ueno

- Chief Director
- Marine Accidents Inquiry Association

4. Presentations on IMO Marine Casualty Investigation Code, MAIF and MAIFA Activities

① IMO Marine Casualty Investigation Code

Presented by Mr. Walter Douglas Rabe, Chairman of MAIF


② MAIF Activities

Presented by Mr. Walter Douglas Rabe, Chairman of MAIF

③ MAIFA Activities

Presented by Capt. San Tai Harlan LI, Chairman of MAIFA11


① IMO Marine Casualty Investigation Code





**IMO CASUALTY
INVESTIGATION CODE**

Doug Rabe


Chairman, Marine Accident Investigators'
International Forum

1


**International Standards and
Recommended Practices for a
Safety Investigation into a Marine
Casualty or Marine Incident**

2



**Code for the Investigation of
Marine Casualties and Incidents
Resolution A.849(20)
27 November 1997**


**Amendments to the Code for
the Investigation of Marine
Casualties and Incidents
Resolution A.884(21)
25 November 1999**

3



**Code of the International
Standards and Recommended
Practices for a Safety
Investigation into a Marine
Casualty or Marine Incident
Resolution MSC.255(84)**


4


**Fair Treatment
of Seafarers**



5


General Provisions



Objectives:

- Common approach
- Broad ranging investigations
- Prevent future incidents
- Provide reports to IMO for wide dissemination for safety improvements

6



Mandatory Standards



- Investigation authority
- Notification required
- Very Serious Marine Casualties must be investigated
- Flag States & Substantially Interested States must consult
- National laws must empower investigators to properly investigate

7



Mandatory Standards



- States may conduct separate investigations
- Cooperation required
- Investigations must be impartial and objective
- Seafarers must be treated fairly

8



Mandatory Standards

- Draft Reports to be circulated among interested States for comment
- Final Reports to be provided to IMO, public, and the maritime industry



9



Recommended Practices

- Administrative Responsibilities

Sufficient resources, qualified personnel

- Principles of Investigation

*Independent
Safety focused
Cooperative
Equal priority
Broad scope,
find all causal factors*



10



Recommended Practices

- Investigation of less serious Marine Casualties and Incidents where appropriate
- Code provides a list of factors to be considered when seeking agreement among States



11



Recommended Practices

- Immediate notification of acts of unlawful interference
- Notification to parties of investigation procedures
- Coordination/cooperation procedures
- Evidence collection procedures, VDRs
- Confidentiality of information
- Protection for witnesses and parties
- Draft and Final Report procedures
- Re-opening an investigation process



12



Approved: MSC 83

Adopted: MSC 84

Enters into force: 1 January 2010



13



????? Questions ?????



② MAIF Activities

Marine Accident Investigators' International Forum



The Forum is an international non-profit organisation dedicated to the advancement of maritime safety and the prevention of marine pollution through the exchange of ideas, experiences and information acquired in marine accident investigation.

Marine Accident Investigators' International Forum



Our motto:

Maritime Safety through
Investigation and
Cooperation.

MAIF is seeking status at
IMO as an IGO
(Intergovernmental
Organisation).

Marine Accident Investigators' International Forum



Members: 60+ from 40+
administrations

Last meeting MAIF 16
Beijing, China
October, 2007

Next meeting, MAIF17
Valletta, Malta
Sept 29 – Oct 3, 2008

Website:

Marine Accident Investigators' International Forum



Current initiative

Bring the serious problem
of continuing deaths of
seafarers due to confined
space entry to the
forefront of discussion
and action at IMO.

Marine Accident Investigators' International Forum



MAIF is all about
Saving lives


Marine safety
Cooperation

JOIN US IN MALTA !!

email:

chairman@maif.org


③ MAIFA Activities

 **MAIFA**


MAIFA INTRODUCTION

The Experts Meeting on Promoting Co-operation of the Marine
Casualty Investigation in Asia
25-26 June 2008
Tokyo, Japan


Marine Department, Government of HKSAR

 **MAIFA**


Marine
Accident
Investigators
Forum in
Asia

 **Previous Name** **MAIFA**


Asia
Regional
Marine
Accidents
Investigators
Meeting

 **The Forum** **MAIFA**

- a non-profit organization
- dedicated to the promotion of safety at sea and the prevention of marine pollution through the exchange of ideas, experiences and information acquired in marine accident investigation

 **Purpose** **MAIFA**

- to foster co-operation and communication between member organizations in conducting marine accident investigations, with a view to improving maritime safety and preventing marine pollution within the Asian region

 **Objectives** **MAIFA**

- to foster co-operation in conducting investigations
- to provide a forum for the exchange of views, skills and experience in conducting marine accident investigations among investigators in Asia



Membership

MAIFA

Member

- every marine accident investigation organization within Asia region is eligible to become a member of the Forum
- organization representing commercial or private interests outside an administration shall not be eligible



Membership

MAIFA

Observer

- Maritime administrations and organizations that share the same objectives of the meeting are welcome to send delegates to attend the Forum as observers



Membership

MAIFA

Expansion

- every marine accident investigation organization within Asia region is invited to become a member of the Forum
- Maritime administrations and organizations that share the same objectives of the meeting are invited to send delegates to attend the Forum as observers



Meetings

MAIFA

- The first meeting was held in Tokyo, Japan in 1998
- is held annually
- time and place of meeting shall be decided at the previous meeting
- member organizations are encouraged to host the meeting in turn
- host organization shall chair the meeting e.g. Hong Kong will chair the 11th MAIFA meeting in September in Hong Kong this year



Meetings

MAIFA

Host Organization

- provides venue and is responsible for coordination of administrative and secretarial affairs for the meeting
- may provide financial support to member organizations that have budgetary constraints to encourage their participation in the annual meeting




Meetings


MAIFA

Member Organizations


- are expected to bear the traveling and daily living expenses of their delegates

 **Meetings** **MAIFA**

Year	Host Country	Participating Countries/Region(No. of Country)
1998	Tokyo, Japan	China, Japan, Korea, Philippines (4)
1999	Seoul, Korea	China, Japan, Korea, Hong Kong (4)
2000	Tokyo, Japan	China, Japan, Korea, Hong Kong, Indonesia, Malaysia, Singapore, US Coast Guard (8)
2001	Beijing, China	China, Japan, Korea, Hong Kong, Singapore (5)
2002	Jeju, Korea	China, Japan, Korea, Philippines, Hong Kong, Indonesia, Malaysia, Singapore, Russia (9) + US Coast Guard (Observer)
2003	Hong Kong, China	China, Japan, Korea, Hong Kong, Malaysia, Singapore, Russia (7) + US Coast Guard (Observer)
2004	Yokohama, Japan	Cambodia, China, Japan, Korea, Hong Kong, Indonesia, Malaysia, Philippines, Singapore, Thailand, Russia, Vietnam (12) + US Coast Guard (Observer)


 **Meetings** **MAIFA**

Year	Host Country	Participating Countries/Region(No. of Country)
2005	Singapore	China, Japan, Korea, Hong Kong, Malaysia, Philippines, Singapore, Russia, Thailand (9) + US Coast Guard (Observer)
2006	Shanghai, China	China, Japan, Korea, Hong Kong, Singapore, Russia, Thailand, Vietnam (8) + US Coast Guard (Observer)
2007	Jeju, Korea	China, Japan, Korea, Hong Kong, Indonesia, Malaysia, Singapore, Thailand, Vietnam (9) + US Coast Guard (Observer)


 **MAIFA Website** **MAIFA**

- set up, developed and operated by Korea
- the website is operated to encourage the exchange of information in conducting marine accident investigation and communication among members :


www.maifa.info

 **MAIFA Charter** **MAIFA**

- prepared by Korea and adopted at 6th MAIFA meeting in September 2003 in Hong Kong
- the Charter was reviewed and draft Charters were prepared and submitted to members for comments at 9th & 10th MAIFA meetings.

 **MAIFA Charter** **MAIFA**

- follow-up discussion on the draft Charter will be made at 11th MAIFA meeting in September 2008 in Hong Kong

 **MAIFA Guidelines** **MAIFA**
for enhancing cooperation on marine accident investigation

- prepared by Japan and submitted to members for comments and adoption at 7th & 8th MAIFA meetings
- revised by Japan due to new Code and submitted to members for comments at 10th MAIFA meeting

 **MAIFA Guidelines** **MAIFA**

- follow-up discussion on the revised Guidelines will be made at 11th MAIFA meeting in September 2008 in Hong Kong

 **MAIFA Activities** **MAIFA**

- Annual Meetings since 1998 and the following topics were covered at the preceding MAIFA meetings :
 1. Introduction of marine accident investigation organization and system of members
 2. Case study on major marine accident investigation

 **MAIFA Activities** **MAIFA**

3. Seminars :
 - Voyage Data Recorder (VDR)
 - Automatic Identifications System (AIS)
 - Formal Safety Assessment
 - Human Factors and Bridge Teamwork Management
 - Fatigue Assessment
 - Vessel Traffic Information System (VTIS)

 **MAIFA Activities** **MAIFA**

4. Discussions on regional cooperation
5. Investigator's training
6. Development of :
 - MAIFA Charter
 - MAIFA Guidelines for enhancing cooperation on marine accident investigation
 - MAIFA Website

 **MAIFA Activities** **MAIFA**

7. Discussions on the new Code

 **MAIFA Activities** **MAIFA**

- Mock drill/meeting for Marine Casualty Joint Investigation organized by Japan in December 2003 – *through the mock drill/meeting, members were expected to reach a common understanding on issues relating to joint investigation involving FOC vessels*



MAIFA

Thank you !

5. Country Presentations

① Australia

Presented by Mr. Peter Thomas Foley

② China

Presented by Mr. Guang Lu Zhi

③ India

Presented by Capt. Derrick Frank Vaz

④ Indonesia

Presented by Mr. Hermanu Karmoyono

⑤ Malaysia

Presented by Mr. Muhammad Shuhaimi Abd.Rahman

⑥ Mongolia

Presented by Mr. Galsandondog Damdin

⑦ Myanmar

Presented by Capt. Htay Lwin Oo

⑧ Philippines

Presented by Mr. Alfredo Eglesia Bautista

⑨ Republic of Korea

Presented by Mr. Byung Joon Lim

⑩ Russia

Presented by Capt. Grigoriy Mitrofanovich Sadovoy

⑪ Singapore

Presented by Capt. Mohamed Harun Ja'ffar

⑫ Thailand

Presented by Mr. Rijjapoj Saisa-ard

⑬ USA

Presented by Dr. John Sherman Spencer and Mr. Walter Douglas Rabe


⑭ Vietnam

Presented by Mr. Ha Nguyen Hai Phan

⑮ Japan

Presented by Mr. Hideo Osuga

① Australia



Australian Government
Australian Transport Safety Bureau

Australian Transport Safety Bureau


The Experts Meeting on Marine Casualty Investigations
25 and 26 June 2008
Paul Foley, Director Marine Safety Investigation
Australian Transport Safety Bureau

Safe Transport

ATSB Mission

The ATSB contributes to the wellbeing of all Australians by maintaining and improving transport safety and public confidence through excellence in:


- independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis and research
- raising safety awareness and knowledge



Australian Government
Australian Transport Safety Bureau

ATSB Investigations


- Transport Safety Investigation Act 2003
- Central Office in Canberra, Field Offices in Adelaide, Perth & Brisbane
- No-blame investigation
- Systemic investigation
- Investigation reports cannot be used as evidence in civil or criminal proceedings
- All investigation reports must be publicly released



Australian Government
Australian Transport Safety Bureau

ATSB role and operations


- ATSB approximately 100 staff, 60 investigators, mostly in Canberra and mostly dealing with aviation (Commonwealth sole role)
- Aviation and marine investigation recognised as among best in world (ICAO, ISASI, IMO, MAIIF, ITSA activities)
- Rail safety – building a similar reputation with 9 investigators and professional staff (4 in Adelaide).



Australian Government
Australian Transport Safety Bureau

ATSB Strengths

- Transport Safety Investigation Diploma 12 common units for all investigators complemented by mode-specific on-the-job training. Significant investment in investigator training!
- Safety Investigation Information Management System, document control, shared work space application, work flow application, integrated casualty database, recommendation tracking etc, tailored to suit ATSB analysis model- more on that later...
- Expert technical analysis (failure analysis and data recorder) capability and expert human factors resources



Australian Government
Australian Transport Safety Bureau

The Global Shipping Scene

- 38,500 vessels involved in international trade
- 26,600 companies involved in the ownership
- 155 countries that permit ships to fly their flag


Australian Scene (2006)

- 88 Australian registered trading ships
- 3,517 foreign ships entering Australian waters
- 25,517 calls at Australian ports



Australian Government
Australian Transport Safety Bureau

Commonwealth
 Aviation, International and Interstate shipping, GBR Pilotage, Interstate trains



States
 State trading ships, pilotage, fishing vessels, State railways

Australian Transport Context

Australian Government
 Australian Transport Safety Bureau

Australian Maritime Safety Authority
 - the regulator



Australian Transport Safety Bureau
 - the independent investigator



Australian Government
 Australian Transport Safety Bureau

Marine Investigation Unit

Five investigators drawn from the nautical and engineering disciplines

Jurisdiction includes:

- Australian flag ships
- foreign ships in our Territorial waters
- ships with an Australian crew
- evidence may be found in Australia

Constitutional limitations exclude smaller commercial vessels and recreational craft which are registered and trade intrastate


Australian Government
 Australian Transport Safety Bureau

Groundings




Australian Government
 Australian Transport Safety Bureau

Collisions

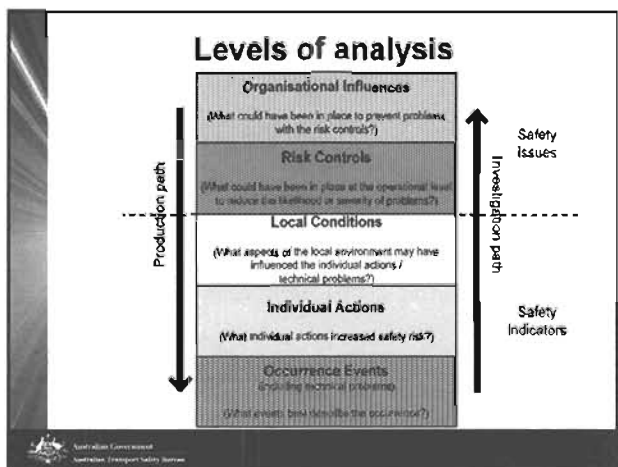
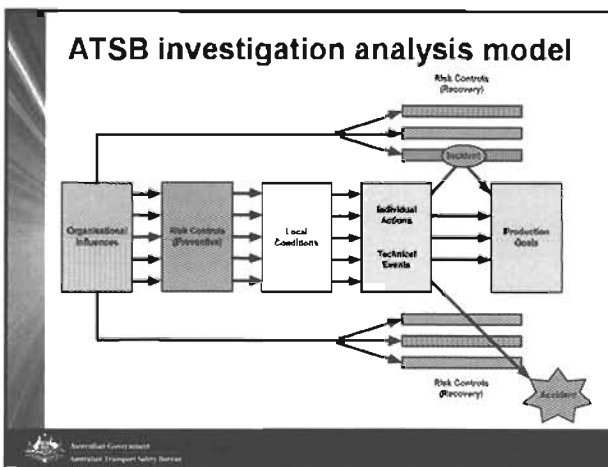
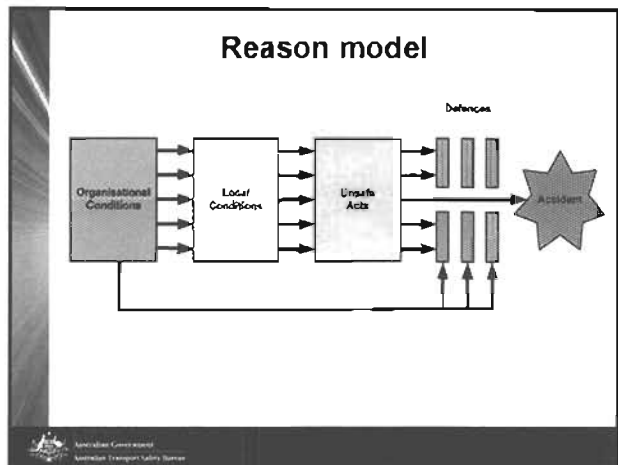
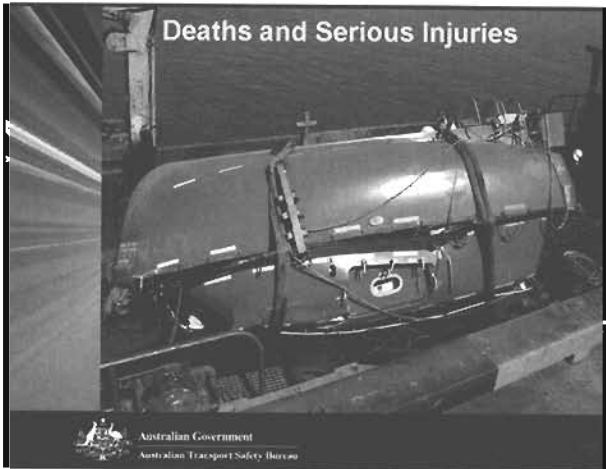


Australian Government
 Australian Transport Safety Bureau

Fires and Explosions



Australian Government
 Australian Transport Safety Bureau



International Co-operation

- ATSB has performed joint investigations in the past with other flag authorities notably:-
- Hong Kong on *Nego Kim* and *Lowlands Grace* in 2001 and 2004
- Marshall Islands on *Probo Bear* and *Van Gogh* in 2006 and 2007
- On-going work with Indonesia's National Transportation Safety Committee to deliver training, mentoring of investigators and on-the-ground investigation assistance in Marine and Aviation investigations

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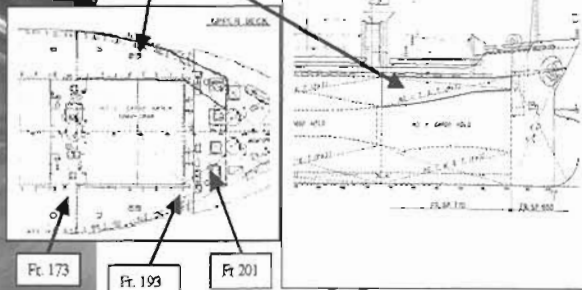
Nego Kim 18 November 2001



Australian Government
Australian Transport Safety Bureau

Number 1 port topside ballast tank plan

No 1. Port, topside ballast tank



Australian Government
Australian Transport Safety Bureau



Australian Government
Australian Transport Safety Bureau



Australian Government
Australian Transport Safety Bureau



Australian Government
Australian Transport Safety Bureau



Australian Government
Australian Transport Safety Bureau

Paint constituents

Compound	Flammability Limit % by volume in air	Flash Point (°C)	Vapour Density (Air = 1)	Auto-ignition temperature (°C)
Toluene	1.1 – 7.1	4	3.14	480
Xylene	1.1 – 7.0	27	3.7	527
N-butanol	1.7 – 9.8	29	2.6	345
Isobutanol	1.7 – 10.9	28	2.6	415

Australian Government
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Australian Government
Australian Transport Safety Bureau



Australian Government
Australian Transport Safety Bureau

Investigation conclusions

- Explosion was caused when paint vapours were ignited inside the tank
- Proximal factors included: poor ventilation, use of excess thinners, high ambient temperature, use of non intrinsically safe equipment, lack of appropriate functioning gas analysis equipment

The ship management company contributed by:

- Failing to recognise the risks associated with the operation and provide appropriate instructions
- appropriate equipment, or even an MSDS for the paint

Co-operation with Hong Kong

- Early notification of the accident
- Decision by Hong Kong Marine Authority to send an Investigator
- Liaison and sharing of evidence on the ground to the maximum extent possible
- Later sharing of analysis work
- Draft reports shared
- Release of final reports co-ordinated

Co-operation under the Casualty Investigation Code

- Facilitated by Memorandum of Understanding
- Early notification of intent to investigate
- Sharing of information to the extent practicable throughout investigation
- Points of contact for progress updates
- Flag Authorities to receive copies of draft reports for comment as an "Interested party" and to facilitate early safety action
- Flag Authorities to receive final reports
- Coordination of IMO reporting

Questions?

Safe
Transport

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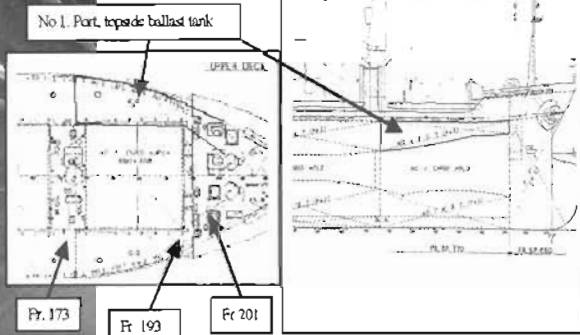
Australian Government
Australian Transport Safety Bureau

Nego Kim 18 November 2001



Australian Government
Australian Transport Safety Bureau

Number 1 port topside ballast tank plan



Australian Government
Australian Transport Safety Bureau



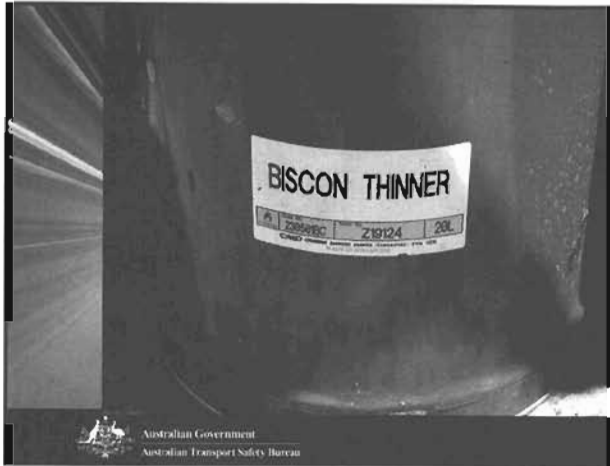
Australian Government
Australian Transport Safety Bureau



Australian Government
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Australian Government
Australian Transport Safety Bureau

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Australian Government
Australian Transport Safety Bureau



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Australian Transport Safety Bureau



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Australian Transport Safety Bureau



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Australian Transport Safety Bureau

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- Draft reports shared
- Release of final reports co-ordinated

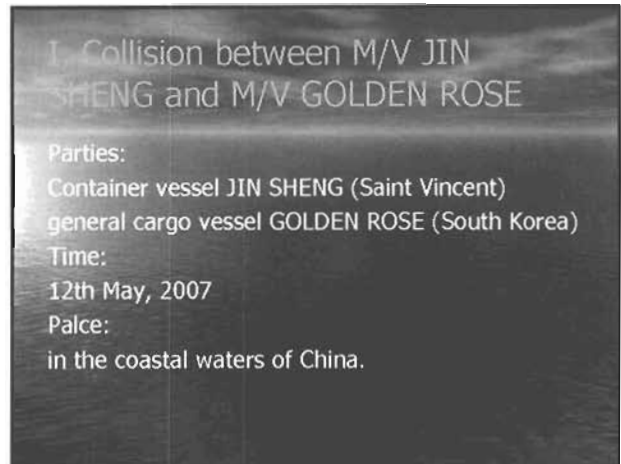
Co-operation under the Casualty Investigation Code

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- Flag Authorities to receive final reports
- Coordination of IMO reporting

Questions?

Safe
Transport

② China



A successful joint investigation



III. Collision between M/V PANBLESS and fishing boat LUJIAOYU 0597

Parties:

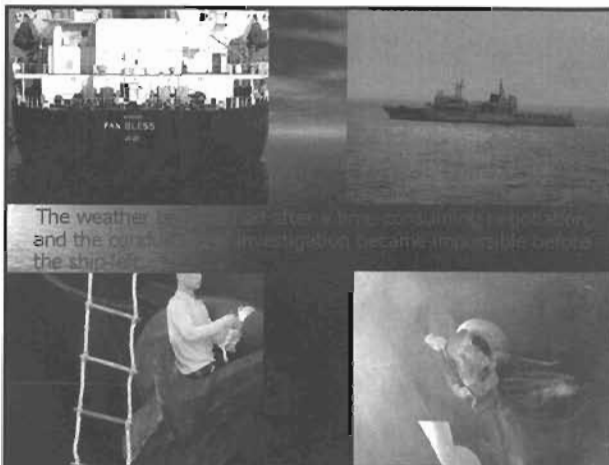
M/V PANBLESS (South Korean)
fishing boat LUJIAOYU 0597 (China)

Time:

08:30 on 7th April, 2008

Place:

outside the mouth of the Yangtze river, China



The weather was foggy and visibility was poor. The collision occurred at 08:30 on 7th April 2008. The investigation became impossible because the ship left the scene.

Part 2 Problems

1. The rights of ship owners

no obligations to accept investigations from non-flag states.



II. The rights of crew

The right of crew to remain silent only can fail the investigation be conducted effectively.



III. The power of the authorities

States should entitle their authorities of necessary investigation powers

IV The independence of the investigation

As an independent and non-blame investigation whose basic principle is cause-finding philosophy, it should be separated from diplomatic intervention and other types of investigation.



Part 3 Future prospect

- New development of the code;
- pay more attentions on the cooperation among us ;
- developing bilateral or multilateral agreements with the aim at facilitating the parties participation in investigations;
- make MAIFA be better by common effort.



We believe, on the existing basis the cooperation among us in the future will be deeper, more efficient and effective, and will make the Asian oceans safer and clearer!

THANKS!

③ India

"The Experts Meeting on Promoting Co-operation of Marine Casualty Investigations in Asia"
Convened By
Japan Marine Accident Inquiry Agency
Tokyo Japan

Presented by:
 Capt. Derrick Frank Vaz
 Nautical Surveyor Cum Deputy Director General (Tech.),
 Mercantile Marine Department, Mumbai India

Maritime Accidents – Myth or Reality?



ITAL FLORIDA
TRIESTE

22 00 07

*Capt. Derrick Frank Vaz
 NS Cum DDG (Tech), MMD Mumbai, India*



*Capt. Derrick Frank Vaz
 NS Cum DDG (Tech), MMD Mumbai, India*


Maritime Accidents – Myth Or Reality?

Maritime Accidents – Myth Or Reality?



*Capt. Derrick Frank Vaz
 NS Cum DDG (Tech), MMD Mumbai, India*

Why are we here today? To take Responsibility!



IRRESPONSIBILITY
 No Single Person Believes It Is To Blame For The Flood.

www.dspart.com
*Capt. Derrick Frank Vaz
 NS Cum DDG (Tech), MMD Mumbai, India*

THERE IS MORE TO SHIPPING THAN MEETS THE EYE



*Capt. Derrick Frank Vaz
 NS Cum DDG (Tech), MMD Mumbai, India*

Safety at Sea, Pollution Prevention, Environment Control, Security

Some Regs

- First SOLAS Convention adopted 1929, etc.
- COLREG 72
- MARPOL 73/78
- Amend. SOLAS protection
- Amend. to ... Enterprise, lives
- OPA 90 ... Cad... Exxon Valdez
- ISM, enforced 1998
- Revised single hull phase schedules. 2001 Erika & 2002 Prestige

T... lives lost
Tra... made mandatory: English Channel)
... - major oil
... ter
... incl. Lakonia,
... Enterprise, lives
... Cad... Exxon Valdez
... 1994 Estonia, lives lost
... 2001 Erika & 2002 Prestige

Capt. Derrick Frank Vaz
NS Cum ODG (Trib), MCO Mumbai, India

Who is this?

AN OWNER ?? A MANAGER??
A SEAFARER

Burnt-out!

Capt. Derrick Frank Vaz
NS Cum ODG (Trib), MCO Mumbai, India

Regret may come too late!

IT IS HARD TO ADMIT WHEN YOU MAKE MISTAKES, BUT WHEN THEY'RE BIG ENOUGH, THE PAIN THEY LEAVE IS REAL.

www.dsp24hrs.com

Capt. Derrick Frank Vaz
NS Cum ODG (Trib), MCO Mumbai, India

ARROGANCE

The Best Leaders Inspire by Example. When That's Not an Option, Brute Intimidation Works Pretty Well, Too.

Flag States Should Lead By Example. When that's not an option, Brute Intimidation Works Pretty Well too!

Capt. Derrick Frank Vaz NS Cum ODG (Trib), MCO Mumbai, India

Problem Areas – Who is the weakest link?

DYSFUNCTION

A chain is only as strong as its weakest link.

www.dsp24hrs.com

Capt. Derrick Frank Vaz
NS Cum ODG (Trib), MCO Mumbai, India

GROUNDING

Flag: Tuvalu, age 33 yrs, Passenger cum car carrier, Off Andaman & Nicobar

Primary causes: Failure of tug propulsion & inclement weather

Capt. Derrick Frank Vaz
NS Cum ODG (Trib), MCO Mumbai, India

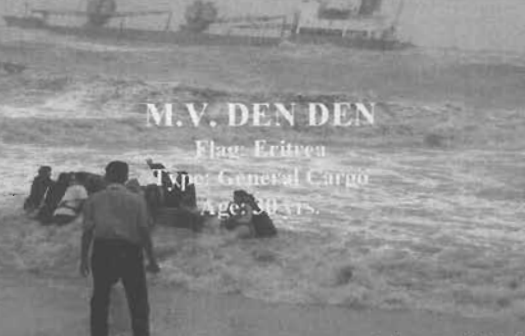
SINKING



Flag India, Container vessel, age 27 yrs
Primary cause: Technical failure, poor maintenance, inclement weather
 Capt. Derrick Prasad Vaz
 NS Cum PDDG (Tech), MMD Mumbai, India

M.V. DEN DEN

Flag: Eritrea
 Type: General Cargo
 Age: 30 yrs.




Primary causes: Dragged anchor, power failure, collided with buoy and ran aground off New Mangalore

Capt. Derrick Prasad Vaz
 NS Cum PDDG (Tech), MMD Mumbai, India

M.V. ARCADIA PROGRESS

Flag: India
 Type: Bulk Carrier
 Age: 25 yrs.




Primary causes: Dragged anchor in rough weather while awaiting berth. Ran aground off Porbandar

Capt. Derrick Prasad Vaz
 NS Cum PDDG (Tech), MMD Mumbai, India

M.V. MARIA-S

Flag: Panama
 Type: General Cargo
 Age: 20 yrs.



Primary causes: Sub standard ship on account of poor maintenance, lack of competency & poor working conditions supplemented by inclement weather. Vessel eventually sank while entering navigational channel of Cochin harbour

Capt. Derrick Prasad Vaz
 NS Cum PDDG (Tech), MMD Mumbai, India

GIANT STEP OCT'2006



Capt. Derrick Prasad Vaz
 NS Cum PDDG (Tech), MMD Mumbai, India



CONFORMITY

When Unscrupulous Shipowners Are Free To Do What They Please, They Usually Imitate Each Other!

Accident Investigation

CHALLENGES

I Expected Times Like This – But I Never Thought They'd Be So Bad, So Long and So Frequent!

M.V. "Miss Fortune"

MISFORTUNE

While Good Fortune Often Eludes Shipowners & Seafarers, This Kind Never Misses!

PREFACE

The Ministry set up a committee on 4th July 2007 under the Director General of Shipping to recommend urgent measures within 15 days.

DGS associated

- *Coast Guards, Navy, Maritime boards, Major port trusts, technical Advisers of DG Shipping*

The Committee submitted its report to the Ministry on 3rd August 2007.

Consequently, only obvious measures are included.

Source: Experts committee report

Capt. Derrick Frank Vaz
NS Cum IODG (Tech), MMD Mumbai, India

METHODOLOGY

Analysis:

- 3 years casualty data
- Existing felt shortcomings

Recommendations:

- Preventive-14
- Emergency response-5
- Relief & rehabilitation-2
- Short term-8

Capt. Derrick Frank Vaz
NS Cum IODG (Tech), MMD Mumbai, India

ANALYSIS OF DATA

Ship casualties are increasing...

Incidents involving Indian ships, coastal waters, seafarers:

2005	2006	2007(till July)
99	111	126

Capt. Derrick Frank Vaz
NS Cum IODG (Tech), MMD Mumbai, India

ANALYSIS OF DATA... Contd.

Serious shipping casualties:

Marine Accidents	2005	2006	2007
Collisions	12	5	11
Groundings	8	7	8
Sinkings	5	1	2
TOTAL	25	13	21

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ANALYSIS OF DATA... Contd.

During the monsoon, of 29 vessels lost:

- 65% (18/29) were 25 years
- In 50% (15/29), the initiating cause was machinery breakdown
- Of these, 93% (14/15) were more than 25 years old.

Old vessels are being flagged because of high freight rates

Capt. Derrick Frank Vaz
NS Com. D.D.G (Tech), MMD Mumbai, India

ANALYSIS OF SHORTCOMINGS

- Indian Coast Guards is the first agency to be informed of ships in distress.
- DGS obtains the information from Coast Guards on MRCC or others.
- The information received is generally incomplete.
- The responsibility of coordination falls on DGS though no authority is vested.
- Time is often lost because DGS authority is questioned and responses are delayed.
- Coast Guard's role in salvage is minimal.
- Resources for SAR and salvage are inadequate.
- Legislation is not supportive for wreck removal

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NS Com. D.D.G (Tech), MMD Mumbai, India

LOSSES ARE SIGNIFICANT

Financial:

- In the event of a major oil pollution disaster, losses go up to billions
- In one incident, BHN platform (2005), the country wrote off USD 40 million
- Erika, off the shore of France (1999) was estimated over USD 286 million.

Source: ICPC Fund, P & T group & ONGC reports

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ANALYSIS...

TRAFFIC IS GROWING

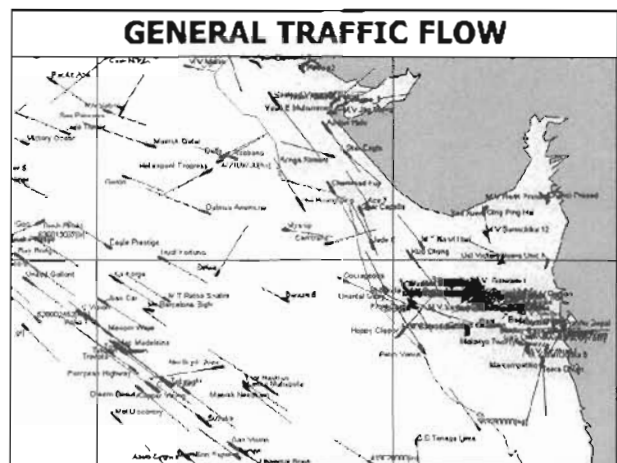
- Over 48,000 ships over 1000 GRT engaged in international trade.
- An estimated 12000 vessels call at Indian ports daily.
- An estimated 1000 foreign flag ships present in Indian waters on any given day.
- In addition, 882 MS registered vessels under the Indian flag and an estimated 300,000 fishing and sailing vessels navigate in Indian waters.

Economic growth will see Indian coastal waters getting further crowded.

India's own growth in offshore activity & development in ports, ship building & energy needs will make the coastline more accident prone.

Source: National & International journals

Capt. Derrick Frank Vaz
NS Com. D.D.G (Tech), MMD Mumbai, India



RECOMMENDATIONS

IMMEDIATE PREVENTIVE MEASURES

- Restriction on old vessels in TW and EEZ.
- Sensitive offshore area protection.
- Vessel traffic management.
- Safeguarding port navigational waters.
- Stringent inspection of older vessels.
- Places of refuge.

*Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MMD Mumbai, India*

IMMEDIATE PREVENTIVE MEASURES...

Restriction of old vessels in TW & EEZ:

- Advisory to ship owners of vessels 25 yrs. & above in age to discourage operation in south west monsoon through IMO.
- No chartering permission should be given to vessels more than 25 yrs. of age.
- Only double hull or CAS certified tankers to be permitted during the monsoons.
- An advisory to ship agents to discourage operation of vessels of above 25 yrs. age during the monsoons.

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PREVENTIVE MEASURES....

Sensitive offshore area protection:

- OSVs & other vessels in offshore areas more than 20 yrs. of age to undergo mandatory technical inspection by IRS.

Stringent inspection of older vessels:

- Targeting based on age, size, flag, class & ownership for foreign ships (PSC).
- FSI inspection of Indian ships increased targeting based on cargo, safety profile of owner, age etc.

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Sea lanes and traffic management:

- VTIMS to be introduced along the coast
- Sea lanes to be set up in the vicinity of oilfield development area
- Coast Guard to augment surveillance and patrolling of sea lanes during fair and foul seasons

Places of refuge:

- Being a sensitive issue politically, the Ministry of Shipping should choose on POR each on the East & west coast for timely assistance (port to follow IMO guidelines)

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Safeguarding port navigational waters:

- All ports to provide services of vessel monitoring traffic with effective communication and AIS system for safety of navigation.
- All ports to issue weather warnings in time through VHF radio for the safety of small fishing craft, tugs, barges etc.
- All ports to display storm signals to warn fishing and shipping traffic.
- All ports & Customs to review entry & exit clearances based on technical fitness certificates. IPA to draw up checklist of clearances of Customs clearance in consultation with DG Shipping.
- MS Act and Indian Ports Act to give more power to the Administration and ports for the removal of wrecks posing a hazard to navigation.

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NS Com. DDG (Tech), MMD Mumbai, India*

EMERGENCY RESPONSE MEASURES

Authorities Responsible for Emergency response:

- At national level, DGS to assume responsibility.
- At local level, within ports and for at least 2 nautical miles around, Port chairman responsible, however DGS to be empowered to take over if situation demands.
- For national disasters, DGS to coordinate with MHA..

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NS Com. DDG (Tech), MMD Mumbai, India*

Essential Equipment:

- Salvage companies of international repute to be encouraged to sign MOU with Govt. for salvage vessels.
- To set up 2 ETVs of 120 BP with salvage insurance equipment, hot tab etc. on east / west coast of India.
- All ports to augment their resources with respect to oil pollution response / containment equipments/ manpower.

SAR response:

- Coast Guard/ Navy to have twin engine helicopters- heavy duty with longer endurance at standby during rough weather).

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NS Com. DDG (Tech), MOCD Mumbai, India*

REHABILITATION AND RELIEF MEASURES

Emergency Funds:

- A separate fund and PL account to be established under the control of shipping to meet expenses for bankrupt owners, underprivileged fishermen, removal of wrecks, mortal remains of seafarers, hospitalizations etc.

Facilitation of Settlement of claims:

- To provide expertise in line with national & international laws for expeditious settlement of claims during salvage operations.

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NS Com. DDG (Tech), MOCD Mumbai, India*

SHORT TERM MEASURES

- The Important ones are:
- Information sharing on casualties with coastal agencies.
- Augmentation of coastal surveillance by coast guard/ Navy, ONGC, marine police, ports etc. including AIS.
- Long Range identification tracking within 1000 miles from the coast.
- Establishment of Casualty Investigation Bureau for timely investigation..
- Facilities of salvage and oil response experts for timely assistance to distressed and disabled vessels.
- Legislative Changes with respect to wreck removal & port entry rules..

*Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MOCD Mumbai, India*

ASSESSMENT OF REPORT

- **Controversial: Vessels more than 25 years of age.**
- **Costs- ETV, Emergency funds.**
- **Role of Coast Guard.**
- **Manpower of DGS.**

*Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MOCD Mumbai, India*

DATA SUPPORT FOR DECISION TO RESTRICT OLD VESSELS

All year ship casualties	2005	2006	2007	TOTAL
All ships	37	30	57	124
During MW	16	18	32	66
Serious loss	25	13	21	59
More than 25 yrs	10	7	16	33
Loss/ serious during MW	8	5	16	29
More than 25 yrs	6	4	8	18

CONCLUSION: the combination of age, poor maintenance and rough weather is **FATAL**

*Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MOCD Mumbai, India*

VESSELS MORE THAN 25 YEARS

Begin cautiously by tightening up -

- Chartered vessels in offshore areas- all weather.
- All chartered vessels (except gas carriers) during monsoons.
- Bulk- We should, but look at the freight rates!

Port entry rules are urgently required.

*Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MOCD Mumbai, India*

FINANCIAL IMPLICATIONS

ETVs (EMERGENCY TOWING VESSELS):

- Need to involve petroleum sector to minimize costs.
- Either they take anchor handling supply vessels with salvage capabilities under MOU with INSA and DGS

OR

We mandate salvage capability on their standby OSVs (OFFSHORE SUPPLY VESSELS) with anchor handling & towing capabilities (AHTS)

- Govt. to bear only charter hire recurring costs for days tugs are taken for salvage work. Recurring NP expenditure estimated Rs. 3 crores

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NS Com. DDG (Tech), MAND Mumbai, India

Contd...

FINANCIAL IMPLICATIONS...Contd

Emergency fund for immediate relief:

Rs. 2 crores per annum with powers to DGS as to relief coordinators for national emergencies.

A budget line and Rs. 5 crores per annum non planned (NP) expenditure is required.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MAND Mumbai, India

AGE PROFILE- WORLD FLEET- 01.01.2005

Types of vessel	% of GT					Avg. age
	0-4 yrs	5-9 yrs	10-14 yrs	15-19 yrs	> 20yrs	
All ships	23.0%	21.9%	16.5%	11.3%	27.3%	12.3
Tankers	29.0%	22.8%	20.9%	11.7%	15.7%	10.3
Bulk carriers	20.0%	22.0%	14.6%	12.4%	30.8%	13.0
General cargo	7.3%	15.0%	10.7%	10.9%	56.1%	17.5
Container ships	31.9%	29.3%	16.3%	16.3%	13.7%	9.4
All Others	16.0%	15.7%	11.9%	11.9%	48.4%	15.6

Classification societies have explicit survey requirements for vessels of over 20 yrs. Of age. No data is available for vessels over 20 yrs. Of age.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MAND Mumbai, India

AGE PROFILE- INDIAN FLEET AS ON 31/12/2007

Types of vessel	% of GT					Avg. age
	0-4 yrs	5-9 yrs	10-14 yrs	15-19 yrs	> 20yrs	
All ships	18.27%	7.71%	15.06%	14.54%	44.42%	15.62
Crude tankers	31.86%	5.39%	24.33%	15.15%	23.28%	11.98
Product tankers	19.47%	11.45%	8.31%	8.92%	51.86%	15.89
Dry bulk carriers	7.97%	7.31%	9.30%	14.77%	60.65%	18.55
Container ships	0.00%	0.00%	56.20%	0.00%	43.80%	17.04
All Others	4.34%	10.35%	8.54%	22.75%	54.01%	18.31

Classification societies have explicit survey requirements for vessels of over 20 yrs. Of age. No data is available for vessels over 20 yrs. Of age.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MAND Mumbai, India

ADVANCE ACTION TAKEN

- Draft circular on restrictions on chartering of old vessels.
- Emphasis on PSC and FSI.
- Safety fairway for offshore areas- Last stages.
- Separate casualty investigation bureau- Draft not issued.
- Port entry rules.
- Wreck removal legislation amendment.

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NS Com. DDG (Tech), MAND Mumbai, India

BACK UP SLIDES

YEAR	2005	2006	2007	TOTAL
• TYPE				
• Collision	12	5	26	43
• Grounding	8	7	15	30
• Fire	0	0	7	7
• Sinking	0	0	27	27
• Explosion	5	1	1	7
• TOTAL	25	13	76	114

Findings : Contributing factors are poor maintenance, advancing age, hostile weather etc.

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NS Com. DDG (Tech), MAND Mumbai, India

OCCUPATIONAL ACCIDENTS

YEAR	2005	2006	2007	TOTAL
Accidental death	45	26	1	72
Suicide	1	0	3	4
Natural death	4	19	45	68
Injured	5	12	11	28
Missing	25	12	13	50
TOTAL	80	69	73	222

Findings : Contributing factors – substandard crew, fatigue, poor living conditions and poor working conditions etc.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MMD Mumbai, India

CASUALTY STATISTICS WORLD- WIDE 2005 TO 2007

YEAR	2005	2006	2007	TOTAL
TYPE				
Collision	12(4)*	5(9)*	11	28(24)*
Grounding	8(5)*	7(15)*	8	23(28)*
Fire/Expl				
Sinking	5(2)*	1(3)*	2(7)*	8(12)*
TOTAL	25(11)	13(27)	21(26)	59(64)

Findings : Contributing factors are poor maintenance, advancing age, hostile weather etc.

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NS Com. DDG (Tech), MMD Mumbai, India

CASUALTY STATISTICS WORLD - WIDE FROM 1st July, 07 TILL 31st DEC. 07

Collision / contact	15
Grounding	7
Fire / explosion / Sinking	0
Total	22

PS – Out of these cases 2 occurred in Indian waters and remaining in foreign waters.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MMD Mumbai, India

SHIP CASUALTIES ANALYSIS

WORLD - WIDE FROM 2005 TO 2007 (ALL YEAR ROUND)

	2005	2006	2007	TOTAL
Total Ships affected	64	146	260	470
Age over 25 yrs	9	31	61	101
Age less than 25 yrs	40	89	138	267
Total	49	120	199	368

PS – Cases of ships age not known, small crafts, port facilities and misc. not taken into account.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MMD Mumbai, India

SHIP CASUALTIES ANALYSIS FOR 2005 TO 2007 DURING MONSOON IN INDIAN WATERS (1st JUNE to 31st AUG., 2007)

	2005	2006	2007	TOTAL
Total Ships affected	9	26	26	61
Age over 25 yrs	4	11	13	28
Age less than 25 yrs	2	12	9	23
Total	6	23	22	51

PS- Cases of ships age not known not taken into account.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MMD Mumbai, India

SHIP CASUALTIES ANALYSIS FOR 2007 DURING MONSOON IN INDIAN WATERS (FROM 25th JULY to 31st AUG., 2007)

- Data between 25th July to 31st Aug., 2007
- Total Ships affected 12
- Age over 25 yrs 5
- Age less than 25 yrs 7

PS- Cases of ships age not known not taken into account.

Capt. Derrick Frank Vaz
NS Com. DDG (Tech), MMD Mumbai, India

**OCCUPATIONAL ACCIDENTS
WORLD – WIDE (2005 TO
31/12/2007)**

• YEAR	2005	2006	2007	TOTAL
• Deaths*	75	57	121	253
• Injured	5	12	15	32
• TOTAL	80	69	136	285

* Include accidental, natural, missing & suicide.
Findings : Contributing factors – substandard crew, fatigue, poor living conditions and poor working conditions etc.

*Capt. Derrick Frank Vaz
NS Com. DDO (Tech), MMD Mumbai, India*



Until One Has The Courage To Lose Sight Of The Shore,
He Will Not Know The Terrors Of Being Lost Forever At Sea!

**Mandatory Code For Investigation Of
Marine Casualties And Incidents Agreed For
Adoption In 2008.**

Sub committee of Flag States at its 15th Session agreed on the subject Code

The New Code is to replace the existing Code A 849(20) as amended by A 884(21).

This code will be submitted for adoption by MSC at its 84th Session in mid 2008.

The Code would require a Flag State to conduct a Marine Safety Investigation into every "Very Serious Marine Casualty" ... involving the Total Constructive Loss of a Ship, death or severe damage to the Environment.

Capt. Derrick Frank Vaz, NS Com. DDO (Tech), MMD Mumbai, India

**Mandatory Code For Investigation Of
Marine Casualties And Incidents
Agreed For Adoption In 2008.**

The Code would also recommend a Flag State to conduct a Marine Safety Investigation into Marine Casualties (other than Very Serious) and incidents, if it is considered that the investigation will provide information that can avert recurrence

The New Code would include a new Regulation 6 in Solas Chpt. XI-1, Part I and II will be mandatory. Part III will be recommendatory.

*Capt. Derrick Frank Vaz
NS Com. DDO (Tech), MMD Mumbai, India*



When The Winds Of Change
Blow Hard Enough,
The Most Trivial Things
Can Turn Into
Deadly Projectiles!

CHANGE

*Capt. Derrick Frank Vaz
NS Com. DDO (Tech), MMD Mumbai, India*

*Thanks
for your
Attention !*

Capt. Derrick Frank Vaz

*Nautical Surveyor cum Deputy Director General (Tech),
MMD Mumbai, INDIA*

④ Indonesia

WHO WE ARE

- The (KPPKPU) – The Investigation Committee On Civil Aviation Accidents – was established in 1994 to conduct independent investigations of all civil aviation accidents in Indonesia;
- In 1999 it became Komite Nasional Keselamatan Transportasi (KNKT) or NTSC. Its objectives is to conduct investigation on all major accidents in all modes of transportation;
- NTSC is a division under Ministry of Transportation and is reporting directly to the Minister.

National Transportation Safety Committee (NTSC)

2

NTSC LEGAL SOURCE

- UNCLOS Article 94. Duties of the Flag State;
- IMO Resolution A.849(20). Code for the Investigation of Marine Casualties;
- SOLAS Chapter 1, Regulation 21;
- PRESIDENTIAL DECREE No. 105 / 1999 (NTSC responsible to The MINISTER OF TRANSPORTATION).
- REGULATION NO.17/2008, ARTICLE 256

National Transportation Safety Committee (NTSC)

4



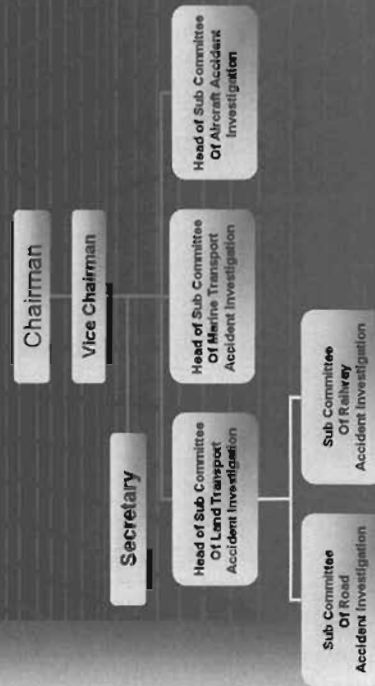
NATIONAL TRANSPORTATION SAFETY COMMITTEE (NTSC)

MINISTRY OF TRANSPORTATION
REPUBLIC OF INDONESIA

PRESENTED BY:

Expert Meeting on Promoting Co-operation of the Marine Casualty Investigation in Asia,
JUNE 25-26, 2008
TOKYO, JAPAN

NTSC STRUCTURE



National Transportation Safety Committee (NTSC)

3

OUR VISION

To Become A Single Self Regulating Organization That Is Capable In Conducting Investigations And Surveys And Improving Safety Of Life At Sea In Indonesia.

Indonesia Transportation Safety Committee (NTSC)

5

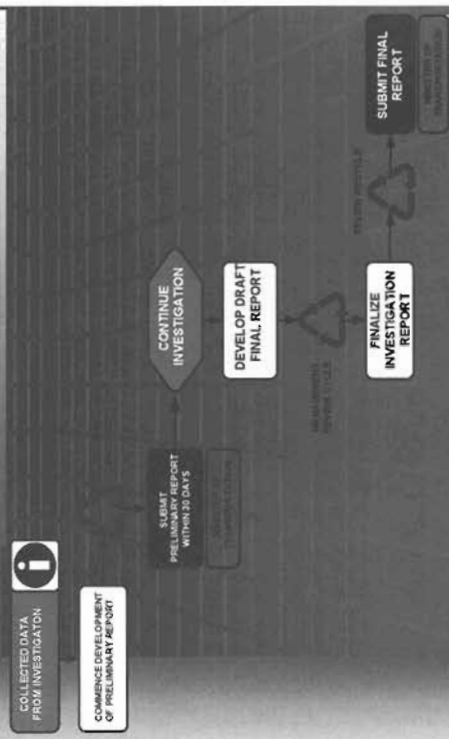
OUR MISSION

- To Determine Probable Factors Or Causes Of Transportation Accidents Based On Identification Of The Substandard Of The Safety System In Order To Prevent Similar Accidents Happened In The Future;
- To Recommend Safety Regulations To Be Administered Consistently By The Respective Party.

Indonesia Transportation Safety Committee (NTSC)

6

REPORTING PROCEDURE



Indonesia Transportation Safety Committee (NTSC)

INDONESIA MARINE ACCIDENT DATA 2007



UPDATED : DEC 2007

Indonesia Transportation Safety Committee (NTSC)

8

INTERNATIONAL JOINT CO-CORPORATION

- TRAINING & EDUCATION WITH AUSTRALIAN TRANSPORT SAFETY BUREAU (ATSB)
 - INVESTIGATION TECHNICAL ASSISTANCE
 - HUMAN FACTOR TRAINING FOR INVESTIGATOR
 - HUMAN FACTOR TRAINING FOR ENGINEER
 - SENT NTSC'S INVESTIGATOR TO FOLLOW IN ATSB INVESTIGATOR DIPLOME PROGRAM
- ACCIDENT DATA EXCHANGE WITH JAPANESE COASTGUARD

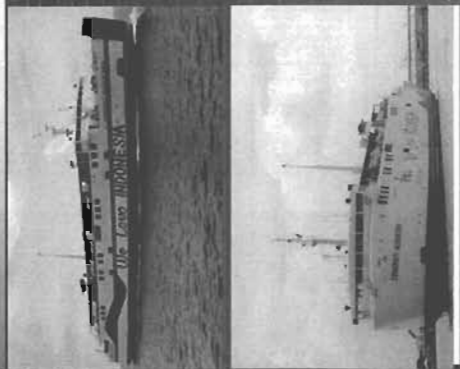
With the Transportation Safety Committee (NTSC)

9

INVESTIGATED CASES

SENOPATI NUSANTARA (DECEMBER 2006)

- Year Built:
 - 1985
- Dockyard:
 - Japan
- Type of Accident:
 - Capsize
- Location:
 - Mandelika water, Java Sea
- Findings:
 - Construction Modification
 - Bad Weather
 - Last Docking On October 2006
 - Close Space Cardack
 - Most probable cause:
 - Bad Weather & Manning Regulation
- Contributing Factors:
 - Regulation for ferry ropax
 - Inaccuracy cargo data
 - Free Surface Effect
 - Leakage On Water Tight Ramp
 - Cargo Securing Material
 - Ship's Handling in Bad Weather
 - Implementation of ISM Code



With the Transportation Safety Committee (NTSC)

11

LEVINA I (FEBRUARY 2007)

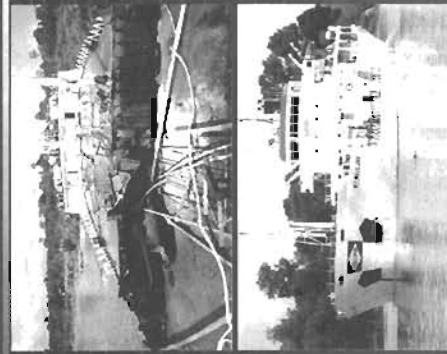
- Years Built:
 - 1980
- Dockyard:
 - Fokuoka Shipbuilding Co.Ltd, Japan
- Type of Accident:
 - Fire
- Location:
 - +40 nmi Northern Tanjung Priok Port, Jakarta
- Findings:
 - Inaccuracy of Cargo Data
 - Passenger list is not same with Actual numbers of passenger onboard
 - Most probable cause:
 - Fire on non-declared Dangerous goods on vehicle on deck
- Contributing Factors:
 - Cargo booking supervision
 - Fire detector and fire fighting system vehicles onboard
 - Inadequate distance between vehicles onboard
 - Lack of skill in crowd & crisis management



With the Transportation Safety Committee (NTSC)

12

MT. MAULANA (APRIL 2007)

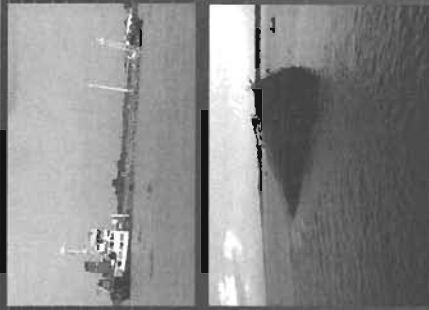


- Years Built :
 - 1982
- Dockyard :
 - Inggom Dockyard, Jakarta, Indonesia
- Type of Accident :
 - Explosion
- Location :
 - Telepung Blight, Siah River, Riau
- Findings :
 - Overload on electrical system
 - Tank Cleaning While steaming
 - Leakage caused by corrosion on gas discharge piping system
- Contributing Factors :
 - Weather/Temperature
- Recommendation:
 - Improvement on piping maintenance system

National Transportation Safety Committee (NTSC)

13

MT. JOSPHINE (MAY 2007)

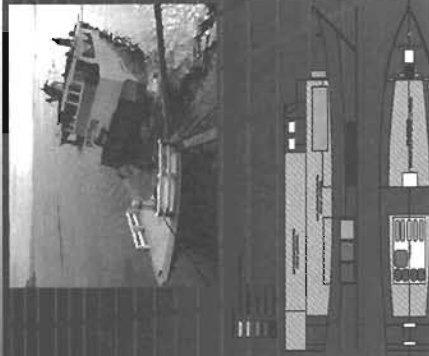


- Years Built :
 - 1985
- Dockyard :
 - Mukai-shima Dockyard Co.Ltd Japan
- Type of Accident :
 - Capsize
- Location :
 - Muisi River, South Sumatera
- Findings :
 - Crack on the bottom hull cause flood in ballast tank
 - Improper handling of flood
- Contributing Factors :
 - Management decision;
 - Pilot recommendations not obligated;
 - Ship sailing route (form salt water to fresh water);
 - Crew's experience on local water
- Recommendation:
 - Enhancing on ISM Code Implementation

National Transportation Safety Committee (NTSC)

14

MV. ACITA 03 (OCT 2007)



- Years Built :
 - 2003
- Dockyard :
 - Nipels, Tallibit, Aceh
- Type of Accident :
 - Capsize
- Location :
 - Lakaba Beach, Barubau, South East Celebes
- Findings :
 - Passengers distributed on one side which cause
 - No Controls of Passenger on board by local authority;
- Contributing Factors :
 - Lack of crew control on passengers;
 - Lack of Passenger's Safety Knowledge;
 - Transportation availability during peak season;
 - Ship's General and Accommodation's design;
- Recommendation:
 - Improvement on local built wooden passenger cargo vessels
 - Enhancement on safety control in local authority
 - Crews training for emergency conditions;

National Transportation Safety Committee (NTSC)

15

MT. KHARISMA SELATAN (DEC 2007)



- Years Built :
 - 1988
- Dockyard :
 - Murakami Hide Shipyard, Japan
- Type of Accident :
 - Capsize
- Location :
 - Mirah Pier, Surabaya
- Findings :
 - Ship loaded with no load line certificate
- Contributing Factors :
 - Lack of Crew's Understanding on ship operation procedure
 - No Load line installed
- Recommendation:
 - Enhancing supervision on ISM-Code Implementation;
 - Enhancing on ship's boarding control;
 - Enhancing ship maintenance Plan;
 - Enhancing Crew's Training on ship's familiarity;

National Transportation Safety Committee (NTSC)

16

ISSUED SAFETY RECOMMENDATIONS

- Revise or amend on Ferry Ro-Ro Safety Regulations;
- Improvement on the Application Ship Safety System;
- Enforced or Urge the Company to Develop Planned Maintenance System;
- Supervision and Enforcement on the Implementation of All Laws for Carriage and Handling of Dangerous Goods;
- Close Audit for Crew's Understanding on Ship Management System;
- Improvement on Manning Regulation and Crew's Training on safety aspect (e.g. *Fire Drill, Abandon Ship, Crowd Management*) and In Competency.

Nasional Transportation Safety Committee (NTSC)

17

PRESENT COMMITTEE CONDITIONS

- Vast Coverage Area compare with the number of investigators and while Committee concentrated in Jakarta;
- Lack of Independency in the Aspect of Hierarchy As Well As Budget;
- Cheap Fare For Passenger (Government Controlled) Due To Low People's Income, Make it Difficult To Fulfill All Safety Requirement;
- Global problem of fuel supply

Nasional Transportation Safety Committee (NTSC)

18

FUTURE CONDITION

- Independent Agency, Under and be responsible directly to the PRESIDENT of Republic Indonesia;
- Enactment of Transportation Safety Investigation ACT;
- Enactment of Procedure for the Acceptance of NTSC Recommendations and To monitoring Them;
- To Have Adequate Number Of Investigators;

Nasional Transportation Safety Committee (NTSC)

19

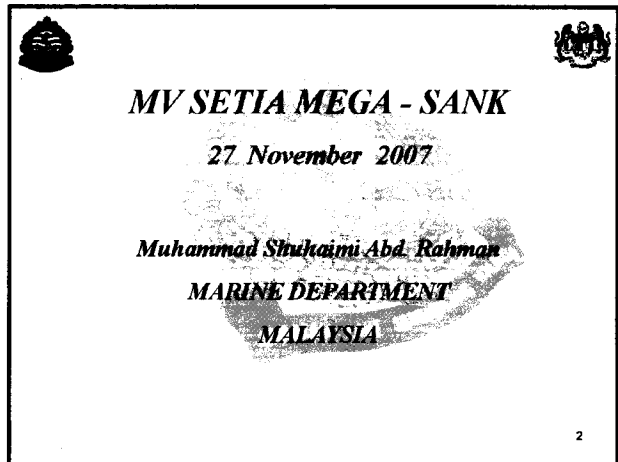
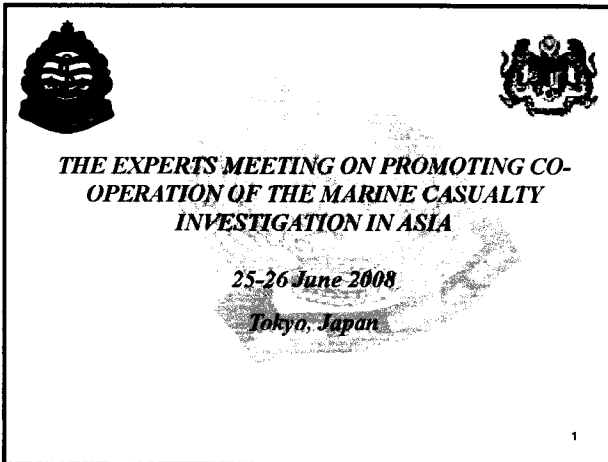
TERIMA KASIH THANK YOU



NATIONAL TRANSPORTATION SAFETY COMMITTEE
MINISTRY OF TRANSPORTATION

KARYA BLD. 7th FL. JL. MERDEKA BARAT NO. 8,
JAKARTA PUSAT, INDONESIA, 10110
TELEP. : 62 21 3517606; 3811308 EXT. 1497, FAX : 62 21 3517606
WEB : WWW.DEPHUB.GO.ID/KNKKT
EMAIL : KNKT@DEPHUB.GO.ID

⑤ Malaysia



Ship Particulars

Name of Vessel	: MV Setia Mega
Port of Registry	: Labuan, Malaysia
Type of Vessel	: Anchor Handling Tug
Year of Built	: 2005
GRT/NRT	: 496/149
IMO	: 9338450
Class	: BV
Crew on Board	: 14
Cargo on Board	: 3 units of N2 tanks (each 13 tns)

3

Incident Information

Item	Particulars
Date of Incident	November 29, 2007
Time Of Incident	1225 hrs
Location	Off Resak Oilfield , 05° 28.8N / 104° 03.4E
Weather	Strong breeze , swell 3-4 meters , wind speed 27 knots
Master In Command	Capt Imran Tanjung , >5 years as Master on board offshore vessel
Cargo on Board	3 units of Nitrogen tanks (size 8'x6'x8') each weighing 13 tons
ROB (during incident)	MGO – 173,643 liters, FW-163,900 liters, LO-914 liters, Hydraulic Oil – 600 liters (in drums)

4

Description Of Incident

- Vessel underway from KSB to DLB experiencing strong breeze and high swell;
- On voyage, vessel lost stability due to excessive listing to port ;
- Crews abandoned ship, boarded life raft and rescued by another boat;
- Ship sank- 70meters depth

5

Events Leading to Incident

Date	Time	Description
26/11/07	1200hrs	MV Setia Mega departed from Dulang B (Location PFSO) to Kemaman Supply Base (Port) for scheduled maintenance and taking provision. On board, deck space 95% occupied with backload.
		Weather-Swell 1.5-2 meters, Wind N-E , Wind speed – 15-20 knots.
		3 rd Engineer inspected steering gear room and found no abnormalities.

6

Events Leading to Incident (Con't)		
Date	Time	Description
27/11/07	0330hrs	Vessel arrived at KSB anchorage and dropped anchor.
	0900hrs	Anchor aweigh and proceed to KSB Berth#3.
	1040 hrs	Internal Audit by Company.
	1045 hrs	Commenced maintenance in E/R by ships' staff & Company's maintenance team.
		Maintenance done : 1. Service M/E stbd side injectors, 2. Repair M/E stbd exhaust silencer, 3. Repair A/E 1 starter motor.

7

Events Leading to Incident (Con't)		
Date	Time	Description
27/11/07	1200 hrs	Load MGO 50,000 ltrs.
28/11/07	1755 – 1810 hrs	Loading 3 units N2 tank (8'x6'x8') weight 13 tonnes each.
	2000 hrs	Vessel departed KSB to DLB. Departure condition : Draft Fwd : 4.0 m Aft:4.3 m. MGO – 174,143liters, FW-166,400 liters, LO-914 liters, Hydraulic Oil – 600 liters (in drums)
	2000 – 2100 hrs	Routine round check by 3/Engineer including steering gear room and found no abnormalities.

8

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	0700 hrs	2/Officer on duty observed the vessel's mooring rope stowed on deck stbd crash bar was partly washed over the stern. The Master altered course to allow the crew to recover the rope and the vessel resumed passage on original course. Crews noticed cargoes remained intact.

9

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	0915 hrs	2/Officer transmitted the routine vessel's daily report(for 28 Nov. 2008) to Owner
	1000 - 1019hrs	Master on bridge noticed rudder angle indicator showed erratic movement. Master and 2/officer attempted to rectify the fault by changing auto pilot to manual, switching on and off button for steering motor, change over from fwd to aft control, but the fault remained.

10

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1000 - 1019hrs	In E/room, alarm sounded and E/cadet noticed steering gear fault alarm, steering gear room bilge high level alarm and FO daily tank high level alarm. E/cadet went up to bridge to find out and then instructed by Master to check steering compartment. E/cadet and Oiler proceeded on deck for inspection and noticed the port side stern area below water and portside steering compartment access hatch coaming submerged.

11

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1000- 1019hrs	Attempted to open the stbd side hatch cover but was unsuccessful because of heavy roll and strong sea wash. Master slowed down M/engine to allow E/cadet inspect the steering room compartment again. Based on discussion between Master, C/E and E/cadet, they suspected steering gear room flooded.

12

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1000-1019hrs	<p>Master clutched out both M/engines and as a result, sinkage at stern and port list appeared to be more severe</p> <p>At this juncture, few crew members noticed cargo lashings already loose and 3 cargoes started shifting</p>

13

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1000-1019hrs	<p>Immediately, C/E, 3 Engineer, E/Cadet and Oiler in the engine room attempted to dewater the steering compartment.</p> <p>While opening the valves and before they could start the GS pump, a blackout occurred due to tripping of the main circuit breaker.</p> <p>Engineers closed the breakers but each time it tripped.</p>

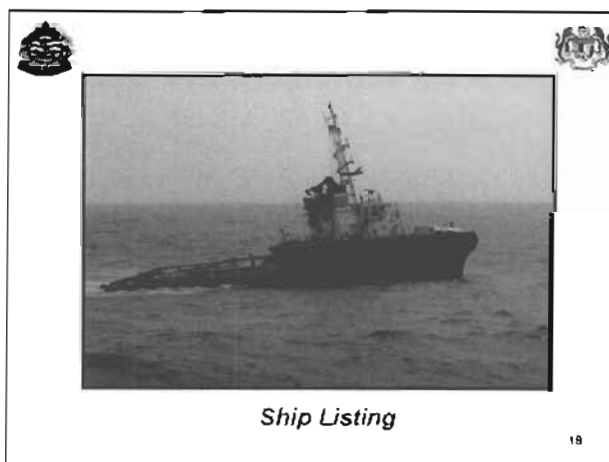
14

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1000-1019hrs	<p>Realizing that they were not able to control the flooding without electrical power, CE notified Master and ordered his engine crew to close up the access doors to accommodation @ main deck and engine room. CE activated the fuel tanks remote closing valves and the Main engines and generator engine later stopped</p>
	1020-1114hrs	<p>2nd Officer contacted various parties and vessels within vicinity for assistance. Before engine crew left the e/room, they noticed excessive water leaking through the emergency escape access hatch deck port side</p>

Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1000-1019hrs	<p>Realizing that they were not able to control the flooding without electrical power, CE notified Master and ordered his engine crew to close up the access doors to accommodation @ main deck and engine room. CE activated the fuel tanks remote closing valves and the Main engines and generator engine later stopped</p>
	1020-1114hrs	<p>2nd Officer contacted various parties and vessels within vicinity for assistance. Before engine crew left the e/room, they noticed excessive water leaking through the emergency escape access hatch deck port side</p>
	1115hrs	<p>Master ordered vessel to be abandoned. By this time three nitrogen tanks shifted to aft and about to fall overboard</p>
	1130hrs	<p>All 14 crew members in life-raft waiting to be rescued</p>

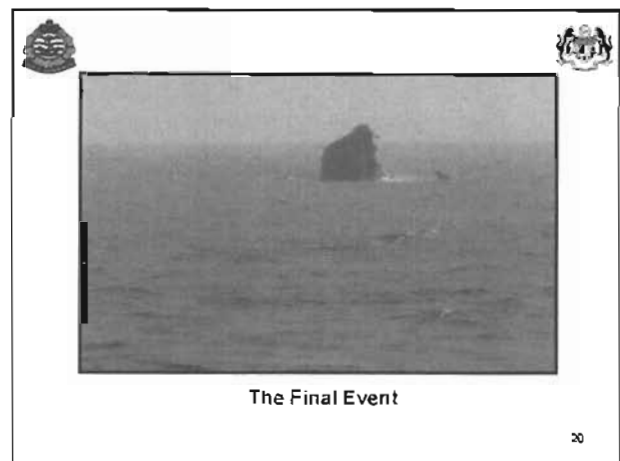
Events Leading to Incident (Con't)		
Date	Time	Description
29/11/07	1200hrs	MV Osam Manila rescued all 14 crews
	1225hrs	MV Setia Mega sank more or less vertically with stern down
		<p>Position Recorded : 05° 28.8 N / 104° 03.4 E Depth approximately 70 meters</p>

17



Ship Listing

18



Findings

- The ingress of water to the steering gear compartment was affirmed by the high bilges alarm and subsequent failure of the steering gear motor;
- The water ingress that contributed to the failure of the steering gear motor, causing numerous trips to the main breaker resulting in vessel's power outage;
- Neutralizing the engine caused water shipping on deck adding more weight to the vessel causing it to trim further by stern;
- Engine room flooding experienced from ingress of water to the emergency escape hatch;
- Eventual flooding of the engine room resulted in the vessel sinking;

21

Water Ingress

i. Mushroom (Ventilation)

- Crew unawareness
- Least focus for maintenance

22

ii. Hatch Cover

Left unlocked - 3rd Engineer last to enter

23

iii. Rudder Bush

- Can drop and cause water ingress
- Unlikely to happen as at 0700hrs vessel can still change course and maneuvered

24

Recommendation				
1	Training	Provide refresher briefing to vessels' Masters and Officers on action during power outage and critical situations	Fleet Management Division	Short Term & Long Term
2	Procedure	<ul style="list-style-type: none"> Ensure effective pre-departure check by Master through witnessing by the Base Operations Manager Provide briefing to vessels crew on the required pre-departure checks to be conducted 	<ul style="list-style-type: none"> Base Operation Managers Fleet Management Division 	<ul style="list-style-type: none"> Short and Long Term Short and Long Term
3	Recruitment process	Strengthen the recruitment process with focus on job knowledge verification	Crew Management Department & Recruitment Panel	Short and Long Term

Recommendation (Con't)				
4	Maintenance Day	Periodic adequate maintenance days be provided by Client as per vessel's PMS	Client / AMSB	Short and Long Term

- ### Lessons Learnt
- To ensure integrity of water tightness must be verified before each voyage;
 - To ensure Pre-departure checklist to be executed by Master and witnessed by the Base Operations Manager at supply bases;
 - To ensure steps or methods to keep the vessel afloat must be fully explored and understood by the vessel's crew e.g de-ballasting etc.;
 - To ensure personnel should not be overcome by panic;
 - To ensure mandatory ship drills are carried out as they are vital during actual emergency;

Thank You
(Aigato gozaimasu)

⑥ Mongolia

MONGOLIA MARITIME ADMINISTRATION

Mongolia Maritime Administration was established in 2007 under the Ministry of Road Transport and Tourism as Government Implementing Agency in order to implement the Government policy on maritime issues and domestic water transport.

Mongolia has passed its national Maritime Law in 1996 and became a member IMO since 1996. Mongolia has ratified over 12 main conventions of IMO and participates in General Assembly meeting of IMO gradually.

Since 2003, Mongolia has established a Joint Venture company "Mongolia Ship Registry" with Singaporean company "Maritime Chain". At present in our registry over 300 ships operates actively around the world.

Maritime Administration is in charge of implementing national policy on maritime shipping, ships registry and developing the maritime sector in its country. Despite its location as a landlocked country, Maritime Administration works on accessing to the International Maritime conventions through which country can obtain some advantages from the sea.

Main Activity of Administration

- Implementation of Government policy in maritime sector and also inland water transport;
- Accession in IMO and international conventions;
- Investing and promoting to develop newly established sector in Mongolia, maritime and inland water transport;
- Developing national laws and regulations on the matter;
- Monitoring on implementation of national laws and regulations;
- Maintaining and controlling over Mongolia Ship Registry;
- Working jointly with IMO and other international organizations on training its stuff and national officers;
- Assisting and promoting on development of domestic water transport entities by its professional knowledge and training their stuff;
- Registration and certification of domestic water transport vehicles;

**Maritime Administration
Sukhbaatar District, Chingis Avenue-11
Ulaanbaatar 210628**

⑦ Myanmar

Participation of Myanmar in
The Expert Meeting on
Promoting Co-operation of the Marine
Casualty Investigation in Asia
(Tokyo, Japan, 25th to 26th June, 2008)

Participant

Capt. Htay Lwin Oo
Deputy Director

Introduction

Myanmar is situated at

- South East Asia
- North and North-East bounded by China
- East and South-East bounded by Laos and Thailand
- South bounded by the Andaman sea and the bay of Bengal
- West bounded by Bangladesh and India
- between latitudes 09° 32'N and 28° 31' N
- Longitude 92° 10' E and 101° 11' E
- an area of 677,000 square km
- ranging 936 km from the east to west .2051 km from north to south



Myanmar has a sea coast on the Bay of Bengal to the South and West. Myanmar has a long extended coastline of about 2229km and 9 ports for sea going ships but only 4 ports (Yangon, Sittwe, Patheingyi and Mawlamyine Ports) can be used for international trade. There are many rivers and creeks in Myanmar. Among them Ayeyarwaddy, Chindwin, Thanlwin, Sittaung and Kaladan are major rivers, which run down through the country from the north to the south, and in lower Myanmar, the delta region is crisscrossed with many waterways.

The main functions of the DMA are mentioned in the followings:

1. Advisory Functions Planning and policy making, especially in its final stage is expected to be a political function of a Government.
2. Administration Functions
3. Regulatory Functions and
4. Development/ Promotional Functions

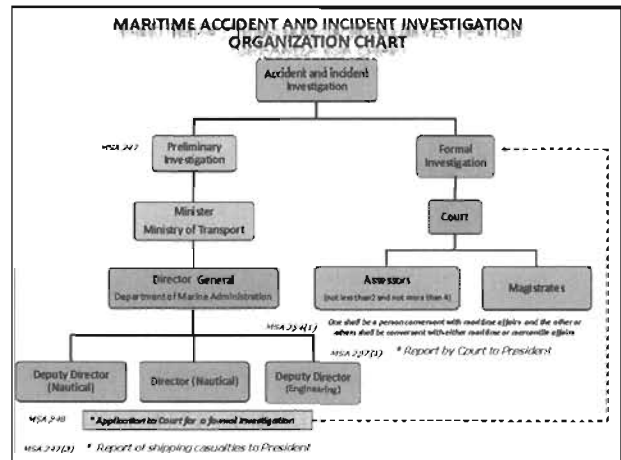
In this regards, the primary functions are expected to take the form of:

- (i) General Superintendence and co-ordination
- (ii) Registration of Ships and related functions
- (iii) Surveys, Inspections and Certification of Ships, along with related activities
- (iv) Examination and Certification of Seafarers
- (v) Manning of ships

- (vi) Conducting Inquiries / Investigations into Shipping casualties
- (vii) Dealing with matters pertaining to Prevention / Control / Combat of marine pollution
- (viii) Dealing with matters pertaining to Maritime Search and Rescue
- (ix) Dealing with security measures relating Ships and Ports security and implementing ISPS code in Myanmar
- (x) Recruitment of seamen, arrangement for education, proper training, determination of qualification and grading
- (xi) Ensuring Safety of Fishing vessels and other small crafts
- (xii) Dealing with wrecks in National Jurisdiction
- (xiii) Advising the Ministry and Government on all maritime technical matters

- (xiv) Registration of foreign vessels under the terms of Bare boat chartering
- (xx) Preparation of explanation on the matters covered by the IMO conventions or instruments and provisions to the Ministry of Transport and the Attorney General's Office.

In relation to the qualified and well trained seafarers and educated marine personnel, the DMA works together with the IMT and the MMU.



SPECIAL SHIPPING INQUIRES AND COURTS

- For the purpose of inquires and investigations under this part a shipping casualty shall be deemed to occur when –
 - (a) on or near the coasts of the Union of Myanmar, any ship is lost, abandoned, stranded or materially damaged ;
 - (b) any lost of life ensues by reason of any casualty happening to, or on board of, any ship on or near those coasts ;
 - (c) on or near those coasts, any ship causes loss or material damage to any other ship ;
- * the word "coast" includes the coasts of creeks and tidal rivers.
- Whenever any such officer receives credible information that a shipping casualty has occurred, he shall forthwith report in writing the information to the President of the Union of Myanmar and may proceed to make a preliminary inquiry into the casualty.
- An officer making a preliminary inquiry under this section shall send a report thereof to the President of the Union.

The officer appointed under MSA 246(3), whether he has made a preliminary inquiry or not, may, and where the President of the Union so directs, shall make an application to a Court empowered under section 249, requesting to make a formal investigation into any shipping casualty ; and the Court shall thereupon make such investigation.

A Court making a formal investigation shall constitute as its assessors not less than two and not more than four persons, of whom one shall be a person conversant with maritime affairs and the other or others shall be conversant with either maritime or mercantile affairs.

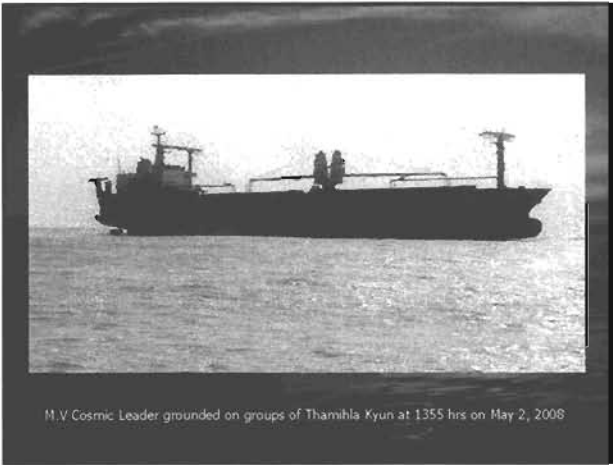
The Court shall, in the case of all investigation under this part, transmit to the President of the Union a full report of the conclusions at which it has arrived, together with the evidence.

In cases in which, under the Merchant Shipping Acts, the Court is required to send a report to the Board of Trade, the report shall be sent through the President of the Union and the transmission of the report to the President of the Union shall be a sufficient compliance with this sub-section.

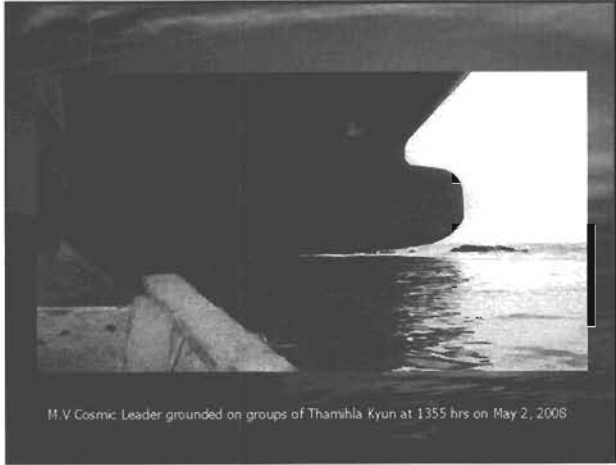
CASE STUDY OF

"M.V COSMIC LEADER GROUNDING"

- Panama Registered vessel mv. Cosmic Leader, IMO No. 9011040, GT. 8889 was grounding due to hitting by Cyclone "Nargis" about 1355hrs on 02/05/2008 within Myanmar internal water in psn: Lat. 15 50.4 N , Long. 094 16.0E on the way from Port of Patheingyi to safer place for avoiding Cyclone. All crew and Phillipino were saved by Myanmar SAR.



M.V Cosmic Leader grounded on groups of Thamihla Kyun at 1355 hrs on May 2, 2008



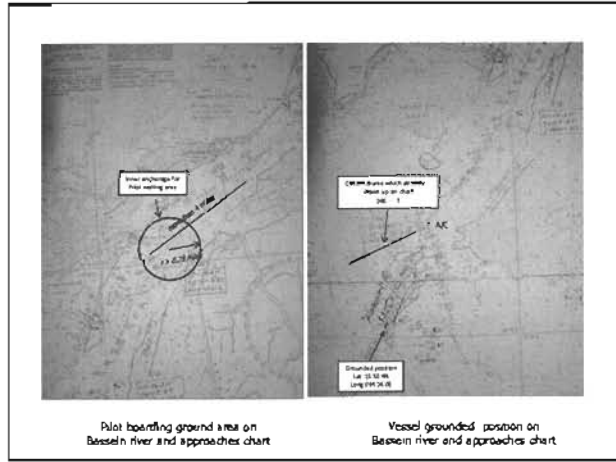
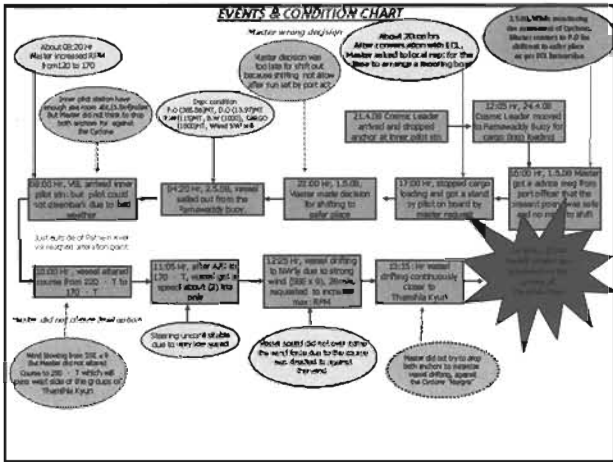
M.V Cosmic Leader grounded on groups of Thamihla Kyun at 1355 hrs on May 2, 2008



M.V Cosmic Leader grounded on groups of Thamihla Kyun at 1355 hrs on May 2, 2008



M.V Cosmic Leader grounded on groups of Thamihla Kyun at 1355 hrs on May 2, 2008



INVESTIGATION INTO CASUALTIES

when ever-

- (a) any inland steam-vessel has been wrecked, abandoned or materially damaged : or
 - (b) by reason of any casualty happening to, or on board of, any inland steam-vessel, lost of life has ensured : or
 - (c) any inland steam-vessel has caused loss or material damage to any other vessel
- The master of the steam-vessel shall forthwith give notice of the wreck, abandonment , damage, casualty, or loss to the officer in charge of the nearest police-station
- If a formal investigation into the facts of any case reported under section 32 appears to the President of the Union to be expedient, the President of the Union may-
- (a) appoint a special Court and direct the Court to make the investigation at such place as the President of the Union may fix in this behalf ; of
 - (b) direct any principal Court of ordinary criminal jurisdiction or the Court of any District Magistrate to make the investigation.

A special Court appointed under clause (a) of sub-section (1) shall consist of not less than two nor more than four persons, of whom one shall be a Magistrate, one shall be a person conversant with maritime affairs, and the other or others (if any) shall be conversant with either maritime or mercantile affairs or with the navigation of inland steam-vessels.

CASE STUDY OF

"M.V ROAD TO MANDALAY GROUNDING"

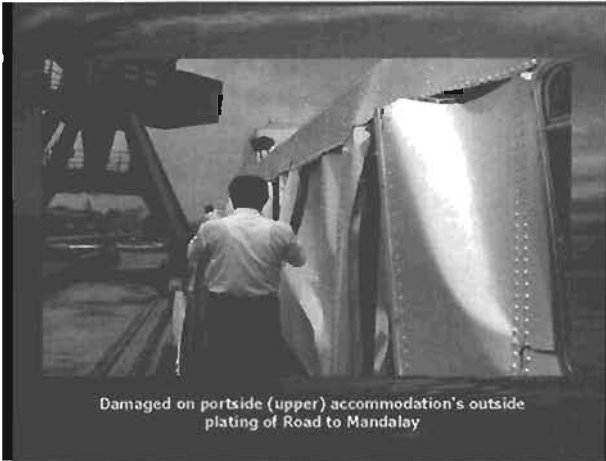
- Myanmar Registered inland vessel mv. Road to Mandalay, Off No. 8199, GT. 1916 was grounding due to hitting by Cyclone "Nargis" about 0555hrs on 03.05.2008 within Myanmar (Yangon) river in psn: Lat. 16 49.51 N , Long. 096 06.9E while she waiting to enter the Sinmalike Dockyard at mooring buoy. All crew ,19, Myanmar were saved alive.



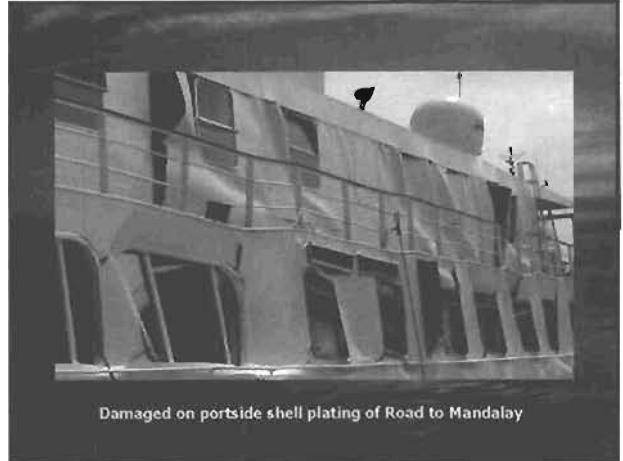
M.V road to Mandalay portside alongside at Sinmalaik Dockyard after grounded by Cyclone "Nargis"



M.V road to Mandalay portside alongside at Sinmalaik Dockyard after grounded by Cyclone "Nargis"



Damaged on portside (upper) accommodation's outside plating of Road to Mandalay



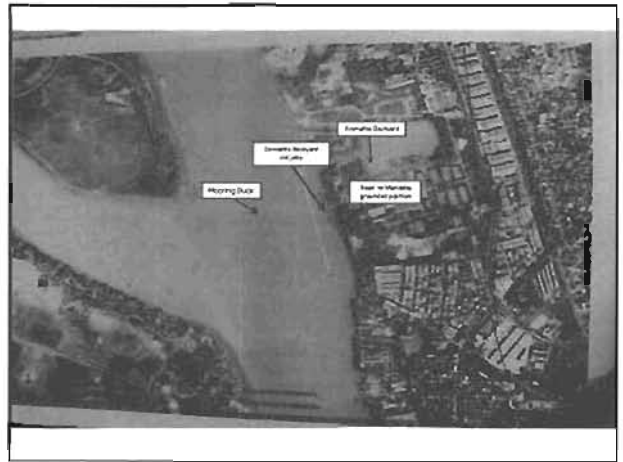
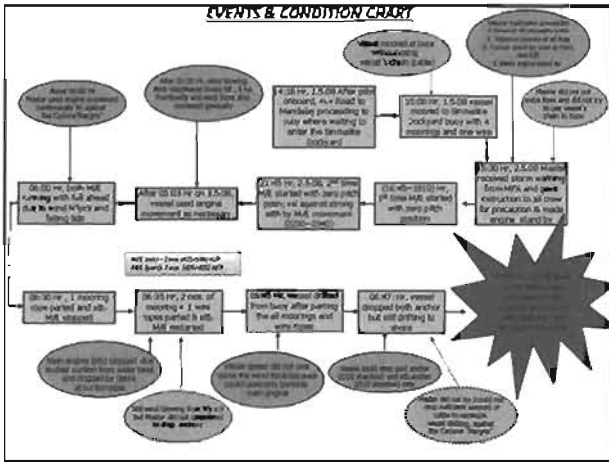
Damaged on portside shell plating of Road to Mandalay



Damaged cabin floor



Damaged cabin paneling



Necessity of Maritime Causality Investigation in Myanmar

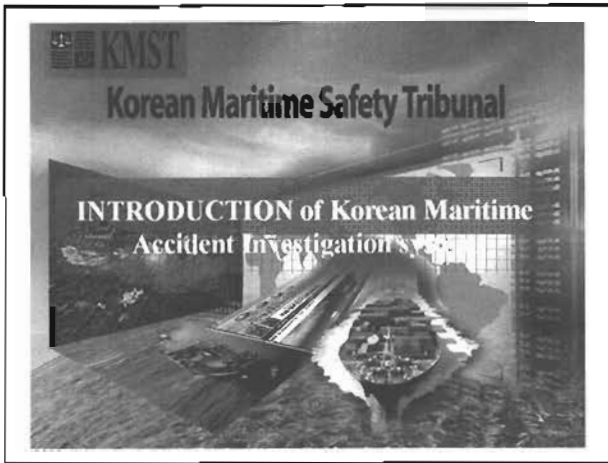
The necessity to be fulfilled for accident and incident causality investigation in Myanmar are as follow -

- (i) Extend a new set up as a branch of Department of Marine Administration
- (ii) Formulate the national legislation accordance with the Investigation of Marine Casualties and Incident Code
- (iii) Provide facility for site investigation within Myanmar territorial water and inland water
- (iv) Need more training for well trained personal

Our country always adopted formulated rule and regulations from IMO and International Convention, and we are ready to perform co-operation with neighboring countries.



⑨ Republic of Korea



Chronology of Marine Accident Inquiry System

- 1961.12. Promulgation of Marine Accidents Inquiry Act
- 1963.1. Establishment of Marine Accidents Inquiry Committee
- 1971.1. Renamed to the Marine Accidents Inquiry Agency(MAIA)
- 1999.8. Renamed to the Korean Maritime Safety Tribunal(KMST)
- 2008.2. KMST came under the jurisdiction of MLTM

1. Mandate

• The principal role of the KMST is to investigate marine accidents and determine its circumstances and causes. The goal is to improve safety at sea and prevent accidents from occurring.

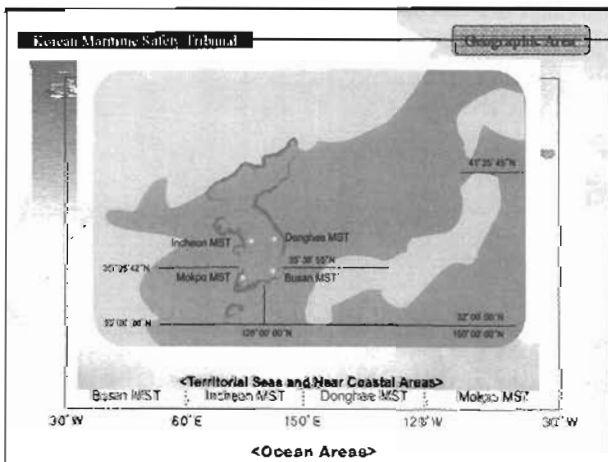
- When investigator decides that a marine accident warrants an inquiry, administrative judges question persons involved in the accident based on the outcome of an investigation and make a ruling.
- After the judgement, a senior investigator enforces disciplinary actions against the ship's officer, engineer or pilot who is found responsible for causing the accident.
- The senior investigator may, if necessary and appropriate, also discipline others involved.

2. Organization

- The KMST operates under the Ministry of Land, Transport and Maritime Affairs(MLTM) and discharges its functions independently.
- In addition to the head office in Seoul, the KMST has 4 District Maritime Safety Tribunal(MST) offices, in Busan, Incheon, Mokpo and Donghae for the District MST's initiatives investigation into marine accidents.
- KMST / MST

```

    graph TD
      Commissioner --> Investigation_Div[Investigation Div.]
      Commissioner --> Judgement_Div[Judgement Div.]
      Investigation_Div --> Investigator_General[Investigator General]
  
```



3. Jurisdiction

Vessels

- The KMST investigates all marine accidents occurring in Korean territorial water, including those involving foreign vessels, and accidents occurring out of Korean territorial waters involving Korean vessels.
- The type of vessel that KMST has jurisdiction over include motor vessels, sailing vessels, some kind of barges and seaplanes defined as ship in national law.

Korean Maritime Safety Tribunal

3. Jurisdiction

Marine accident

- An injury or disappearance of person relating to operation of ship or ship's structure or outfit
- A damage of ship or shore facility relating to ship's operation
- A ship's collapse, losing or missing
- Ship's collision, grounding, capsizing or immobility of ship
- Oil pollution relating to ship's operation

Korean Maritime Safety Tribunal

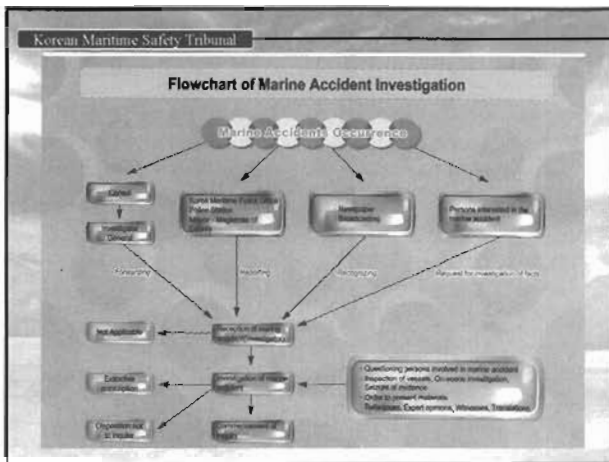
4. Investigation and Inquiry Procedure

Investigation

When other authorities such as the marine police inform the KMST of a marine accident, an investigator at a district MST begins to investigate. Based on the initial findings, if investigator believe that the accident should be inquired further, he refers that case to the Court of the district MST.

Inquiry and judgement

When a marine accident is referred to a district MST Court, the judges examine the case by questioning the persons involved and make a judgement in the Court. Three judges discuss the circumstances of the case and come to verdict.



Korean Maritime Safety Tribunal

4. Investigation and Inquiry Procedure

Instance

If the investigator or the person involved in the marine accident does not accept the judgement of the local MST Court, they can appeal and request the KMST in Seoul to reexamine the case. If they reject the KMST's ruling, they can take the case to the Supreme Court.

(First) District MST → (Second) KMST → (Third) Supreme Court

Appeal process Appeal process

Korean Maritime Safety Tribunal

4. Investigation and Inquiry Procedure

Execution of judgement

- If a marine accident is determined to be caused by an international act or negligence of a ship's officer or pilot on duty, the district MST and the KMST sentence will decide the appropriate disciplinary action.
- The district MST and the KMST may, if necessary and appropriate, impose disciplinary action against other person(s), in addition to those mentioned, who are involved in the accident

Korean Maritime Safety Tribunal

5. Statics

Marine accidents (vessel type)

Year	Passenger	Cargo	Fishing	Oil tanker	Tug boat	Others	Total
2003	10	120	483	25	52	34	767
2004	20	130	734	24	122	40	1,070
2005	8	89	657	24	72	24	894
2006	17	110	584	45	33	18	855
2007	13	96	435	31	109	15	759
Total	68	555	2,953	150	496	131	4,345
%	1.6	12.8	68.0	3.5	10.2	3.9	100

Korean Maritime Safety Tribunal

5. Statics

Investigation

Year	Transferred From previous year	New	Total	Req. Judge	Disposal			Transferred to next year	Total
					Dismissed				
					Not applicable	Not necessary			
2005	263	658	941	183	3	600	244	941	
2006	244	657	901	179	-	471	251	901	
2007	251	665	817	180	2	465	154	817	

Inquiry

Year	Transferred From previous year	New	Total	Judgment	Transferred to next year
2005	62	164	206	164	72
2006	72	179	201	192	69
2007	69	193	262	188	74

- Korean Maritime Safety Tribunal
5. Investigation Policy for IMO Investigation Code
- Under consideration of accepting IMO investigation code to domestic law
 - Collection of internal opinions
 - Comparison with other investigation agencies



⑩ Russia

Investigation of Marine Casualties in the Russian Federation.

Proceeding from the assumption that Practice of investigation of Marine Casualty in every country is differ from practice in others, it is advisable to show particulars in the Russian Federation practice to the participants of the Meeting.

Marine Casualties in Russian ports are investigated according to Rules of investigation of Marine Casualty.

Marine Casualties are classified to:

1. Shipwreck;
2. Casualty;
3. Event with elements of casualty;
4. Operation incident.

Shipwreck means that involved ship is totally lost or the ship is damaged to such an extent that subsequent operation of it became impossible.

Casualty applies in cases of death of person connected with casualty and when a passenger ship loses even if one of nautical characteristic.

Event with elements of casualty - means that a cargo ship loses even if one of nautical characteristic. The classification society takes final decision in disputable cases.

Operation incident means insignificant damages when no one of nautical characteristic is lost.

Preliminary classification is carried out by Captain of the ship, final by the Harbour Master.

The objective of Marine Casualty investigation is to prevent such casualties in the future. Investigations identify the circumstances of the casualty under investigation and establish the causes and contributing factors, by gathering and analyzing information and drawing conclusions. It is not the purpose of such investigations to determine liability or apportion blame. All items violated (if any) should be indicated in Act of investigation.

Preliminary investigation of each Marine Casualty is carried out by the Captain of involved vessel. Captain is responsible to investigate Operation incident fully. The main purpose of Captain's investigation is to establish that risk admitted by him does not exceeded permissible limit. Risk is admitted warranted, that should be showed in the process of investigation, if:

- risk corresponds the aims;
- the aim could not be reached by ordinary not connected with risk actions;
- risk does not turn into deliberate damage;
- the life should be the object of risk

If Operation incident occurs in a port, full investigation is carried out by the Harbour Master.

If a Marine Casualty with Russian ship happens on the high seas, the Harbour Master of first port of call investigates the case.

Marine Casualty investigation is given the same priority as criminal or other investigations established to determine responsibility or blame.

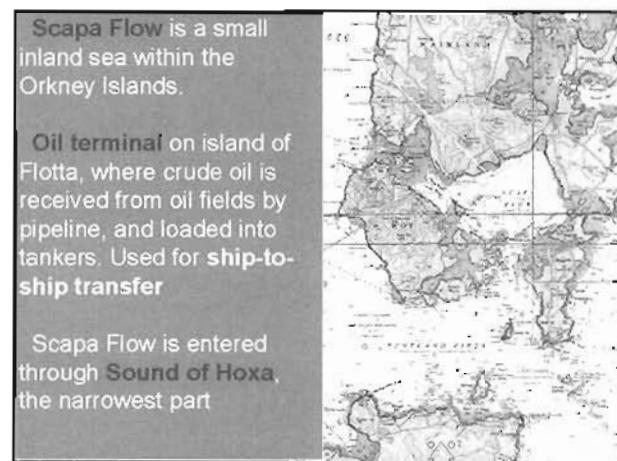
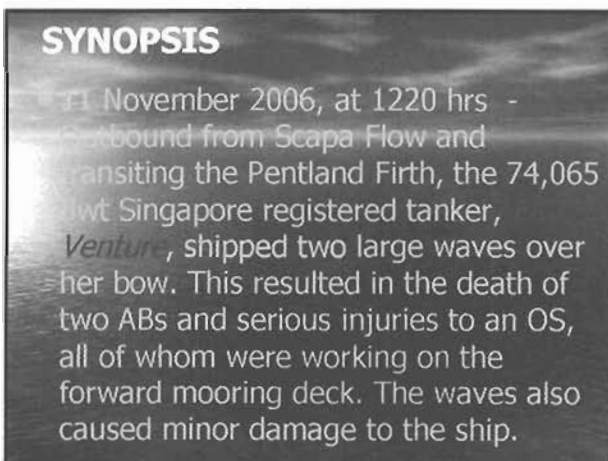
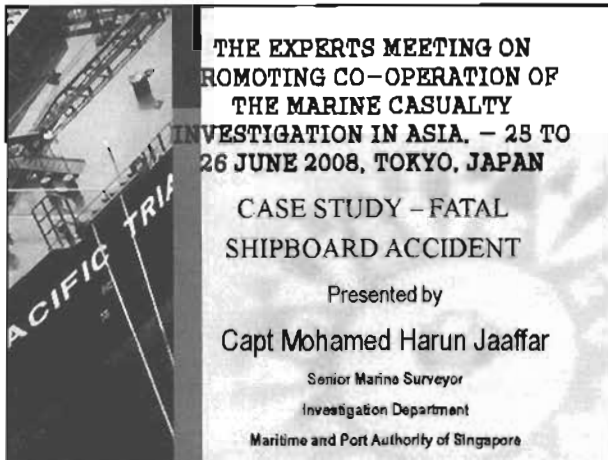
Marine Casualty investigation is a process held for the purpose of casualty prevention which includes the gathering and analysis of information, drawing of conclusions, including the identification of the circumstances and the determination of causes and contributing factors and, appropriate, the making of safety recommendations.

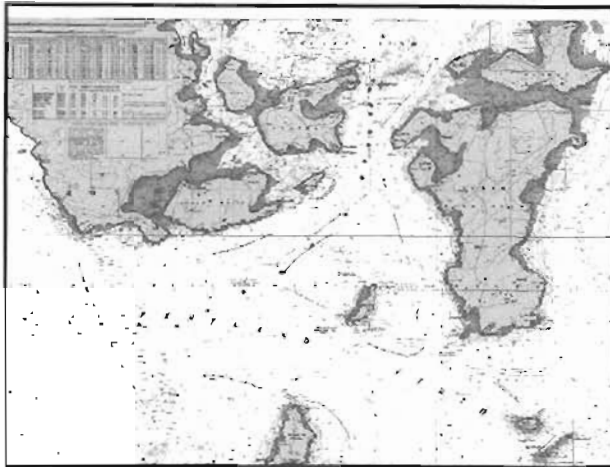
It is necessary to harmonize Rules of investigation of Marine Casualty in the Russian Federation to Code adopted in May 2008. Nowadays a new draft of Rules of investigation of Marine Casualty is being worked out.

In the Russian Federation the main person who investigates marine Casualty is the Harbour Master. He in some cases (if he considers indispensable) organizes special committee for Casualty investigation and heads it. After the case is investigated all materials are sent to the Ship-owner, procurator and to Rostransnadzor (Structure of Transport ministry of the Russian Federation, which controls and supervises in sphere transport). Rostransnadzor makes the final Decision. If Rostransnadzor does not agree with any part of investigation, Act is returned to the Harbour Master for the revision. If agree, forwards to ship-owners and IMO. In addition publish in booklet.

June 11 2008.

11 Singapore





Sequence of events

- **10 to 11 November**, *FR8 Venture* carried out a ship-to-ship transfer with another tanker and loaded a full cargo of crude oil.
- 11 Nov – 0536 hrs - Loading operations were completed the daughter vessel cast off and left Scapa Flow.
- 1054hrs - *FR8 Venture* weighed anchor to depart.
- After weighing anchor, the bosun and AB1 secured the port anchor, and began stowing mooring lines down into the forward storeroom.

Sequence of events

- AB2 and an OS were stowing loose mooring lines at the aft.
- 1136 hrs - Pilots disembarked near the entrance to Scapa Flow.
- The wind was west to west-north-west and near gale force, with waves of about 4 to 5m high.
- The ship's freeboard was about 6.6m and spray was being shipped on board.
- The tidal stream was flowing generally in the same direction as the wind.

Sequence of events

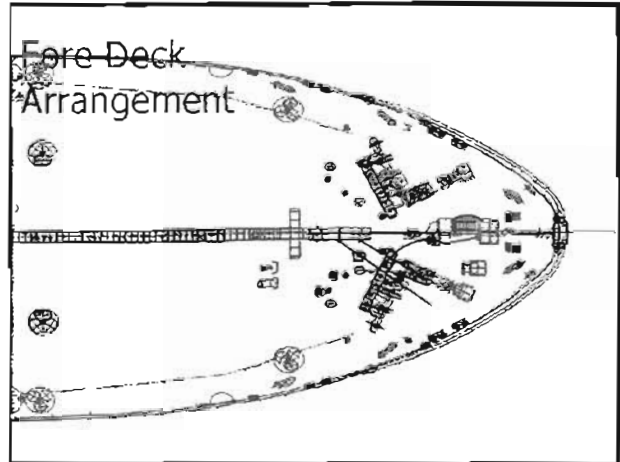
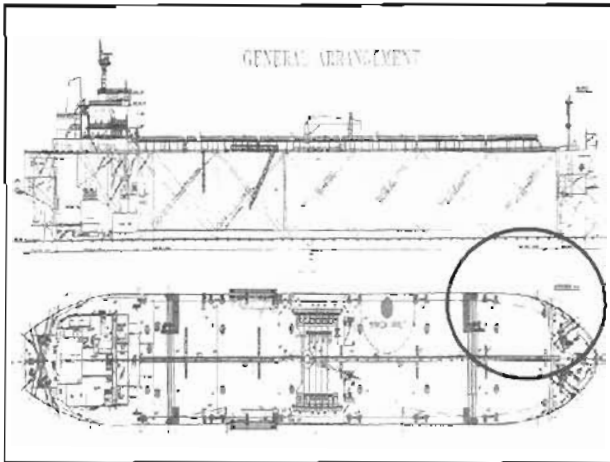
- 1210 hrs, C/O told AB2 and the OS to go forward and help the bosun.
- AB2 joined AB1 on the starboard winch platform to lash canvas covers around the mooring wires.
- The bosun instructed the OS to place a securing wire through the starboard anchor cable.

Sequence of events

- At about 1220 hrs, just as the OS turned towards the anchor cable, a large wave was shipped over the bow. The ship pitched into the following trough and then a second larger wave was shipped on board.
- The two ABs were swept aft, towards and under the flying bridge.

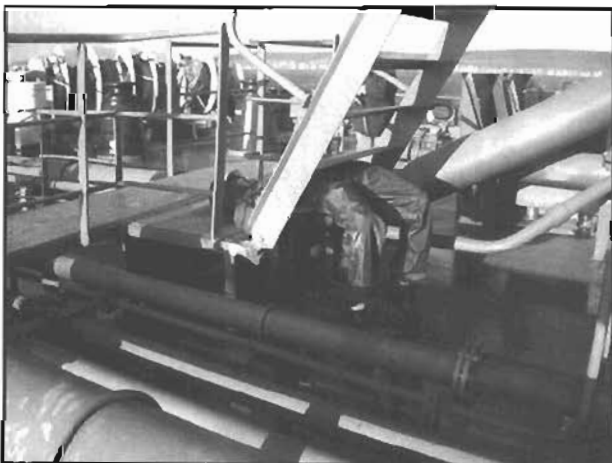
Sequence of events

- The OS was swept aft and came into contact with a protection plate for the forward liferaft.
- The bosun had managed to cling onto the storeroom door when the first wave was shipped, and then onto the ladder rungs of the foremast as the second wave swept over the foredeck, he remained uninjured.



Sequence of events

- The bridge team saw the seas being shipped on deck.
- The third officer released a MOB marker from the bridge wing.
- The general alarm was sounded and the crew mustered at the emergency station.
- The OS managed to walk aft until he reached amidships, where he collapsed.
- All three injured were taken to the accommodation.





Events following the incident

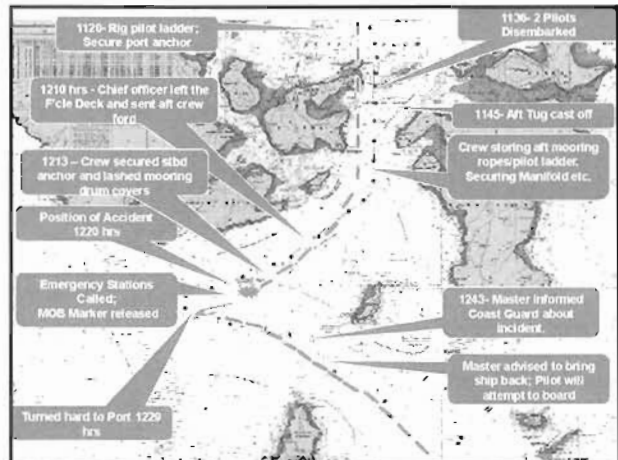
- *FR8 Venture* called Orkney Harbour Control to report the accident and requested for medical assistance.
- Orkney Harbour Control then informed Shetland Coastguard of the tanker's emergency.
- Shetland Coastguard arranged a radio telephone link between the ship's master and a doctor at Aberdeen Royal Infirmary.

Events following the incident

- The Longhope RNLI lifeboat took the local doctor out to meet the ship, but the rough seas prevented the doctor from boarding the ship from the lifeboat.
- However, the Stornoway Coastguard rescue helicopter was able to transfer her to *FR8 Venture*.
- Once onboard the vessel, the doctor determined that the two ABs had died of their injuries and the OS should be taken to hospital.

Events following the incident

- The helicopter returned to the ship, landed an Orkney Harbour pilot and airlifted the doctor and the OS to Aberdeen Royal Infirmary.
- The ship returned to Scapa Flow and anchored there at about 1800.



PRE-CONSULTATION ACCIDENT REPORT

The close rapport was enhanced between MAIB and MPA in the course of this investigation. MPA gave inputs in the analysis to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

PRE-CONSULTATION ACCIDENT REPORT

The analysis focuses on determining whether the shipping of such waves should have been expected and, if so, why the crew members were placed in an area of danger and what precautionary measures should have been taken.

Findings & Recommendations

- The two large waves that were shipped over the bows should have been expected in the prevailing weather conditions.
- The master should have delayed the sailing so that the ship could have been secured for sea in sheltered waters.
- Having decided to leave the shelter of Scapa Flow before the decks were secured, a risk assessment should be made and an effective plan of action considered.

Findings & Recommendations

- The plan could have concentrated the crew securing the forward area first, leaving the stowing of the aft ropes later.
- The plan should have prompted the need for precautionary measures, such as considering the option of turning the ship away from the weather, when safe and practicable to do so, to secure the anchor.

Action Taken FRS Shipmanagement

- The ship managers have reviewed and amended their temporary's SMS procedures for working on deck in heavy weather. This is to ensure that crew on deck are exposed to the elements for the least possible time.

Maritime and Coastguard Agency

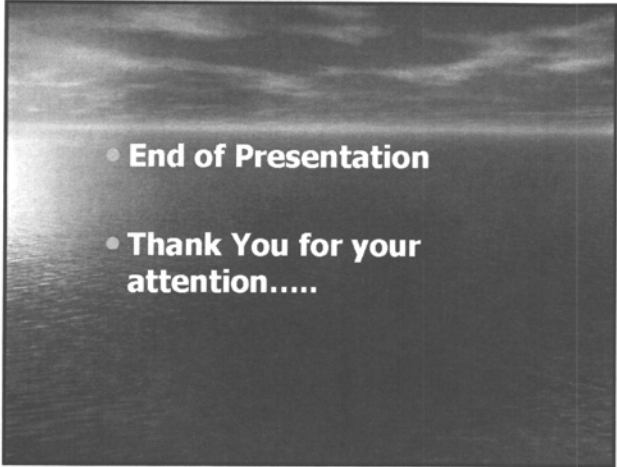
- The MCA has issued a Safety Alert, which gives a brief outline of the accident and draws attention to the contents of chapter 3 of the Admiralty Sailing Directions (NP52) North Coast of Scotland Pilot. This warns mariners of strong tides, with large waves that frequently occur in the area of Pentland Firth

mca Safety Alert

November 2008

Two Deckhands Killed In Pentland Firth


- On 11 November 2008, a large tanker of 74,000 tonnes displacement was proceeding out of Scapa Flow into the Pentland Firth, bound for the United States East Coast after having completed a ship to ship oil transfer.
- The tanker was approximately 3-4 miles west of the head of Swona in the Pentland Firth and four crew members were on the forecastle head securing the anchor when it was hit by a number of abnormal waves in succession.
- Three of the crew were carried off along the maindeck by the force of the first wave. Two men received injuries which proved fatal. The third is now recovering from spinal and head injuries in hospital.
- The weather conditions present at the time of this incident were generally gales of 40 to 50 knots and heavy seas. The tide was also flooding from the west.
- Ship Master and Deck Officers on vessels transiting the Pentland Firth should be aware of the information given in the Admiralty Sailing Directions North Coast of Scotland Pilot (NP 52) Chapter 3, in particular section 1.140 which describes the heavy seas of deep forming off St John's point and extending the whole way across the Firth to Tor Ness. The most obvious feature over a large expanse of the Firth 3.5 miles west of Skye, with a west lee of small the water near Skye, with strong, large waves from suddenly and from varying directions, making them difficult to anticipate or counter.
- Masters must take the above into careful consideration so as not to jeopardise the safety of their crew when transiting the Pentland Firth. Further advice may be sought from Aberdeen or Shetland Coastguard Rescue Centres if required.



- **End of Presentation**
- **Thank You for your attention.....**

12 Thailand

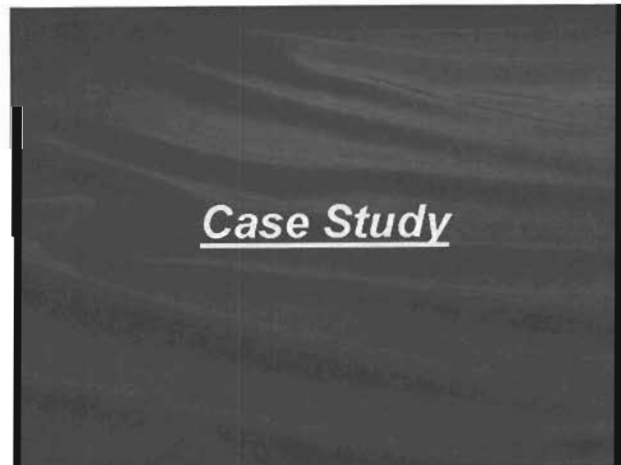
MAIFA



*The Experts Meeting on Promoting of the
Marine Casualty Investigation in Asia*


25-26 June 2008
Tokyo, Japan

By Mr. Rujjapoj Saisa-ard
Maritime Safety & Environment Bureau
Marine Department, Thailand
Email hm@msd.go.th



INTRODUCTION

- Refer to the last case study in MAIFA 10th.
- The Accident happened on 06 December 2007 and Same ship-owner but different vessel.
- The Vessel sank in Vietnam territorial water @ position :
 - Lat. 08 36.10' N.
 - Long. 106 35.10' E.



Position

M.V. BANGYEERUA SANK
Lat 08° 36.10' N, Long 106° 35.10' E

The map shows the location of the M.V. BANGYEERUA SANK in the Gulf of Thailand. A box on the map indicates the coordinates: Lat 08° 36.10' N, Long 106° 35.10' E. The map also shows the coastline of Thailand and Vietnam, and the location of the vessel's sinking relative to the coast.

INTRODUCTION

- On 30 November 2007, M.V. Bangyeerua, Thai flag, General Cargo with 24 crews, 4,815 GRT., LOA : 115.65 meters.
- Vessel departure from Penang to Vungtau.
- On 03 December 2007, Weather not good condition, Rough sea and Strong wind, Vessel Rolling & Pitching heavily.

M.V. BANGYEERUA

- On 05 December 2007, At 0545 a.m. C/O order O/S to check bilge & ballast tanks.
- Bilge No.4 (Prt. & Stb.) tanks were found with water 2 meters high. And C/O ordered ENG. Room to pump the water out.
- At 0700 a.m. O/S rechecked Bilge No.4 and found water 2.20 meters high.
- C/O order crews to use 3 submerge pumps to facilitate the Main pump at the Cargo Hold No.2

M.V. BANGYEERUA

- Around 0830 a.m., They checked water in Bilge No.4 and the water level remain unchanged.
- At 0930 a.m. Master reported to ship owner for situation of water in Cargo Hold.
- At 1430 p.m., 1 submerge pump broke down and Water in Cargo Hold No. 2 increasing 20 c.m. / hour.

M.V. BANGYEERUA

- Around 1700 p.m., M.V. Bangyeerua alternate her course to Conson Island for repair the ship hull.
- At 1930 p.m., Another one submerge pump broke down and Water in Cargo Hold No. 2 increasing 40 c.m. / hour
- At 2245 p.m., AIS on M.V. Bangyeerua shown M.V.Jutha Dhamaraksa(Thai Flag) on displays, range 20 N.M.

M.V. BANGYEERUA

- M.V.Jutha D. alternate her course to M.V.Bangyeerua and escort to Conson Island.
- On 06 December 2007, At 0100 a.m. half of Cargo Hold No.2 was filled with water. Master decided to stop engine, ring boat situation alarm and inform M.V. Jutha D about the situation

M.V. BANGYEERUA

- At 0420 a.m., Master sent Distress Signal & Order crews to abandon ship.
- 2 Vietnamese Fishing Boats rescue the crews and sent to M.V. Jutha D.
- At 0710 a.m., M.V. Jutha D. sailing to Sriracha Port Areas and All crews of M.V. Bangyeerua go to ashore.

M.V. BANGYEERUA

- Damage Report
 - All 24 Crews : Safe
 - Ship : Total lost
- The ship owner is under the process of claiming the compensation from their insurance company

Investigation Report

The image shows a document titled "Investigation Report" with a header containing a logo and the date "Julius 2011". The body of the document contains several paragraphs of text, likely detailing the findings of an investigation. There are some handwritten notes and signatures at the bottom of the page.

Ship's Registry

The image shows a "Ship's Registry" form with multiple columns of data. It includes various fields for ship information, dates, and signatures. There are several official stamps and seals on the document, indicating its legal status.

Certificate of Survey

The image shows a "Certificate of Survey" form with a header containing a logo and the date "2011". The body of the document contains several paragraphs of text, likely detailing the results of a survey or inspection. There are some handwritten notes and signatures at the bottom of the page.

M.V. Jutha D. Report

The image shows a report titled "M.V. Jutha D. Report" with a header containing a logo and the date "2011". The body of the document contains several paragraphs of text, likely detailing the findings of an investigation or survey. There are some handwritten notes and signatures at the bottom of the page.

M.V. Bangyeerua Report

The image shows a report titled "M.V. Bangyeerua Report" with a header containing a logo and the date "2011". The body of the document contains several paragraphs of text, likely detailing the findings of an investigation or survey. There are some handwritten notes and signatures at the bottom of the page.

CAUSE

- Old vessel (33 years)
- Poor lashing of cargo
- Lack of Maintenance

conclusion

- Master of M.V. Bangyeerua did not inform coastal state (Vietnam) of the incident:
 - Inadequate knowledge of procedures to deal with emergency case, especially in other territorial water

The Casualty Investigation Policy

- On 15 – 22 October 2007, There was an IMO audit of the Marine administration of the Kingdom of Thailand regarding the conduct of maritime accident investigation

Findings:

- Required written procedures for conducting an investigation as well as analysis of accident investigation submitted to IMO

The Casualty Investigation Policy

Proposed Corrective Action Plan:

- Amend Navigation Act relating to maritime casualty investigation (24months)
- Establish Maritime Investigation Unit which will integrate Marine safety & Environment Bureau and Ship Standard Bureau (30months)
- Manual of conduct of maritime accident investigation (30months)
- Arrange the Maritime Accident and Incident Investigation and Analysis course for investigators throughout the country (36months)

MAIFA



Thank you
for your attention

OVERVIEW OF MARINE ACCIDENT INVESTIGATION IN THE UNITED STATES



Jack Spencer



Doug Rabe

NTSB

- Created in 1967 by the Independent Safety Board Act
- Investigates:
 - › All aviation accidents
 - › Major marine accidents
 - › Serious rail, pipeline and hazardous material accidents
 - › Highway and bridge accidents

USCG

- In 1838, began investigating marine accidents as the "Steamboat Inspection Service"
- Investigates:
 - › Any accident involving commercial vessels, including major marine accidents

Major marine accidents

- Six or more lives lost
- Total loss of a self-propelled vessel of 100 gross tons
- More than \$500,000 in property damage
- Serious threat from the release of hazardous materials
- Generally, 30 to 50 per year occur

NTSB

- NTSB reports directly to Congress
- 5 NTSB Board members are appointed by the President
- NTSB Office of Marine Safety currently has 17 staff members based in Washington, D.C.
- Conducts about 12 marine safety investigations per year

USCG

- USCG reports to Department of Homeland Security
- Commandant is appointed by the President
- 35 USCG Sectors throughout the U.S. have a total of about 200 investigators
- Conducts about 5,000 marine casualty investigations per year

NTSB

- **The independent investigation body**
- **Conducts only safety investigations**
- **Concentrates on serious accidents**
- **Determines probable cause**
- **Issues safety recommendations**
- **Does not maintain trend statistics for all marine casualties**

USCG

- **The regulator – responsible for inspections, vessel and port safety, etc.**
- **Conducts safety, personnel action, and civil penalty investigations**
- **Determines cause and issues safety recommendations**
- **Maintains trend statistics for all marine casualties**

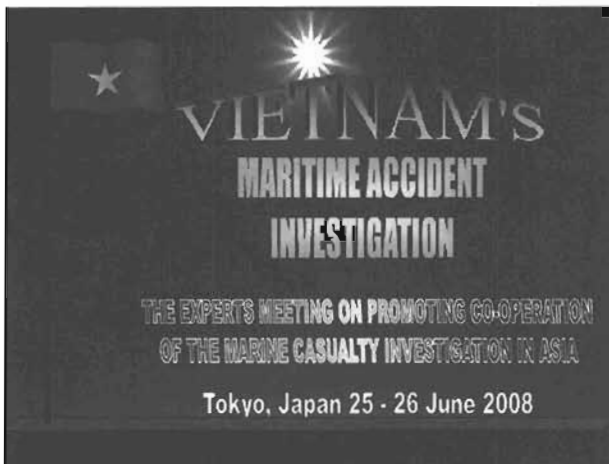
NTSB and USCG

- **Cooperate to ensure the best outcome in every case**
- **Investigate accidents together whenever possible**
- **Maintain a Memorandum of Understanding regarding marine accident investigation to facilitate day to day operations**

NTSB and USCG

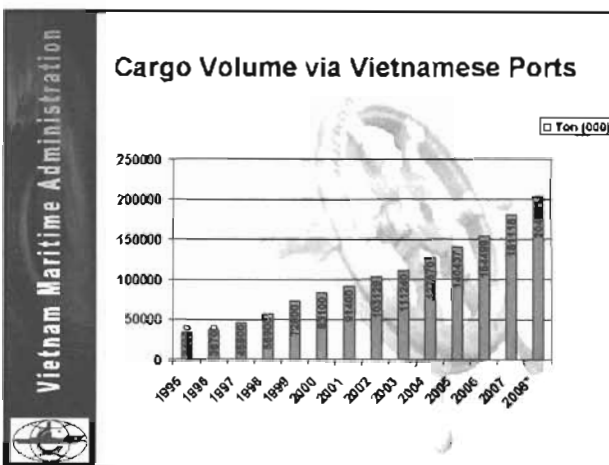
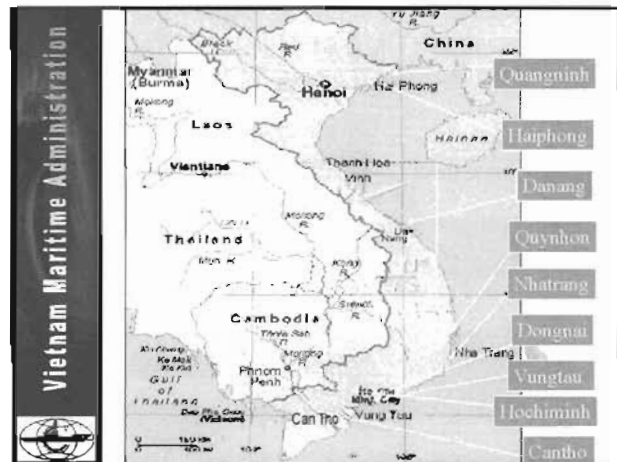
- **Support the MAIF motto "Maritime Safety through Investigation and Cooperation"**
- **Hope to see you at MAIF 17 in Malta !**
- **Wish you a safe journey home.**

14 Vietnam



Seaport System

- Coastline length: 3,260 km from the North to the South
- About 90 seaports
- Major Ports: Quangninh, Haiphong, Danang, Quynhon, Nhatrang, Vungtau, Dongnai, Cantho and Hochiminh City
- Total length of terminal: 23 km.
- In 2004: 74,527 ship calls
- In 2005: 75,235 ship calls
- In 2006: 62,291 ship calls
- In 2007: 88,619 ship calls>>



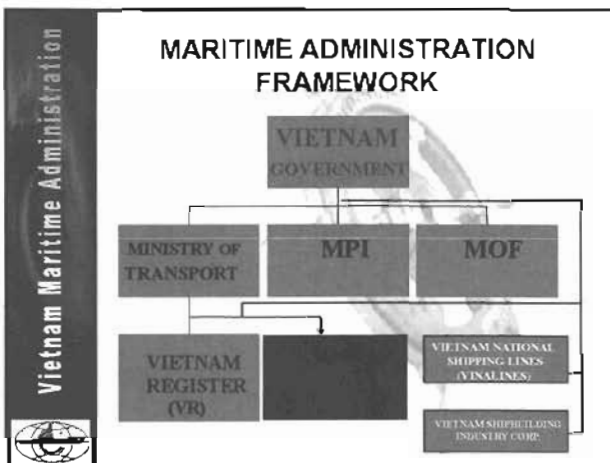
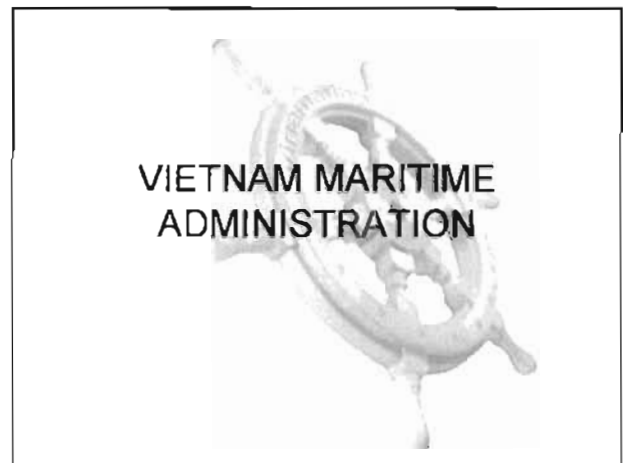
Vietnam National Merchant Fleet

- Number of vessel: 1,199
- Total Gross Tonnage: 2,937,327 GT
- Total Deadweight: 4,384,880 DWT>>

Vietnam Maritime Administration

Number of Vietnamese Seafarers

MANAGEMENT LEVEL			
Deck		Engine	
>3000 GT	683	>3000 Kw	692
500 – 3000	551	750 – 3000	189
100 – 500	985	150 – 750	842
<100 GT	700	< 150 Kw	518
OPERATIONAL LEVEL			
Deck		Engine	
> 500 GT	1169	> 750 Kw	1053
< 500 GT	93	< 750 Kw	153
ASSISSTANT LEVEL			
Bosun	872	AB	6209
Donkeyman	426	Greaser	3995
Elec. Officer	194	Electrician	126



Vietnam Maritime Administration

Ministry of Transport

- The Ministry of Transport is a government agency in charge of state management of land transport (highways, railways), inland waterway transport and maritime transport nation-wide. >>

Vietnam Maritime Administration

MOT – The organization structure

- Organization with advisory functions
- Specialized management Agencies
 - ↳ Vietnam Road Administration
 - ↳ Vietnam Inland Waterway Administration
 - ↳ Vietnam Railway Administration
 - ↳ Vietnam Civil Airway Administration
 - ↳ Vietnam Maritime Administration
 - ↳ Vietnam Register
 - ↳ Transport Construction Quality Control and Management Bureau >>

Vietnam Maritime Administration


MOT – The organization structure

- Administrative Agencies
 - ↳ Research Institute for Transport Science and Technology (RITST)
 - ↳ Transport Development and Strategy Institute (TDSI)
 - ↳ Viet Nam Maritime University (VINAMARU)
 - ↳ School for Training Cards and Civil Servants of the Transport Sector
 - ↳ Transport College
 - ↳ >>



Vietnam Maritime Administration

MOT – The organization structure

- Enterprises:
 - ↳ Vietnam National Lines (VINALINES)
 - ↳ Vietnam Shipbuilding Industry Corp. (VINASHIN)
 - ↳ Seaports
 - ↳ Thang Long Construction Corporation
 - ↳ Civil Engineering Construction Corporation
 - ↳ Transport Industry Corporation (TRANSINCO)
 - ↳>>





Vietnam Maritime Administration

Vietnam Maritime Administration

VINAMARINE'S FUNCTIONS


- Re-established in 2003 at Prime Minister's Decision No.269/QĐ-TTg
- Under management of MOT
- Authority of State Administration in Maritime Industry in Vietnam>>

Vietnam Maritime Administration

VINAMARINE'S DUTIES AND POWERS


- TO WORK OUT :
 - ↳ MARITIME DEVELOPMENT STRATEGIES
 - ↳ MARITIME MASTER-PLANS
 - ↳ SHIPPING POLICIES/ REGULATIONS
 - ↳ RULES OF MANAGEMENT/ LEGAL NORMS
- TO MANAGE MARITIME INFRASTRUCTURE PROJECTS ON MARINE FUNDED BY OVERSEAS OR DOMESTICS
- TO SIGN BILATERAL MARITIME AGREEMENT
- TO PROPOSE TO RACTIFY INTERNATIONAL CONVENTIONS ON MARINE>>



Vietnam Maritime Administration

VINAMARINE'S DUTIES AND POWERS


- TO ISSUE PERMISSION TO FOREIGN SHIPS AND BOATS TO TERRITORIAL WATERS OF VIETNAM
- TO DECLARE SEAPORTS OPENING FOR NAVIGATION
- TO CONTROL OVER MARITIME SERVICES
- TO CARRY OUT SEARCH AND RESCUE ACTIVITIES
- TO IMPLEMENT PORT STATE CONTROL PROCEDURES
- TO CONTROL MARITIME SAFETY ISSUES
- TO INVESTIGATE AND SETTLE VIOLATIONS REGARDING SHIPPING ACTIVITIES>>



Vietnam Maritime Administration

regional Maritime Administration (RMA)

- Re-established at the Decision 57/QĐ-BGTVT by Minister of Transport in October, 2005
- Under administration of Vinamarine
- A legal entity
- Operational fund from State Budget>>



RMA's Major Functions & powers

- To plan seaport development within its responsible area
- To coordinate with relevant authorities in securing port operation appropriately
- To control and supervise the law enforcement on safety-related issues
- To conduct the port State control inspection
- To carry out SAR operation toward people and ships in distress, oil spill, etc.>>



RMA's Major Functions & powers

- To investigate maritime accidents and incidents
- To issue permit to ships entering and leaving ports
- To collect fees & charges as delegated and contribute to State Budget
- To impose fines upon acts against maritime safety, environment prevention >>



MARINE ACCIDENT INVESTIGATION LEGAL FRAMEWORK

Relevant Instruments

- Vietnam Maritime Code 2005
- Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005 of Minister of Transport on marine accident reporting and investigation.
- IMO Resolution A.849 (20) – Code For The Investigation of Marine Casualties and Incidents.
- IMO Resolution A.884 (21) – Guidelines for the Investigation of Human Factors in Marine Casualties and Incidents.
- Other relevant guidelines or references to other case studies



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

- Article 1. Regulation scope
 - ↳ This Decision provides for marine accident reporting and investigation.
- Article 2. Application subjects
 - ↳ This Decision applies to agencies, organizations and individuals involved in marine accident reporting and investigation in the following cases:
 - Marine accidents related to Vietnamese seagoing ships;
 - Marine accidents related to foreign seagoing ships operating in Vietnamese port waters and waters;
 - Marine accidents occurring to ship on official duty, fishing ships, inland waterway means of transport or hydroplanes operating in port waters of Vietnam.



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

- Article 3. Classification of marine accidents
 - ↳ Extremely serious marine accidents
 - ↳ Serious marine accidents.
 - ↳ Less serious marine accidents




Vietnam Maritime Administration

Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

CHAPTER II- REPORTING ON MARINE ACCIDENTS

- Article 4. Marine accident reports
 - ↳ Marine accident reports include urgent reports specified in Appendix, detailed reports specified in Appendix 2 and periodical reports specified in Appendix 3 (not printed herein). Marine accident reports must be truthful, accurate and timely.
- Article 5. Urgent reports
- Article 6. Detailed reports
- Article 7. Periodical reports




Vietnam Maritime Administration

Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

CHAPTER III - INVESTIGATION OF MARINE ACCIDENTS


- Article 8. Requirements for investigation of marine accident
 - ↳ Investigation of marine accidents means the identification of conditions, circumstances, causes or possible causes of marine accidents in order to work out effective measures to prevent and restrict such accidents.
 - ↳ Marine accidents must be investigated in strict compliance with regulations, in a timely, comprehensive and objective manner.



Vietnam Maritime Administration

Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005


- Article 9. Responsibilities for investigation of marine accidents
 - ↳ Directors of port authorities shall have to organize investigation of marine accidents occurring in the areas under their management and other maritime accidents under assignment by the Vietnam Maritime Administration or competent authority.
 - ↳ Depending on the complexity of marine accidents, the directors of port authorities shall decide on the number of marine accident investigators, which, however, must be at least two with adequate professional qualifications
 - ↳ In case of necessity, the director of the Vietnam Maritime Administration or the Minister of Transport shall decide to set up marine accident investigation teams.



Vietnam Maritime Administration

Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005



- Article 10. Marine accident investigators
 - ↳ Marine accident investigators are port authority officers with adequate professional qualifications and capabilities as well as necessary law knowledge, to be nominated by directors of port authorities; in special cases, investigators shall be decided by competent agencies.
 - ↳ Marine accident investigators shall have the following tasks:
 - To work out marine accident investigation plans;
 - To report in writing on the marine accident investigation process to directors of port authorities or heads of agencies which have assigned them the marine accident investigation task.



Vietnam Maritime Administration

Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005


- Article 10. Marine accident investigators
 - ↳ Marine accident investigators shall have the powers
 - To request parties involved in marine accidents to take measures to keep the accident scene intact;
 - To request shipmasters to supply copies of maritime log books, course - recording diagrams, sea charts of areas where the ships meet with accidents and other data on the ships and equipment on board.
 - To request the ships' decentralized technical monitoring agencies, ship owners, ships' agents, coastal communication radio stations, maritime search and rescue centers, Vessel Traffic Services (VTS), maritime insurance companies, maritime pilots and other relevant agencies and organizations to provide necessary information for investigation of marine accidents.

Vietnam Maritime Administration

Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

- Article 10. Marine accident investigators
 - ↳ Marine accident investigators shall have the powers
 - To request parties involved in marine accidents to take measures to keep the accident scene intact;
 - To visit places of accidents and get onboard ships to inspect the scene, examine working positions and take samples necessary for investigation. All these jobs must be done to the witness of, and with certification by, competent person on board the ships and must not affect safe operations of the ships;
 - To check, duplicate administrative registration, registry, insurance and technical dossiers and papers of ships and relevant technical equipment, professional diplomas and certificates of crew members in service of technical evaluation of related equipment and the ships' sailing capacity before voyage and at the time of occurrence of accidents;
 - To use sound-recorders, cameras and video cameras in the course of investigation, if necessary.



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

● Article 11. Time limits for investigation of marine accidents

- ↳ For marine accidents occurring in port waters, the investigation time limit shall not exceed 30 days, counting from the date of occurrence of an accident.
- ↳ For marine accidents occurring beyond port water but within Vietnamese waters, the investigation time limit shall not exceed 30 days, counting from the date the relevant ship arrives at the first Vietnamese port after the accident occurs.
- ↳ For marine accidents occurring beyond the Vietnamese waters, the investigation time limit shall be decided by the director of the Vietnam Maritime Administration



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

● Article 11. Time limits for investigation of marine accidents

- ↳ In complicated cases, if the investigation of marine accidents cannot be completed within the time limit provided for in Clause 1 or 2 of this Article, directors of port authorities shall have to promptly report such in writing to the director of the Vietnam Maritime Administration for consideration and decision of the investigation time limit extension.
- ↳ For marine accidents for which competent agencies defined in Clause 3, Article 9 of this Decision decide to set up investigation teams, the heads of investigation decision - issuing agencies shall decide on and extend the investigation time limit



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

● Article 12. Conducting marine accident investigations

- ↳ Rights after receiving an urgent report specified in Article 5 of this Decision or any information on a marine accident occurring in the area under his/her management, the director of relevant port authority shall have to verify such information for organization of investigation of the marine accident.
- ↳ The marine accident investigation shall be conducted in the following order:
 - Nominating an officer in charge of investigation, investigators and investigation collaborators;
 - Gathering initial information on the marine accident;
 - Approving the investigation plan suggested by the in-charge officer



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

● Article 12. Conducting marine accident investigations

- ↳ The marine accident investigation shall be conducted in the following order:
 - Coming to the place of accident, getting onboard the ship for on-the-spot inspection of damage and traces left after the accident in order to identify and gather necessary evidence;
 - Questioning people related to the marine accident and witnesses;
 - Synthesizing the collected information, if deeming necessary, conducting additional inspection and questioning to clarify questionable issues;
 - Based on the current provisions of law on maritime safety, analyzing the collected information, including expertise conclusions on sample items and traces related to the marine accident.



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

● Article 12. Conducting marine accident investigations

- ↳ For marine accidents investigated by other agencies according to their respective functions, directors of port authorities must also conduct investigation in accordance with the provisions of this Decision.
- ↳ In case of necessity, directors of port authorities may enter into contracts with maritime experts or expertise agencies or laboratories in order to be advised on specialized domains, expertise and analysis of sample items and objects related to maritime accidents.



Decision No. 48/2005/QĐ-BGTVT dated 30/9/2005

● Article 13. Marine accident investigation conclusions

- ↳ Contents of marine accident investigation conclusions shall cover the following:
 - Conclusions on accident causes and circumstances; violations, elements or possibilities which may have caused accidents. Such conclusions must be based on law and plausible evidence.
 - Measures or proposals for prevention and restriction of such accidents;
 - Administrative handling measures falling under the competence of directors of port authorities or proposals on handling measures to the competent authority for consideration and decision with regard to acts of violation falling beyond the handling competence of directors of port authorities.
- Accident investigation conclusions must be sent to concerned parties and the Vietnam Maritime Administration, each with one copy, by the investigation deadline at the latest. For extremely serious marine accidents, written conclusion on investigation must be sent to the Minister of Transport



Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● Article 14. Complaints and settlement of complaints (Tier-1)

–¹In cases where companies managing or operating Vietnamese seagoing ships; ship owners; shipmasters, crew members and relevant pilots or managers of works or equipment damaged by marine accidents disagree with conclusions on marine accident investigation (hereinafter referred collectively to as complainants), they must, within 30 days after receiving such conclusions (according to the postage stamps), lodge complaints to directors of port authorities which have conducted the investigation and announced the marine accident investigation conclusion.



Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● Article 14. Complaints and settlement of complaints (Tier-1)

–¹Within 10 days after receiving complaints, directors of port authorities must process such complaints and notify the complainants thereof in writing; if rejecting the complaints, they must give the reasons therefore. The time limit for complaint settlement by directors of port authorities shall not exceed 30 days after the receipt of complaints, for complicated cases, this time limit may be prolonged but must not exceed 45 days after the receipt of the complaints.

–²The director of the Vietnam Maritime Administration shall have to direct, inspect and urge the settlement of complaints by directors of port authorities.



Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● Article 14. Complaints and settlement of complaints (Tier-2)

–¹Within 30 days after receiving complaint settling decision from directors of port authorities, if the complainants disagree therewith, they may further complain with the director of the Vietnam Maritime Administration. In this case, the complainants must send their complaints together with copies of settling decisions of directors of port authorities and documents related to the complaints



Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● Article 14. Complaints and settlement of complaints (Tier-2)

–¹Within 30 days after receiving complaint settling decision from directors of port authorities, if the complainants disagree therewith, they may further complain with the director of the Vietnam Maritime Administration. In this case, the complainants must send their complaints together with copies of settling decisions of directors of port authorities and documents related to the complaints.



Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● Article 14. Complaints and settlement of complaints (Tier-2)

–¹Within 10 days after receiving the complaints, the director of the Vietnam Maritime Administration must process them and notify the complainants as well as directors of relevant port authorities thereof in writing; if rejecting the complaints, he/she must give the reasons therefore. The time limit for complaint settlement by the director of the Vietnam Maritime Administration shall not exceed 45 days after the receipt of the complaints; for complicated cases, this time limit may be prolonged but must not exceed 60 days.



Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● Article 14. Complaints and settlement of complaints (Tier-3)

–¹Within 30 days after receiving the complaint settling decisions from the director of the Vietnam Maritime Administration, if the complainants disagree therewith, they may further lodge their complaints to the Minister of Transport. In this case, the complainants must enclose their complaints with copies of complaint-settling decisions of the director of the Vietnam Maritime Administration.




Vietnam Maritime Administration

Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● **Article 14. Complaints and settlement of complaints (Tier-3)**

↳ The procedures and time limit for the Transport Minister to process and settle such complaints shall comply with the provisions of Clause 2 of this Article. The Transport Minister's complaint- settling decisions shall be the final ones, except for cases otherwise provided for by law.




Vietnam Maritime Administration


Decision No. 48/2005/QD-BGTVT dated 30/9/2005

● **Article 15. Implementation effect**

↳ This decision takes effect as from January 1, 2006, and replaces the Transport Minister's Decision No. 2756/2002/QD-BGTVT of August 29, 2002, promulgating the regulations on marine accident reporting and investigation.




Statistic Data



Vietnam Maritime Administration

Statistic Data


Year	Number of accidents					Dead	Injured
	Total	Percentage on 1000 ship calls	Very Serious	Serious	Less Serious		
2003	94	1,27	13	30	41	11	10
2004	70	0,94	07	20	43	23	13
2005	68	1,19	11	28	29	17	00
2006	59	0,85	08	28	22	38	15
2007	47	0,64	08	15	26	16	16



Vietnam Maritime Administration

Statistic Data


- Although the number of accidents in last 5 years have been decreased, however, the consequences of the accidents have been increased, especially, the number of fisherman was dead and injured are very "huge": 55 dead (51.4%) and 26 injured (65%)
- From 2002 to 2006:
 - ↳ 79 collisions between cargo vessels and fishing vessels, represented 39.9% of 201 collisions,
 - ↳ 40 cases: after collisions, there cargo vessels ran away.



Vietnam Maritime Administration

Statistic Data

- 3 months of 2008:
 - ↳ 14 marine accidents -- reduce 01 case compared with 3 months of 2007:
 - Collision: 09 cases, in which 02 very serious cases
 - ↳ 14 Vietnamese means 01 vessel more than 1000 GT, 06 vessels less than 1000 GT, 07 fishing vessels
 - ↳ 01 foreign vessel more than 1000 GT
 - Contact: 01 case
 - ↳ 01 Vietnamese vessel contacted with electric wire



Statistic Data

- 3 months of 2008:
 - ↳ 14 marine accidents – reduce 01 case compared with 3 months of 2007:
 - Grounding: 01 case
 - ↳ 01 Vietnamese vessels: 01 vessel less than 1000 GT
 - Sinking: 02 cases
 - ↳ 01 Vietnamese vessel more than 1000 GT
 - ↳ 01 foreign vessel more than 1000 GT
 - Fire: 01 case:
 - ↳ 01 Vietnamese vessel



Statistic Data

- 3 months of 2008:
 - ↳ Consequences of accidents:
 - 15 dead, increased 08 persons compared with 3 months of 2007
 - 12 injured, decreased 12 persons compared with 3 months of 2007
 - 11 missing, increased 11 persons compared with 3 months of 2007
 - 07 transport means sunk, damaged, decreased 01 means compared with 3 months of 2007



Statistic Data

- Year 2007:
 - ↳ Investigated all the reported cases and produced 30 final reports.
- 1st Quarter of 2008:
 - ↳ 05 reports on results of investigation was released.



Statistic Data

- Contribution factors:
 - ↳ Human factors: >80%
 - ↳ Other factors: <20%



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**Thank you
For
Your kind attention**



Case Study on Joint Investigation of Sinking of M/V Sea Bee

The Experts Meeting on Promoting Co-operation of the Maritime Casualty Investigation in Asia
25-26 June 2008 Tokyo, Japan

A Table of Contents

- Summary of the Accident.
- Vessel Data
- Weather conditions
- The voyage
- Investigation
- Investigation results

Summary of Accident

- At 2135 on 01/5/2005, M.V "Sea Bee", which was belong to the "EASTERN DRAGON SHIPPING CO,LTD" in Vietnam and whose nationality was Mongolia, was damaged and then sunk in the east China Sea on the voyage from Qinghuangdao to Philippine.
- The sinking approximate position was 32° 53.867'N/122° 56.873'E.
- 3 crew died and 20 crew were missing.

Sinking of M.V Sea Bee

Vessel Data

- Type of ship: general cargo ship
- GT: 3978
- NT: 2365
- L.O.A: 243.00m
- Breadth: 16.40m
- Depth: 8.15m
- Speed: 11.50KT
- Builder: K.K. TAIHEI HOGYA, AKISU, JAPAN
- IMD No: 8005924
- Call sign: JVRZ2
- Port of register: Ulaanbaatar
- Year built: 1981
- Hull material: Steel
- Holds and hatches: 2X2
- Type of main engine/Power: Internal-combustion engine /2834KW

Weather conditions

- Weather: overcast
- Direction of wind: North
- Wind force: 6 to 7 Near gale occasionally gale 8
- Direction of wave: North
- Height of wave: 4.0~6.0m

The voyage

- MV "Sea Bee" arrived at Qinghuangdao for loading coils. There were 998 pcs/2003.61 tons of coils were loaded in NO.1 hold; 1516 pcs/3003.65 tons of coils were loaded in NO.2 hold. (2514 pcs/5007.26 tons of coils loaded in total). There were 292.31T of fuel oil, 51.93T diesel oil and 292T fresh water refueled.
- About 0510 hours on Apr. 29th, the ship sailed from Qinghuangdao. The draft of fore and aft were 6.25 metres and 6.65 metres.



The voyage

- About 1200 hours on Apr. 29th, the ship position was in 39° 20'N/120° 09'48"E and the speed was 9.8kt.
- About 1200 hours on Apr. 29th, the ship position was in 36° 31'N/122° 49'E and the speed was 9.3kt.
- About 0706 on May. 1st, the ship transmitted the last messages by radiotelegraphy to company that the ETA to Manila would be the afternoon on May 6th, but it had not information of the ship position.



The loading in No.2 hold



Investigation

- Due to this was a very serious case with loss of all crewmembers on board ship – 23 Vietnamese, so our Minister of Transport dispatched a delegation to China.
- Our delegation had meetings with China MSA on 24/8/2005, with Shanghai MSA on 26/8/2005 and with China MSA again on 29/8/2005.
- We also met the Shanghai Salvage Company conducted the survey the wreck.



Investigation

- On 29/08/2005, we signed agreement between Vinamarine and China MSA, in which we agreed to establish the Joint Investigation Team consist of China MSA, Vinamarine and Mongolian Ship Registry in September 2005.
- Ministry of Transport also assigned a Vietnamese Team to joint the Team with other parties.
- However, due to many reasons, the first joint investigation between Vinamarine and other countries was unable to carry out.



Investigation results

- China MSA conducted the investigation and found the possibilities causes of sinking as followed:
 - As a result of insufficient hull intensity, there was much possibilities of causing hull ruptured and flooded and sank, while Ship navigated in stormy conditions. cause: No1.doc
 - It could not be precluded that the possibility of ship sinking was caused by hull damage, which was due to the cargo moving. And it was possible that the heavy stormy condition, the improper stowage and lashing resulted in the cargo moving. cause No2.doc






***Thank you
For
Your kind attention***

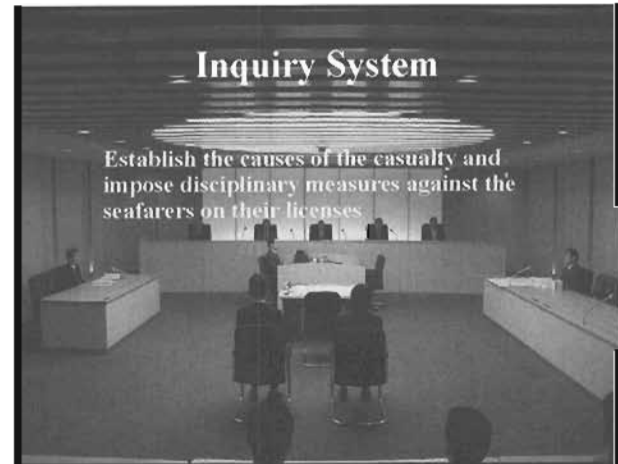
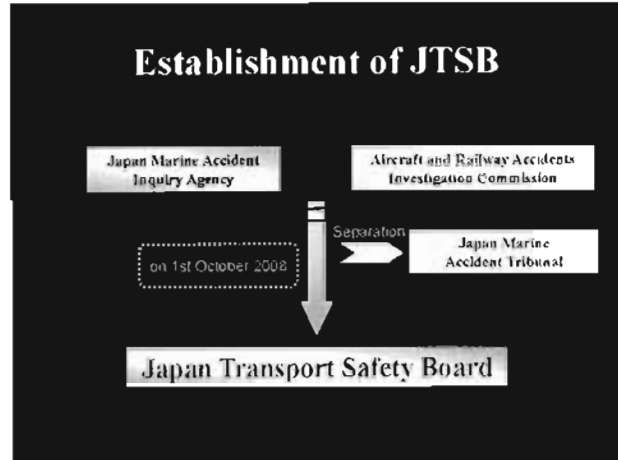


Establishment of Japan Transport Safety Board

Hideo Osuga
Deputy Commissioner
Japan Marine Accident Inquiry Agency



*Experts Meeting on Promoting Co-operation of Marine Casualty Investigation
in Asia on 25-26 June 2008, Tokyo, Japan*



Casualty Investigation Code

The objective of this code is to provide a common approach for States to adopt in the conduct of Marine Safety Investigation into Marine Casualties and Marine incidents.

Marine Safety investigations do not seek to apportion blame or determine liability. Marine Safety investigation, as defined in this Code, is an investigation conducted with the objective of preventing Marine Casualties and Marine incidents in the future.

Reasons for change

- ⌄ The inquiry system aims at apportioning of blame and determining liability.
- ⌄ The exchange of information with marine safety investigation states is becoming difficult.
- ⌄ The emphasis tends to be on the determining of liability (disciplinary measures) rather than on the establishment of root causes or human factor analysis.
- ⌄ Low quality of recommendations for the prevention of future casualties tends to be the case.
- ⌄ Other several disconformities with provisions in the recommended part of the Code

What we aim at

- ↳ More conformity with the New Marine Casualty Investigation Code
- ↳ More thorough analysis on root causes and human factors
- ↳ More effective recommendations for prevention of future casualties
- ↳ More facility in terms of international cooperation

JTSB

Multi-modal transport accident investigation board

Headquarters in Tokyo

8 regional offices dealing with marine casualty throughout the country

181 staff including 105 investigators (68 maritime)



○ Headquarters Office
■ Regional Offices

Investigation Procedure



Bilateral Arrangements with

- ↳ Korean Maritime Safety Tribunal (signed on 27 February, 2002)
- ↳ China Maritime Safety Administration (signed on 26 February, 2008)
- ↳ Panama Maritime Authority (under discussion)
- ↳ Australian Transport Safety Bureau (under discussion)

Japan Transport Safety Board



For Safe Sea

Thank you for your attention

6. Summary

The two-day experts meeting proceeded with the guidance of the coordinator, Mr. Hideo Osuga of JMAIA.

During the meeting, participants made valuable presentations and exchanged views lively.

In conclusion, in order to promote regional cooperation in Asia in future marine casualty investigations, the participants unanimously agreed on the adoption of text of the summary of the meeting as per the attached sheet.



The Experts Meeting

The Experts Meeting on Promoting Co-operation of the Marine Casualty Investigation in Asia

Summary

The new IMO Marine Casualty Investigation Code has been adopted by the IMO Maritime Safety Committee at its Eighty-Fourth Session and will take effect on 1 January 2010.

We, the marine casualty investigators gathered here in Tokyo, Japan on 25-26 June 2008 for the experts meeting on promoting cooperation of the marine casualty investigation in Asia, unanimously recognize and agree on the importance of international cooperation in marine casualty investigations and in sharing information on marine casualties and lessons learned in order to prevent the recurrence of marine casualties in the future and to maintain maritime safety and a clean environment at sea.

In promoting international cooperation, we find the activities of MAIFA, MAIIF, and bilateral or multilateral arrangements, to be valuable.

26 June 2008, Tokyo

Participated by the investigators of the following States / Region

Australia, China, Hong Kong China, India, Indonesia, Japan, Malaysia, Mongolia, Myanmar, Philippines, Korea, Russia, Singapore, Thailand, U.S.A. and Vietnam.

Agreed by MAIIF and MAIFA Chairmen

Participants

Tetsuo Yokoyama(Commissioner of JMAIA), Hideo Osuga(Coordinator), Walter Douglas Rabe(MAIIF Chairman), San Tai Harlan LI(Hong Kong China: MAIFA11 Chairman), Peter Thomas Foley(Australia), Dao jiu Ma, Guang Lu Zhi, Guo Xin Ye(China), Derrick Frank Vaz(India), Hermanu Karmoyono(Indonesia), Tetsuya Yamamoto, Yoshiaki Nagahama, Satoshi Shibata, Tatsuya Kojo(Japan), Muhammad Shuhaimi Abd.Rahman(Malaysia), Galsandongog Damdin(Mongolia), Htay Lwin Oo(Myanmar), Alfredo Iglesia Bautista(Philippines), Byeong Yong Jo, Byung Joon Lim(Korea), Grigoriy Mitrofanovich Sadovoy(Russia), Mohamed Harun Ja'ffar(Singapore), Rijjapoj Saisa-ard(Thailand), John Sherman Spencer(U.S.A.), Mark Eyler(U.S.A.), Ha Nguyen Hai Phan(Vietnam)

Reference

ANNEX 1

**RESOLUTION MSC.255(84)
(adopted on 16 May 2008)**

**ADOPTION OF THE CODE OF THE INTERNATIONAL STANDARDS AND
RECOMMENDED PRACTICES FOR A SAFETY INVESTIGATION
INTO A MARINE CASUALTY OR MARINE INCIDENT
(CASUALTY INVESTIGATION CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the function of the Committee,

NOTING with concern that, despite the best endeavours of the Organization, casualties and incidents resulting in loss of life, loss of ships and pollution of the marine environment continue to occur,

NOTING ALSO that the safety of seafarers and passengers and the protection of the marine environment can be enhanced by timely and accurate reports identifying the circumstances and causes of marine casualties and incidents,

NOTING FURTHER the importance of the United Nations Convention on the Law of the Sea, done at Montego Bay on 10 December 1982, and of the customary international law of the sea,

NOTING IN ADDITION the responsibilities of flag States under the provisions of the International Convention for the Safety of Life at Sea, 1974 (regulation I/21) (hereinafter referred to as "the Convention"), the International Convention on Load Lines, 1966 (article 23) and the International Convention for the Prevention of Pollution from Ships, 1973 (article 12), to conduct casualty investigations and to supply the Organization with relevant findings,

CONSIDERING the need to ensure that all very serious marine casualties are investigated,

CONSIDERING ALSO the Guidelines on fair treatment of seafarers in the event of a maritime accident (resolution A.987(24)),

ACKNOWLEDGING that the investigation and proper analysis of marine casualties and incidents can lead to greater awareness of casualty causation and result in remedial measures, including better training, for the purpose of enhancing safety of life at sea and protection of the marine environment,

RECOGNIZING the need for a code to provide, as far as national laws allow, a standard approach to marine casualty and incident investigation with the objective of preventing marine casualties and incidents in the future,

RECOGNIZING ALSO the international nature of shipping and the need for co-operation between Governments having a substantial interest in a marine casualty or incident for the purpose of determining the circumstances and causes thereof,

NOTING resolution MSC.257(84) by which it adopted amendments to chapter XI-1 of the Convention to make parts I and II of the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident mandatory under the Convention,

HAVING CONSIDERED, at its eighty-fourth session, the text of the proposed Casualty Investigation Code,

1. ADOPTS the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code), set out in the Annex to the present resolution;
2. INVITES Contracting Governments to the Convention to note that the Code will take effect on 1 January 2010 upon entry into force of the amendments to regulation XI-1/6 of the Convention;
3. REQUESTS the Secretary-General of the Organization to transmit certified copies of the present resolution and the text of the Code contained in the Annex to all Contracting Governments to the Convention;
4. FURTHER REQUESTS the Secretary-General of the Organization to transmit copies of the present resolution and the text of the Code contained in the Annex to all Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

**CODE OF THE INTERNATIONAL STANDARDS AND RECOMMENDED
PRACTICES FOR A SAFETY INVESTIGATION INTO A MARINE CASUALTY
OR MARINE INCIDENT (CASUALTY INVESTIGATION CODE)**

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Foreword

1 This Code incorporates and builds on the best practices in marine casualty and marine incident investigation that were established by the Code for the Investigation of Marine Casualties and Incidents, adopted in November 1997 by the International Maritime Organization (the Organization), by resolution A.849(20). The Code for the Investigation of Marine Casualties and Incidents sought to promote co-operation and a common approach to marine casualty and marine incident investigations between States.

Background

2 The Organization has encouraged co-operation and recognition of mutual interest through a number of resolutions. The first was resolution A.173(ES.IV) (Participation in Official Inquiries into Maritime Casualties) adopted in November 1968. Other resolutions followed including: resolution A.322 (The Conduct of Investigations into Casualties) adopted in November 1975; resolution A.440(XI) (Exchange of Information for Investigations into Marine Casualties) and resolution A.442(XI) (Personnel and Material Resource Needs of Administrations for the Investigation of Casualties and the Contravention of Conventions), both adopted in November 1979; resolution A.637(16) (Co-operation in Maritime Casualty Investigations) adopted in 1989.

3 These individual resolutions were amalgamated and expanded by the Organization with the adoption of the Code for the Investigation of Marine Casualties and Incidents. Resolution A.884(21) (Amendments to the Code for the Investigation of Marine Casualties and Incidents resolution A.849(20)), adopted in November 1999, enhanced the Code by providing guidelines for the investigation of human factors.

4 The International Convention for the Safety of Life at Sea (SOLAS), 1948, included a provision requiring flag State Administrations to conduct investigations into any casualty suffered by a ship of its flag if an investigation may assist in identifying regulatory issues as a contributing factor. This provision was retained in the 1960 and 1974 SOLAS Conventions. It was also included in the International Convention on Load Lines, 1966. Further, flag States are required to inquire into certain marine casualties and marine incidents occurring on the high seas*.

5 The sovereignty of a coastal State extends beyond its land and inland waters to the extent of its territorial sea**. This jurisdiction gives the coastal State an inherent right to investigate marine casualties and marine incidents connected with its territory. Most national Administrations have legal provisions to cover the investigation of a shipping incident within its inland waters and territorial sea, regardless of the flag.

* Reference is made to the United Nations Convention on the Law of the Sea (UNCLOS), article 94(7) or requirements of international and customary laws.

** Reference is made to the United Nations Convention on the Law of the Sea (UNCLOS), article 2 or requirements of international and customary laws.

Treatment of Seafarers

6 Most recently, the International Labour Organization's Maritime Labour Convention, 2006 (which has not yet come into force), provides a provision for the investigation of some serious marine casualties as well as setting out working conditions for seafarers. Recognizing the need for special protection for seafarers during an investigation, the Organization adopted, in December 2005, the "Guidelines on Fair Treatment of Seafarers in the Event of a Maritime Accident" through resolution A.987(24). The Guidelines were promulgated by the IMO and the ILO on 1 July 2006.

Adoption of the Code

7 Since the adoption of the first SOLAS Convention, there have been extensive changes in the structure of the international maritime industry and changes in international law. These changes have potentially increased the number of States with an interest in the process and outcomes of marine safety investigations, in the event of a marine casualty or marine incident, increasing the potential for jurisdictional and other procedural differences between affected States.

8 This Code, while it specifies some mandatory requirements, recognizes the variations in international and national laws in relation to the investigation of marine casualties and marine incidents. The Code is designed to facilitate objective marine safety investigations for the benefit of flag States, coastal States, the Organization and the shipping industry in general.

PART I

GENERAL PROVISIONS

Chapter 1

PURPOSE

1.1 The objective of this Code is to provide a common approach for States to adopt in the conduct of marine safety investigations into marine casualties and marine incidents. Marine safety investigations do not seek to apportion blame or determine liability. Instead a marine safety investigation, as defined in this Code, is an investigation conducted with the objective of preventing marine casualties and marine incidents in the future. The Code envisages that this aim will be achieved through States:

- .1 applying consistent methodology and approach, to enable and encourage a broad ranging investigation, where necessary, in the interests of uncovering the causal factors and other safety risks; and
- .2 providing reports to the Organization to enable a wide dissemination of information to assist the international marine industry to address safety issues.

1.2 A marine safety investigation should be separate from, and independent of, any other form of investigation. However, it is not the purpose of this Code to preclude any other form of investigation, including investigations for action in civil, criminal and administrative proceedings. Further, it is not the intent of the Code for a State or States conducting a marine safety investigation to refrain from fully reporting on the causal factors of a marine casualty or marine incident because blame or liability, may be inferred from the findings.

1.3 This Code recognizes that under the Organization's instruments, each flag State has a duty to conduct an investigation into any casualty occurring to any of its ships, when it judges that such an investigation may assist in determining what changes in the present regulations may be desirable, or if such a casualty has produced a major deleterious effect upon the environment. The Code also takes into account that a flag State shall* cause an inquiry to be held, by or before a suitably qualified person or persons into certain marine casualties or marine incidents of navigation on the high seas. However, the Code also recognizes that where a marine casualty or marine incident occurs within the territory, including the territorial sea, of a State, that State has a right** to investigate the cause of any such marine casualty or marine incident which might pose a risk to life or to the environment, involve the coastal State's search and rescue authorities, or otherwise affect the coastal State.

* Reference is made to the United Nations Convention on the Law of the Sea (UNCLOS), article 94 or requirements of international and customary laws.

** Reference is made to the United Nations Convention on the Law of the Sea (UNCLOS), article 2 or requirements of international and customary laws.

Chapter 2

DEFINITIONS

When the following terms are used in the mandatory standards and recommended practices for marine safety investigations they have the following meaning.

2.1 An *agent* means any person, natural or legal, engaged on behalf of the owner, charterer or operator of a ship, or the owner of the cargo, in providing shipping services, including managing arrangements for the ship being the subject of a marine safety investigation.

2.2 A *causal factor* means actions, omissions, events or conditions, without which:

- .1 the marine casualty or marine incident would not have occurred; or
- .2 adverse consequences associated with the marine casualty or marine incident would probably not have occurred or have been as serious;
- .3 another action, omission, event or condition, associated with an outcome in .1 or .2, would probably not have occurred.

2.3 A *coastal State* means a State in whose territory, including its territorial sea, a marine casualty or marine incident occurs.

2.4 *Exclusive economic zone* means the exclusive economic zone as defined by article 55 of the United Nations Convention on the Law of the Sea.

2.5 *Flag State* means a State whose flag a ship is entitled to fly.

2.6 *High seas* means the high seas as defined in article 86 of the United Nations Convention on the Law of the Sea.

2.7 *Interested party* means an organization, or individual, who, as determined by the marine safety investigating State(s), has significant interests, rights or legitimate expectations with respect to the outcome of a marine safety investigation.

2.8 *International Safety Management (ISM) Code* means the International Management Code for the Safe Operation of Ships and for Pollution Prevention as adopted by the Organization by resolution A.741(18), as amended.

2.9 A *marine casualty* means an event, or a sequence of events, that has resulted in any of the following which has occurred directly in connection with the operations of a ship:

- .1 the death of, or serious injury to, a person;
- .2 the loss of a person from a ship;
- .3 the loss, presumed loss or abandonment of a ship;
- .4 material damage to a ship;

- .5 the stranding or disabling of a ship, or the involvement of a ship in a collision;
- .6 material damage to marine infrastructure external to a ship, that could seriously endanger the safety of the ship, another ship or an individual; or
- .7 severe damage to the environment, or the potential for severe damage to the environment, brought about by the damage of a ship or ships.

However, a marine casualty does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

2.10 A *marine incident* means an event, or sequence of events, other than a marine casualty, which has occurred directly in connection with the operations of a ship that endangered, or, if not corrected, would endanger the safety of the ship, its occupants or any other person or the environment.

However, a marine incident does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

2.11 A *marine safety investigation* means an investigation or inquiry (however referred to by a State), into a marine casualty or marine incident, conducted with the objective of preventing marine casualties and marine incidents in the future. The investigation includes the collection of, and analysis of, evidence, the identification of causal factors and the making of safety recommendations as necessary.

2.12 A *marine safety investigation report* means a report that contains:

- .1 a summary outlining the basic facts of the marine casualty or marine incident and stating whether any deaths, injuries or pollution occurred as a result;
- .2 the identity of the flag State, owners, operators, the company as identified in the safety management certificate, and the classification society (subject to any national laws concerning privacy);
- .3 where relevant the details of the dimensions and engines of any ship involved, together with a description of the crew, work routine and other matters, such as time served on the ship;
- .4 a narrative detailing the circumstances of the marine casualty or marine incident;
- .5 analysis and comment on the causal factors including any mechanical, human and organizational factors;
- .6 a discussion of the marine safety investigation's findings, including the identification of safety issues, and the marine safety investigation's conclusions; and
- .7 where appropriate, recommendations with a view to preventing future marine casualties and marine incidents.

2.13 *Marine safety investigation Authority* means an Authority in a State, responsible for conducting investigations in accordance with this Code.

2.14 *Marine safety investigating State(s)* means the flag State or, where relevant, the State or States that take the responsibility for the conduct of the marine safety investigation as mutually agreed in accordance with this Code.

2.15 A *marine safety record* means the following types of records collected for a marine safety investigation:

- .1 all statements taken for the purpose of a marine safety investigation;
- .2 all communications between persons pertaining to the operation of the ship;
- .3 all medical or private information regarding persons involved in the marine casualty or marine incident;
- .4 all records of the analysis of information or evidential material acquired in the course of a marine safety investigation;
- .5 information from the voyage data recorder.

2.16 A *material damage* in relation to a marine casualty means:

- .1 damage that:
 - .1.1 significantly affects the structural integrity, performance or operational characteristics of marine infrastructure or a ship; and
 - .1.2 requires major repair or replacement of a major component or components;
or
- .2 destruction of the marine infrastructure or ship.

2.17 A *seafarer* means any person who is employed or engaged or works in any capacity on board a ship.

2.18 A *serious injury* means an injury which is sustained by a person, resulting in incapacitation where the person is unable to function normally for more than 72 hours, commencing within seven days from the date when the injury was suffered.

2.19 A *severe damage to the environment* means damage to the environment which, as evaluated by the State(s) affected, or the flag State, as appropriate, produces a major deleterious effect upon the environment.

2.20 *Substantially interested State* means a State:

- .1 which is the flag State of a ship involved in a marine casualty or marine incident; or
- .2 which is the coastal State involved in a marine casualty or marine incident; or
- .3 whose environment was severely or significantly damaged by a marine casualty (including the environment of its waters and territories recognized under international law); or
- .4 where the consequences of a marine casualty or marine incident caused, or threatened, serious harm to that State or to artificial islands, installations, or structures over which it is entitled to exercise jurisdiction; or
- .5 where, as a result of a marine casualty, nationals of that State lost their lives or received serious injuries; or
- .6 that has important information at its disposal that the marine safety investigating State(s) consider useful to the investigation; or
- .7 that for some other reason establishes an interest that is considered significant by the marine safety investigating State(s).

2.21 *Territorial sea* means territorial sea as defined by Section 2 of Part II of the United Nations Convention on the Law of the Sea.

2.22 *A very serious marine casualty* means a marine casualty involving the total loss of the ship or a death or severe damage to the environment.

Chapter 3

APPLICATION OF CHAPTERS IN PARTS II AND III

3.1 Part II of this Code contains mandatory standards for marine safety investigations. Some clauses apply only in relation to certain categories of marine casualties and are mandatory only for marine safety investigations into those marine casualties.

3.2 Clauses in Part III of this Code may refer to clauses in this part that apply only to certain marine casualties. The clauses in Part III may recommend that such clauses be applied in marine safety investigations into other marine casualties or marine incidents.

PART II

MANDATORY STANDARDS

Chapter 4

MARINE SAFETY INVESTIGATION AUTHORITY

4.1 The Government of each State shall provide the Organization with detailed contact information of the marine safety investigation Authority(ies) carrying out marine safety investigations within their State.

Chapter 5

NOTIFICATION

5.1 When a marine casualty occurs on the high seas or in an exclusive economic zone, the flag State of a ship, or ships, involved, shall notify other substantially interested States as soon as is reasonably practicable.

5.2 When a marine casualty occurs within the territory, including the territorial sea, of a coastal State, the flag State, and the coastal State, shall notify each other and between them notify other substantially interested States as soon as is reasonably practicable.

5.3 Notification shall not be delayed due to the lack of complete information.

5.4 **Format and content:** The notification shall contain as much of the following information as is readily available:

- .1 the name of the ship and its flag State;
- .2 the IMO ship identification number;
- .3 the nature of the marine casualty;
- .4 the location of the marine casualty;
- .5 time and date of the marine casualty;
- .6 the number of any seriously injured or killed persons;
- .7 consequences of the marine casualty to individuals, property and the environment;
and
- .8 the identification of any other ship involved.

Chapter 6

REQUIREMENT TO INVESTIGATE VERY SERIOUS MARINE CASUALTIES

- 6.1 A marine safety investigation shall be conducted into every very serious marine casualty.
- 6.2 Subject to any agreement in accordance with chapter 7, the flag State of a ship involved in a very serious marine casualty is responsible for ensuring that a marine safety investigation is conducted and completed in accordance with this Code.

Chapter 7

FLAG STATE'S AGREEMENT WITH ANOTHER SUBSTANTIALLY INTERESTED STATE TO CONDUCT A MARINE SAFETY INVESTIGATION

- 7.1 Without limiting the rights of States to conduct their own separate marine safety investigation, where a marine casualty occurs within the territory, including territorial sea, of a State, the flag State(s) involved in the marine casualty and the coastal State shall consult to seek agreement on which State or States will be the marine safety investigating State(s) in accordance with a requirement, or a recommendation acted upon, to investigate under this Code.
- 7.2 Without limiting the rights of States to conduct their own separate marine safety investigation, if a marine casualty occurs on the high seas or in the exclusive economic zone of a State, and involves more than one flag State, then the States shall consult to seek agreement on which State or States will be the marine safety investigating State(s) in accordance with a requirement, or a recommendation acted upon, to investigate under this Code.
- 7.3 For a marine casualty referred to in paragraphs 7.1 or 7.2, agreement may be reached by the relevant States with another substantially interested State for that State or States to be the marine safety investigating State(s).
- 7.4 Prior to reaching an agreement, or if an agreement is not reached, in accordance with paragraphs 7.1, 7.2 or 7.3, then the existing obligations and rights of States under this Code, and under other international laws, to conduct a marine safety investigation, remain with the respective parties to conduct their own investigation.
- 7.5 By fully participating in a marine safety investigation conducted by another substantially interested State, the flag State shall be considered to fulfil its obligations under this Code, SOLAS regulation I/21 and article 94, section 7 of the United Nations Convention on the Law of the Sea.

Chapter 8

POWERS OF AN INVESTIGATION

8.1 All States shall ensure that their national laws provide investigator(s) carrying out a marine safety investigation with the ability to board a ship, interview the master and crew and any other person involved, and acquire evidential material for the purposes of a marine safety investigation.

Chapter 9

PARALLEL INVESTIGATIONS

9.1 Where the marine safety investigating State(s) is conducting a marine safety investigation under this Code, nothing prejudices the right of another substantially interested State to conduct its own separate marine safety investigation.

9.2 While recognizing that the marine safety investigating State(s) shall be able to fulfil obligations under this Code, the marine safety investigating State(s) and any other substantially interested State conducting a marine safety investigation shall seek to co-ordinate the timing of their investigations, to avoid conflicting demands upon witnesses and access to evidence, where possible.

Chapter 10

CO-OPERATION

10.1 All substantially interested States shall co-operate with the marine safety investigating State(s) to the extent practicable. The marine safety investigating State(s) shall provide for the participation of the substantially interested States to the extent practicable*.

Chapter 11

INVESTIGATION NOT TO BE SUBJECT TO EXTERNAL DIRECTION

11.1 Marine safety investigating State(s) shall ensure that investigator(s) carrying out a marine safety investigation are impartial and objective. The marine safety investigation shall be able to report on the results of a marine safety investigation without direction or interference from any persons or organizations who may be affected by its outcome.

* The reference to "extent practicable" may be taken to mean, as an example, that co-operation or participation is limited because national laws make it impracticable to fully co-operate or participate.

Chapter 12

OBTAINING EVIDENCE FROM SEAFARERS

12.1 Where a marine safety investigation requires a seafarer to provide evidence to it, the evidence shall be taken at the earliest practical opportunity. The seafarer shall be allowed to return to his/her ship, or be repatriated at the earliest possible opportunity. The seafarers human rights shall, at all times, be upheld.

12.2 All seafarers from whom evidence is sought shall be informed of the nature and basis of the marine safety investigation. Further, a seafarer from whom evidence is sought shall be informed, and allowed access to legal advice, regarding:

- .1 any potential risk that they may incriminate themselves in any proceedings subsequent to the marine safety investigation;
- .2 any right not to self-incriminate or to remain silent;
- .3 any protections afforded to the seafarer to prevent the evidence being used against them if they provide the evidence to the marine safety investigation.

Chapter 13

DRAFT MARINE SAFETY INVESTIGATION REPORTS

13.1 Subject to paragraphs 13.2 and 13.3, where it is requested, the marine safety investigating State(s) shall send a copy of a draft report to a substantially interested State to allow the substantially interested State to make comment on the draft report.

13.2 Marine safety investigating State(s) are only bound to comply with paragraph 13.1 where the substantially interested State receiving the report guarantees not to circulate, nor cause to circulate, publish or give access to the draft report, or any part thereof, without the express consent of the marine safety investigating State(s) or unless such reports or documents have already been published by the marine safety investigating State(s).

13.3 The marine safety investigating State(s) are not bound to comply with paragraph 13.1 if:

- .1 the marine safety investigating State(s) request that the substantially interested State receiving the report to affirm that evidence included in the draft report will not be admitted in civil or criminal proceedings against a person who gave the evidence; and
- .2 the substantially interested State refuses to provide such an affirmation.

13.4 The marine safety investigating State(s) shall invite the substantially interested States to submit their comments on the draft report within 30 days or some other mutually agreed period. The marine safety investigating State(s) shall consider the comments before preparing the final report and where the acceptance or rejection of the comments will have direct impact on the interests of the State that submitted them, the marine safety investigating State(s)

shall notify the substantially interested State of the manner in which the comments were addressed. If the marine safety investigating State(s) receives no comments after the 30 days or the mutually agreed period has expired, then it may proceed to finalize the report.

13.5 The marine safety investigating State(s) shall seek to fully verify the accuracy and completeness of the draft report by the most practical means.

Chapter 14

MARINE SAFETY INVESTIGATION REPORTS

14.1 The marine safety investigating State(s) shall submit the final version of a marine safety investigation report to the Organization for every marine safety investigation conducted into a very serious marine casualty.

14.2 Where a marine safety investigation is conducted into a marine casualty or marine incident, other than a very serious marine casualty, and a marine safety investigation report is produced which contains information which may prevent or lessen the seriousness of marine casualties or marine incidents in the future, the final version shall be submitted to the Organization.

14.3 The marine safety investigation report referred in paragraphs 14.1 and 14.2 shall utilize all the information obtained during a marine safety investigation, taking into account its scope, required to ensure that all the relevant safety issues are included and understood so that safety action can be taken as necessary.

14.4 The final marine safety investigation report shall be made available to the public and the shipping industry by the marine safety investigating State(s), or the marine safety investigating State(s) shall undertake to assist the public and the shipping industry with details, necessary to access the report, where it is published by another State or the Organization.

PART III

RECOMMENDED PRACTICES

Chapter 15

ADMINISTRATIVE RESPONSIBILITIES

15.1 States should ensure that marine safety investigating Authorities have available to them sufficient material and financial resources and suitably qualified personnel to enable them to facilitate the State's obligations to undertake marine safety investigations into marine casualties and marine incidents under this Code.

15.2 Any investigator forming part of a marine safety investigation should be appointed on the basis of the skills outlined in resolution A.996(25) for investigators.

15.3 However, paragraph 15.2 does not preclude the appropriate appointment of investigators with necessary specialist skills to form part of a marine safety investigation on a temporary basis, neither does it preclude the use of consultants to provide expert advice on any aspect of a marine safety investigation.

15.4 Any person who is an investigator, in a marine safety investigation, or assisting a marine safety investigation, should be bound to operate in accordance with this Code.

Chapter 16

PRINCIPLES OF INVESTIGATION

16.1 **Independence:** A marine safety investigation should be unbiased to ensure the free flow of information to it.

16.1.1 In order to achieve the outcome in paragraph 16.1, the investigator(s) carrying out a marine safety investigation should have functional independence from:

- .1 the parties involved in the marine casualty or marine incident;
- .2 anyone who may make a decision to take administrative or disciplinary action against an individual or organization involved in a marine casualty or marine incident; and
- .3 judicial proceedings;

16.1.2 The investigator(s) carrying out a marine safety investigation should be free of interference from the parties in .1, .2 and .3 of paragraph 16.1.1 with respect to:

- .1 the gathering of all available information relevant to the marine casualty or marine incident, including voyage data recordings and vessel traffic services recordings;
- .2 analysis of evidence and the determination of causal factors;
- .3 drawing conclusions relevant to the causal factors;
- .4 distributing a draft report for comment and preparation of the final report; and
- .5 if appropriate, the making of safety recommendations.

16.2 **Safety focused:** It is not the objective of a marine safety investigation to determine liability, or apportion blame. However, the investigator(s) carrying out a marine safety investigation should not refrain from fully reporting on the causal factors because fault or liability may be inferred from the findings.

16.3 Co-operation: Where it is practicable and consistent with the requirements and recommendations of this Code, in particular chapter 10 on Co-operation, the marine safety investigating State(s) should seek to facilitate maximum co-operation between substantially interested States and other persons or organizations conducting an investigation into a marine casualty or marine incident.

16.4 Priority: A marine safety investigation should, as far as possible, be afforded the same priority as any other investigation, including investigations by a State for criminal purposes being conducted into the marine casualty or marine incident.

16.4.1 In accordance with paragraph 16.4 investigator(s) carrying out a marine safety investigation should not be prevented from having access to evidence in circumstances where another person or organization is carrying out a separate investigation into a marine casualty or marine incident.

16.4.2 The evidence for which ready access should be provided should include:

- .1 survey and other records held by the flag State, the owners, and classification societies;
- .2 all recorded data, including voyage data recorders; and
- .3 evidence that may be provided by government surveyors, coastguard officers, vessel traffic service operators, pilots or other marine personnel.

16.5 Scope of a marine safety investigation: Proper identification of causal factors requires timely and methodical investigation, going far beyond the immediate evidence and looking for underlying conditions, which may be remote from the site of the marine casualty or marine incident, and which may cause other future marine casualties and marine incidents. Marine safety investigations should therefore be seen as a means of identifying not only immediate causal factors but also failures that may be present in the whole chain of responsibility.

Chapter 17

INVESTIGATION OF MARINE CASUALTIES (OTHER THAN VERY SERIOUS CASUALTIES) AND MARINE INCIDENTS

17.1 A marine safety investigation should be conducted into marine casualties (other than very serious marine casualties – which are addressed in chapter 6 of this Code) and marine incidents, by the flag State of a ship involved, if it is considered likely that a marine safety investigation will provide information that can be used to prevent marine casualties and marine incidents in the future.

17.2 Chapter 7 contains the mandatory requirements for determining who the marine safety investigating State(s) are for a marine casualty. Where the occurrence being investigated in accordance with this chapter is a marine incident, chapter 7 should be followed as a recommended practice as if it referred to marine incidents.

Chapter 18

FACTORS THAT SHOULD BE TAKEN INTO ACCOUNT WHEN SEEKING AGREEMENT UNDER CHAPTER 7 OF PART II

18.1 When the flag State(s), a coastal State (if involved) or other substantially interested States are seeking to reach agreement, in accordance with chapter 7 of Part II on which State or State(s) will be the marine safety investigating State(s) under this Code, the following factors should be taken into account:

- .1 whether the marine casualty or marine incident occurred in the territory, including territorial sea, of a State;
- .2 whether the ship or ships involved in a marine casualty or marine incident occurring on the high seas, or in the exclusive economic zone, subsequently sail into the territorial sea of a State;
- .3 the resources and commitment required of the flag State and other substantially interested States;
- .4 the potential scope of the marine safety investigation and the ability of the flag State or another substantially interested State to accommodate that scope;
- .5 the need of the investigator(s) carrying out a marine safety investigation to access evidence and consideration of the State or States best placed to facilitate that access to evidence;
- .6 any perceived or actual adverse effects of the marine casualty or marine incident on other States;
- .7 the nationality of the crew, passengers and other persons affected by the marine casualty or marine incident.

Chapter 19

ACTS OF UNLAWFUL INTERFERENCE

19.1 If in the course of a marine safety investigation it becomes known or is suspected that an offence is committed under articles 3, *3bis*, *3ter* or *3quarter* of the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, 1988, the marine safety investigation Authority should immediately seek to ensure that the maritime security Authorities of the State(s) concerned are informed.

Chapter 20

NOTIFICATION TO PARTIES INVOLVED AND COMMENCEMENT OF AN INVESTIGATION

20.1 When a marine safety investigation is commenced under this Code, the master, the owner and agent of a ship involved in the marine casualty or marine incident being investigated, should be informed as soon as practicable of:

- .1 the marine casualty or marine incident under investigation;
- .2 the time and place at which the marine safety investigation will commence;
- .3 the name and contact details of the marine safety investigation Authority(ies);
- .4 the relevant details of the legislation under which the marine safety investigation is being conducted;
- .5 the rights and obligations of the parties subject to the marine safety investigation;
and
- .6 the rights and obligations of the State or States conducting the marine safety investigation.

20.2 Each State should develop a standard document detailing the information in paragraph 20.1 that can be transmitted electronically to the master, the agent and the owner of the ship.

20.3 Recognizing that any ship involved in a marine casualty or marine incident may continue in service, and that a ship should not be delayed more than is absolutely necessary, the marine safety investigating State(s) conducting the marine safety investigation should start the marine safety investigation as soon as is reasonably practicable, without delaying the ship unnecessarily.

Chapter 21

CO-ORDINATING AN INVESTIGATION

21.1 The recommendations in this chapter should be applied in accordance with the principles in chapters 10 and 11 of this Code.

21.2 The marine safety investigating State(s) should ensure that there is an appropriate framework within the State for:

- .1 the designation of investigators to the marine safety investigation including an investigator to lead the marine safety investigation;
- .2 the provision of a reasonable level of support to members of the marine safety investigation;

- .3 the development of a strategy for the marine safety investigation in liaison with other substantially interested States;
- .4 ensuring the methodology followed during the marine safety investigation is consistent with that recommended in resolution A.884(21), as amended;
- .5 ensuring the marine safety investigation takes into account any recommendations or instruments published by the Organization or International Labour Organization, relevant to conducting a marine safety investigation; and
- .6 ensuring the marine safety investigation takes into account the safety management procedures and the safety policy of the operator of a ship in terms of the ISM Code.

21.3 The marine safety investigating State(s) should allow a substantially interested State to participate in aspects of the marine safety investigation relevant to it, to the extent practicable.

21.3.1 Participation should include allowing representatives of the substantially interested State to:

- .1 interview witnesses;
- .2 view and examine evidence and make copies of documents;
- .3 make submissions in respect of the evidence, comment on and have their views properly reflected in the final report; and
- .4 be provided with the draft and final reports relating to the marine safety investigation*.

21.4 To the extent practical, substantially interested States should assist the marine safety investigating State(s) with access to relevant information for the marine safety investigation. To the extent practical, the investigator(s) carrying out a marine safety investigation should also be afforded access to Government surveyors, coastguard officers, ship traffic service operators, pilots and other marine personnel of a substantially interested State.

21.5 The flag State of a ship involved in a marine casualty or marine incident should help to facilitate the availability of the crew to the investigator(s) carrying out the marine safety investigation.

Chapter 22

COLLECTION OF EVIDENCE

22.1 A marine safety investigating State(s) should not unnecessarily detain a ship for the collection of evidence from it or have original documents or equipment removed unless this is

* The reference to 'extent practical' may be taken to mean, as an example, that co-operation or participation is limited because national laws make it impractical to fully co-operate or participate.

essential for the purposes of the marine safety investigation. Investigators should make copies of documents where practicable.

22.2 Investigator(s) carrying out a marine safety investigation should secure records of interviews and other evidence collected during a marine safety investigation in a manner which prevents access by persons who do not require it for the purpose of the investigation.

22.3 Investigator(s) carrying out the marine safety investigation should make effective use of all recorded data including voyage data recorders if fitted. Voyage data recorders should be made available for downloading by the investigator(s) carrying out a marine safety investigation or an appointed representative.

22.3.1 In the event that the marine safety investigating State(s) do not have adequate facilities to read a voyage data recorder, States with such a capability should offer their services having due regard to the:

- .1 available resources;
- .2 capabilities of the readout facility;
- .3 timeliness of the readout; and
- .4 location of the facility.

Chapter 23

CONFIDENTIALITY OF INFORMATION

23.1 States should ensure that investigator(s) carrying out a marine safety investigation only disclose information from a marine safety record where:

- .1 it is necessary or desirable to do so for transport safety purposes and any impact on the future availability of safety information to a marine safety investigation is taken into account; or
- .2 as otherwise permitted in accordance with this Code*.

23.2 States involved in marine safety investigation under this Code should ensure that any marine safety record in its possession is not disclosed in criminal, civil, disciplinary or administrative proceedings unless:

* States recognize that there are merits in keeping information from a marine safety record confidential where it needs to be shared with people outside the marine safety investigation for the purpose of conducting the marine safety investigation. An example is where information from a marine safety record needs to be provided to an external expert for their analysis or second opinion. Confidentiality would seek to ensure that sensitive information is not inappropriately disclosed for purposes other than the marine safety investigation, at a time when it has not been determined how the information will assist in determining the contributing factors in a marine casualty or marine incident. Inappropriate disclosure may infer blame or liability on the parties involved in the marine casualty or marine incident.

- .1 the appropriate authority for the administration of justice in the State determines that any adverse domestic or international impact that the disclosure of the information might have on any current or future marine safety investigations is outweighed by the public interest in the administration of justice; and*
- .2 where appropriate in the circumstances, the State which provided the marine safety record to the marine safety investigation authorizes its disclosure.

23.3 Marine safety records should be included in the final report, or its appendices, only when pertinent to the analysis of the marine casualty or marine incident. Parts of the record not pertinent, and not included in the final report, should not be disclosed.

23.4 States need only supply information from a marine safety record to a substantially interested State where doing so will not undermine the integrity and credibility of any marine safety investigation being conducted by the State or States providing the information.

23.4.1 The State supplying the information from a marine safety record may require that the State receiving the information undertake to keep it confidential.

Chapter 24

PROTECTION FOR WITNESSES AND INVOLVED PARTIES

24.1 If a person is required by law to provide evidence that may incriminate them, for the purposes of a marine safety investigation, the evidence should, so far as national laws allow, be prevented from admission into evidence in civil or criminal proceedings against the individual.

24.2 A person from whom evidence is sought should be informed about the nature and basis of the investigation. A person from whom evidence is sought should be informed, and allowed access to legal advice, regarding:

- .1 any potential risk that they may incriminate themselves in any proceedings subsequent to the marine safety investigation;
- .2 any right not to self-incriminate or to remain silent;
- .3 any protections afforded to the person to prevent the evidence being used against them if they provide the evidence to the marine safety investigation.

Chapter 25

* Examples of where it may be appropriate to disclose information from a marine safety record in criminal, civil, disciplinary or administrative proceedings may include:

- 1 where a person the subject of the proceedings has engaged in conduct with the intention to cause a destructive result; or
- 2 where a person the subject of the proceedings has been aware of a substantial risk that a destructive result will occur and having regard to the circumstances known to him or her it is unjustifiable to take the risk.

DRAFT AND FINAL REPORT

25.1 Marine safety investigation reports from a marine safety investigation should be completed as quickly as practicable.

25.2 Where it is requested, and where practicable, the marine safety investigating State(s) should send a copy of a draft marine safety investigation report for comment to interested parties. However, this recommendation does not apply where there is no guarantee that the interested party will not circulate, nor cause to circulate, publish or give access to the draft marine safety investigation report, or any part thereof, without the express consent of the marine safety investigating State(s).

25.3 The marine safety investigating State(s) should allow the interested party 30 days or some other mutually agreed time to submit their comments on the marine safety investigation report. The marine safety investigating State(s) should consider the comments before preparing the final marine safety investigation report and where the acceptance or rejection of the comments will have direct impact on the interests of the interested party that submitted them, the marine safety investigating State(s) should notify the interested party of the manner in which the comments were addressed. If the marine safety investigating State(s) receives no comments after the 30 days or the mutually agreed period has expired, then it may proceed to finalize the marine safety investigation report .

25.4 Where it is permitted by the national laws of the State preparing the marine safety investigation report, the draft and final report should be prevented from being admissible in evidence in proceedings related to the marine casualty or marine incident that may lead to disciplinary measures, criminal conviction or the determination of civil liability.

25.5 At any stage during a marine safety investigation interim safety measures may be recommended.

25.6 Where a substantially interested State disagrees with the whole or a part of a final marine safety investigation report, it may submit its own report to the Organization.

Chapter 26

RE-OPENING AN INVESTIGATION

26.1 Marine safety investigating State(s) which have completed a marine safety investigation, should reconsider their findings and consider re-opening the investigation when new evidence is presented which may materially alter the analysis and conclusions reached.

* See chapter 13 where provisions with respect to providing interested parties with reports on request may alternatively be included as a mandatory provision.

26.2 When significant new evidence relating to any marine casualty or marine incident is presented to the marine safety investigating State(s) that have completed a marine safety investigation, the evidence should be fully assessed and referred to other substantially interested States for appropriate input.

ANNEX 3

**RESOLUTION MSC.257(84)
(adopted on 16 May 2008)**

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR
THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention"), concerning the amendment procedure applicable to the Annex to the Convention, other than to the provisions of chapter I thereof,

HAVING CONSIDERED, at its eighty-fourth session, amendments to the Convention, proposed and circulated in accordance with article VIII(b)(i) thereof,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2009, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;
3. INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2010 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY
OF LIFE AT SEA, 1974, AS AMENDED

CHAPTER XI-1
SPECIAL MEASURES TO ENHANCE MARITIME SAFETY

- 1 The following new regulation 6 is added after the existing regulation 5:

“Regulation 6

Additional requirements for the investigation of marine casualties and incidents

Taking into account regulation I/21, each Administration shall conduct investigations of marine casualties and incidents, in accordance with the provisions of the present Convention, as supplemented by the provisions of the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code) adopted by resolution MSC.255(84), and:

- .1 the provisions of parts I and II of the Casualty Investigation Code shall be fully complied with;
- .2 the related guidance and explanatory material contained in part III of the Casualty Investigation Code should be taken into account to the greatest possible extent in order to achieve a more uniform implementation of the Casualty Investigation Code;
- .3 amendments to parts I and II of the Casualty Investigation Code shall be adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I; and
- .4 part III of the Casualty Investigation Code shall be amended by the Maritime Safety Committee in accordance with its rules of procedure.”



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