

## DAY 2

SEPT 2012 revision



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A Course prepared for



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QUESTIONS FROM DAY 1?



Exercise 1  
'THIS IS THE FUTURE'

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This is the Future - The situation



COFFEE

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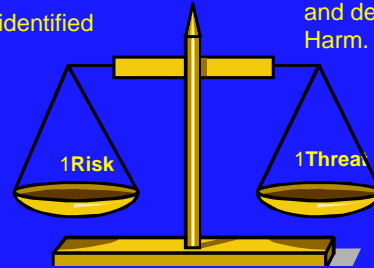
## Lecture THREE "Risk Assessment"

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## The Balance of Risk and Threat

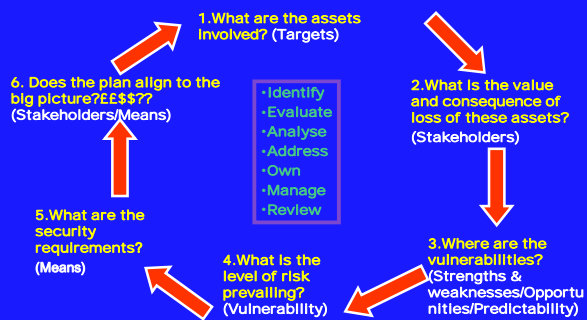
Exposure  
to the identified  
threat

The capability  
and desire to  
Harm. Who?



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### Managing Risks



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## CODE OF PRACTICE ON SECURITY IN PORTS

IMO/ILO  
MESSHP/2003/14  
Appendix A - PSA

Although aimed at Ports, It provides a very satisfactory methodology for risk assessment on ships.  
IMO Guide 2012 provides guidance and a methodology. TRAM is a simplified version of this  
In addition the US NVIC 10-02 Provides an alternative methodology – used by some RSO's undertaking the SSA.

## RISK ASSESSMENT METHODOLOGY

□ THREAT and

□ RISK

□ ASSESSMENT

□ MATRIX

- Identify Threats
- Initiate and recommend countermeasures
- To Deter, Detect, Reduce consequences
- To enable planning and Resource allocation

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### THREAT SCENARIOS 1

Consider Threat scenarios.  
*Ships and the Port Facilities they interface with which are vulnerable.*

- Direct Attack
  - Injury/Loss of Life
- Destruction of Facilities and Infrastructure
  - Hi-Jack of vessels
  - Use as a weapon
- Release of Noxious or Hazardous material.
  - Use as a weapon
- Sabotage
- Kidnap and Ransom

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## THREAT SCENARIOS 2

AREAS OF RISK MAY INCLUDE:-

### VESSELS

- ❑ Command areas (Bridge , E.R)
- ❑ Machinery Spaces
- ❑ Cargo Spaces
- ❑ I.T and Communications Infrastructure
- ❑ Areas of special vulnerability (e.g Cargo Discharge points)

### THREATS IN THE PORT ENVIRONMENT

- ❑ Cargo Gear
- ❑ Lock gates
- ❑ Radar Towers
- ❑ Impounding Stations
- ❑ Tank farms
- ❑ Rail Links
- ❑ Access Points
- ❑ Piers/Quayside and Vessels alongside

Personal security !!

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## THE THREAT 1

- ❑ Probability of an incident to be assessed using the following scale;

❑ 3 - HIGH

❑ 2 - MEDIUM

❑ 1 - LOW

- ❑ Threat Score based on Specific information or Known Characteristics of Potential Target

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## VULNERABILITY 1

TO BE ASSESSED AS FOLLOWS

- ❑ 4 = No existing security measures or ineffective security measures.

- ❑ Unrestricted access.
- ❑ No monitoring
- ❑ Untrained Staff

- ❑ 3 = Minimal Security measures.

- ❑ Inadequate Access Control
- ❑ Sporadic Monitoring
- ❑ Poor Training

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## VULNERABILITY 2

TO BE ASSESSED AS FOLLOWS

- ❑ 2 = Satisfactory Security measures

- ❑ Controls on access.
- ❑ Formal Security Training programme
- ❑ Target not easily damaged

- ❑ 1 = Fully effective Security measures.

- ❑ ALL OF "2" PLUS.....
- ❑ Ability to move to Higher Levels of Security
- ❑ Target difficult to damage
- ❑ Capable of operating if some functions damaged

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## THE RISK - Value/Consequence

What is consequence of loss ?

- ❑ Loss of life - litigation, insurance, reputation, emotional consequences
- ❑ Loss of ship - expense, reputation, business expectancy
- ❑ Loss of cargo - expense, reputation, business expectancies
- ❑ Loss of reputation - market credibility, shareholder confidence, jobs.

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## IMPACT (Consequence) 1

Assess Impact on each potential target;

- ❑ 5 = Detrimental to Security and Safety

- ❑ Loss of Life or serious injury
- ❑ Widespread danger to Public Health and safety

- ❑ 4= Detrimental to Public Safety/National Prestige

- ❑ Significant Environmental damage
- ❑ Localised Public Health and safety compromised

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## IMPACT (Consequence) 2

Assess Impact on each potential target:

- ❑ 3 = Detrimental to Environment/Economic functioning of the Port Facility and vessel operations
  - ❑ Likely to cause sustained Port wide disruption
  - ❑ Significant economic loss
  - ❑ Damage to National Prestige
- ❑ 2 = Detrimental to Assets, infrastructure, utilities and Cargo Security
  - ❑ Limited disruption to individual assets/organisation
- ❑ 1 = Detrimental to Customer and/or Port community confidence

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## RISK SCORE

Risk Score is:-

- ❑ THREAT x VULNERABILITY x IMPACT
  - ❑ HIGHEST SCORE SCENARIO WILL BE:-
  - ❑ THREAT HIGH 3
  - ❑ VULNERABILITY – NO COUNTERMEASURES x4
  - ❑ IMPACT – LOSS OF LIFE/INJURY x5
- 
- 60

LOWEST SCORE SCENARIO = 1 x 1 x 1 = 1

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## ACTION PRIORITY 1

- ❑ **Decide on a priority basis what your actions should be protecting the ship or facility from incidents and attacks.**
- ❑ **Select an option against your Risk Score.**
  - 1 Do nothing  
(Low score 1 to 5)
  - 2 Check current security measures  
(Low to Middle score 5 to 15)
  - 3 Improve existing security measures  
(Middle score 15 – 40)
  - 4 Improve and increase all security measures  
(High score 40 – 60)

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## ACTION PRIORITY 2

- ❑ Tabulating and Listing Scores for Each Threat Scenario will assist in setting priorities for Dealing with potential incidents

AND

- ❑ Provide indication of actions needed to
  - ❑ DETER
  - ❑ DETECT and
  - ❑ MITIGATE CONSEQUENCES
  - ❑ DEPLOY APPROPRIATE RESOURCES AND SECURITY MEASURES

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## THE RISK

**Manage the risk**

Implement plans

**Own the risk**

Take responsibility for solutions

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## THE THREAT

Threat assessment information sources:-

- ❑ Contracting government
- ❑ Foreign Governments
- ❑ EMSA
- ❑ Security services
- ❑ Risk Management Services
- ❑ Web sources
- ❑ Police – Special Forces Sections
- ❑ PFSO's other CSO's

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## EXERCISE 1B PRACTICAL RISK ASSESSMENT

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## COFFEE

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## Lecture FOUR "ISPS Code in Detail" PART A

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## ISPS PART 'A' - QUIZ

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## ISPS PART A, SOLAS CHAPTER V & XI

### □ DOCUMENT REVIEW & RECAP

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## VIDEO 1 'Security, Everybody's business' A Training guide

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LUNCH

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## Lecture FIVE "ISPS Code in Detail" PART B

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## ISPS CODE PART 'B' - QUIZ

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## PART B Debrief & Issues

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## MSC/Circ.1097

### International Ship Security Certificates (ISSC)

- 8 The Committee recognized that part B of the ISPS Code was albeit recommendatory, a process all parties concerned needed to go through in order to comply with part A. It was concluded that paragraph 9.4 of part A of the ISPS Code required that in order for an ISSC to be issued, the guidance in part B would need to be taken into account.
- 9 The Committee further specifically considered that an ISSC would not be issued unless paragraphs 8.1 to 13.8 of part B of the ISPS Code had been taken into account.

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## Mandatory provisions

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## EU REGULATION 725:2004

Makes:

- 1.12 (revision of ship security plans),
- 1.16 (port facility security assessment),
- 4.1 (protection of the confidentiality of security plans and assessments),
- 4.4 (recognised security organisations),
- 4.5 (minimum competencies of recognised security organisations),
- 4.8 (setting the security level),
- 4.14, 4.15, 4.16 (contact points and information on port facility security plans),
- 4.18 (identification documents),
- 4.24 (ships' application of the security measures recommended by the State in whose territorial waters they are sailing),
- 4.28 (manning level),
- 4.41 (communication of information when entry into port is denied or the ship is expelled from port),
- 4.45 (ships from a State which is not party to the Convention),

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## EU REGULATION 725:2004

- 6.1 (company's obligation to provide the master with information on the ship's operators),
- 8.3 to 8.10 (minimum standards for the ship security assessment),
- 9.2 (minimum standards for the ship security plan),
- 9.4 (independence of recognised security organisations),
- 13.6 and 13.7 (frequency of security drills and exercises for ships' crews and for company and ship security officers),
- 15.3 to 15.4 (minimum standards for the port facility security assessment),
- 16.3 and 16.8 (minimum standards for the port facility security plan),
- 18.5 and 18.6 (frequency of security drills and exercises in port facilities and for port facility security officers).

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## COFFEE

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## Lecture SIX "Ship Security Assessment"

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## What is a Ship Security Assessment (SSA)?

The SSA is a process by which competent persons identify key assets on board a ship and assesses the threats to these assets and identifies security measures that can be implemented to reduce the vulnerability of these assets.

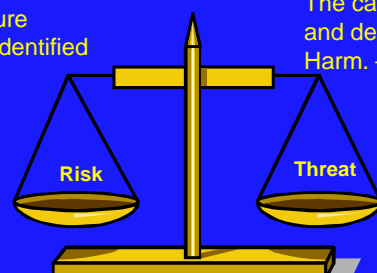
WAS & IS FIRST STAGE OF COMPLYING WITH ISPS REQUIREMENTS

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## The Balance of Risk and Threat

Exposure to the identified Threat

The capability and desire to Harm. – Who?



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## Who will undertake the SSA?

8.1 The Company Security Officer (CSO) is responsible for ensuring that a Ship Security Assessment (SSA) is carried out for each of the ships in the Company's fleet which is required to comply with the provisions of chapter XI-2 and part A of this Code for which the CSO is responsible.

While the CSO need not necessarily personally undertake all the duties associated with the post, the ultimate responsibility for ensuring that they are properly performed remains with the individual CSO.

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## SHIP SECURITY ASSESSMENT No. 1

- ❑ Assessment will be carried out by Competent persons
  - It will be ship specific.
  - It will be risk based.
  - It will be based on specific threat scenarios
  - It will involve an on site survey.
  - It will form the basis of the SSP.
  - The SSA must be protected from unauthorised access or disclosure.
- ❑ Upon completion of the SSA, a Report shall be prepared which forms the basis to develop the plan.

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## Responsibility of Contracting Governments

- ❑ Administrations are responsible (SOLAS XI.2 Reg. 3) for providing guidance to CSO's on the security risks that their ships may face on voyages, having regard to,
  - the ship type,
  - the sea areas in which the ship operates and
  - the ports and port facilities that it uses.
- ❑ If a ship changes its trading pattern, the security threats that it faces may significantly change:
- ❑ In such cases Administrations should be well placed to provide guidance on any new threats that the ship may face as a basis for updating the SSA

*SOURCE - Guide to Maritime Security and the ISPS Code*

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## SHIP SECURITY ASSESSMENT No. 2

Sect 8 Part A

- 8.4 The ship security assessment shall include an on-scene security survey and, at least, the following elements:
- .1 Identification of existing security measures, procedures and operations;
  - .2 Identification and evaluation of key ship board operations that it is important to protect;
  - .3 Identification of possible threats to the key ship board operations and the likelihood of their occurrence, in order to establish and prioritise security measures; and
  - .4 Identification of weaknesses, including human factors in the infrastructure, policies and procedures.
- 8.5 The ship security assessment shall be documented, reviewed, accepted and retained by the Company.

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## SHIP SECURITY ASSESSMENT No. 3

### PART B - 8.8

- ❑ The SSA should consider the persons, activities, services and operations that it is important to protect. This includes:
  - .1 the ship's personnel;
  - .2 passengers, visitors, vendors, repair technicians, port facility personnel, etc;
  - .3 the capacity to maintain safe navigation and emergency response;
  - .4 the cargo, particularly dangerous goods or hazardous substances;
  - .5 the ship's stores;
  - .6 the ship security communication equipment and systems, if any; and
  - .7 the ship's security surveillance equipment and systems, if any.

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## SHIP SECURITY ASSESSMENT No. 4

### Part B - Sect 8.9

- ❑ The SSA should consider all possible threats, which may include the following types of security incidents:
  - .1 damage to, or destruction of, the ship or of a port facility, e.g. by explosive devices, arson, sabotage or vandalism;
  - .2 hijacking or seizure of the ship or of persons on board;
  - .3 tampering with cargo, essential ship equipment or systems or ship's stores;
  - .4 unauthorized access or use, including presence of stowaways;
  - .5 smuggling weapons or equipment, including weapons of mass destruction;
  - .6 use of the ship to carry those intending to cause a security incident and/or their equipment;
  - .7 use of the ship itself as a weapon or as a means to cause damage or destruction;
  - .8 attacks from seaward whilst at berth or at anchor; and
  - .9 attacks whilst at sea.

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## PART B 8.7

As Mandatory - Article 3 of EC 725:2004

The SSA should consider the continuing relevance of the existing security measures and guidance, procedures and operations under both routine and emergency conditions and should determine security guidance

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## Ship & Port Restricted Areas

Part A 7.2.4 & 14.2.4 : Monitoring restricted areas



...to ensure that only authorised persons have access

Ship Access - Environment/perimeter/access?

Internal security: surveillance; identity checks, searching, extra vigilance, port vehicle controls?

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## Emergency Response

- This will require review of the response likely at the Port Facilities where the ship trades.



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## Environment

Part B 8.4.1: Knowledge of Current Security Threats and Patterns

What is the situation in the port facility....

The ship must know....

Security environment?: terrorists, criminals, stowaways

Police, military, Customs, Immigration, port security? Cooperative, effective?

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## Environment

Part A 7.2.5 ...Monitoring Decks and areas surrounding the ship



Part A 14.2.3: Monitoring ... including anchoring & berthing

Secure anchorage? : What is the Threat from terrorists, pirates, stowaways.

Are there Water Patrols, aerial surveillance, over side illumination, ?

Frequency and effectiveness of patrols

Supervision of those on board and around the ship?

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## ACCESS CONTROL



ID system, visitor control, RA Designation, The Port interface.

Security doors, barriers, lighting Surveillance equipment,

Part B 8.7.5 and B15.16.1: controlling Access

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## Part B 8.4.13; Ship & Port Operations



Port rules for entry? Scheduled? Aware of security level?  
Crew ID? Security procedures on arrival? SSO/PFSO's briefed? Who else is in port?

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## COMMUNICATIONS

A7.2.7: Security communications must be readily available

- Back-Up Systems
- Continuous and robust communication methods
- Secure/Private
- Integrated?
- B8.3.5 radio and telecommunications systems, including computer systems and networks;

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## I.T. – SECURITY MANAGEMENT

- ❑ Clear policies on use of IT
- ❑ IT Security awareness training
- ❑ Monitoring of buyers or auditors of software
- ❑ Password rules applied and enforced
- ❑ Clear Logging on and off regulations
- ❑ Authentication of callers requesting information
- ❑ Personnel Department input, past employee control and disgruntled staff
- ❑ Procedures and checks to ensure compliance with the any legislation e.g Data Protection Act 1998 in UK

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## CARGO HANDLING

7.2.6 and (14.2.5): supervising the handling of cargo



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## SHIPS STORES

Part A 7.2.6: (14.2.6)supervising the handling of ship's stores

Source?  
Integrity?  
Reconciliation?  
Their Storage?



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## SSA Considerations

- ❑ WHY WOULD THE VESSEL BE A TARGET ?
- ❑ SECURITY STRENGTHS
- ❑ SECURITY WEAKNESSES
- ❑ SECURITY OPPORTUNITIES
- ❑ PREDICTABILITY OF AN INCIDENT ?
- ❑ VULNERABILITIES BOTH PHYSICAL AND HUUMAN
- ❑ STAKEHOLDERS
- ❑ MEANS OF MITIGATION

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## SHIP SECURITY ASSESSMENT 6

- ❑ ON COMPLETION OF THE SSA:-
- ❑ IT FORMS THE BASIS OF THE SHIP SECURITY PLAN
- ❑ IT MUST ACCOMPANY THE SSP
- ❑ APPROVAL OF THE ASSESSMENT IS NOT REQUIRED
- ❑ IT NEED NOT BE REQUIRED TO BE RETAINED ON BOARD

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Questions?

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## SSA Exercise 2



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## EXERCISE 2

### PRACTICAL SHIP SECURITY ASSESSMENT



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## SUMMARY AND CLOSE



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