

ClassNK Ship Recycling Seminar
Tokyo, Japan

Hong Kong Convention and Sound Development of the Ship Recycling Industry

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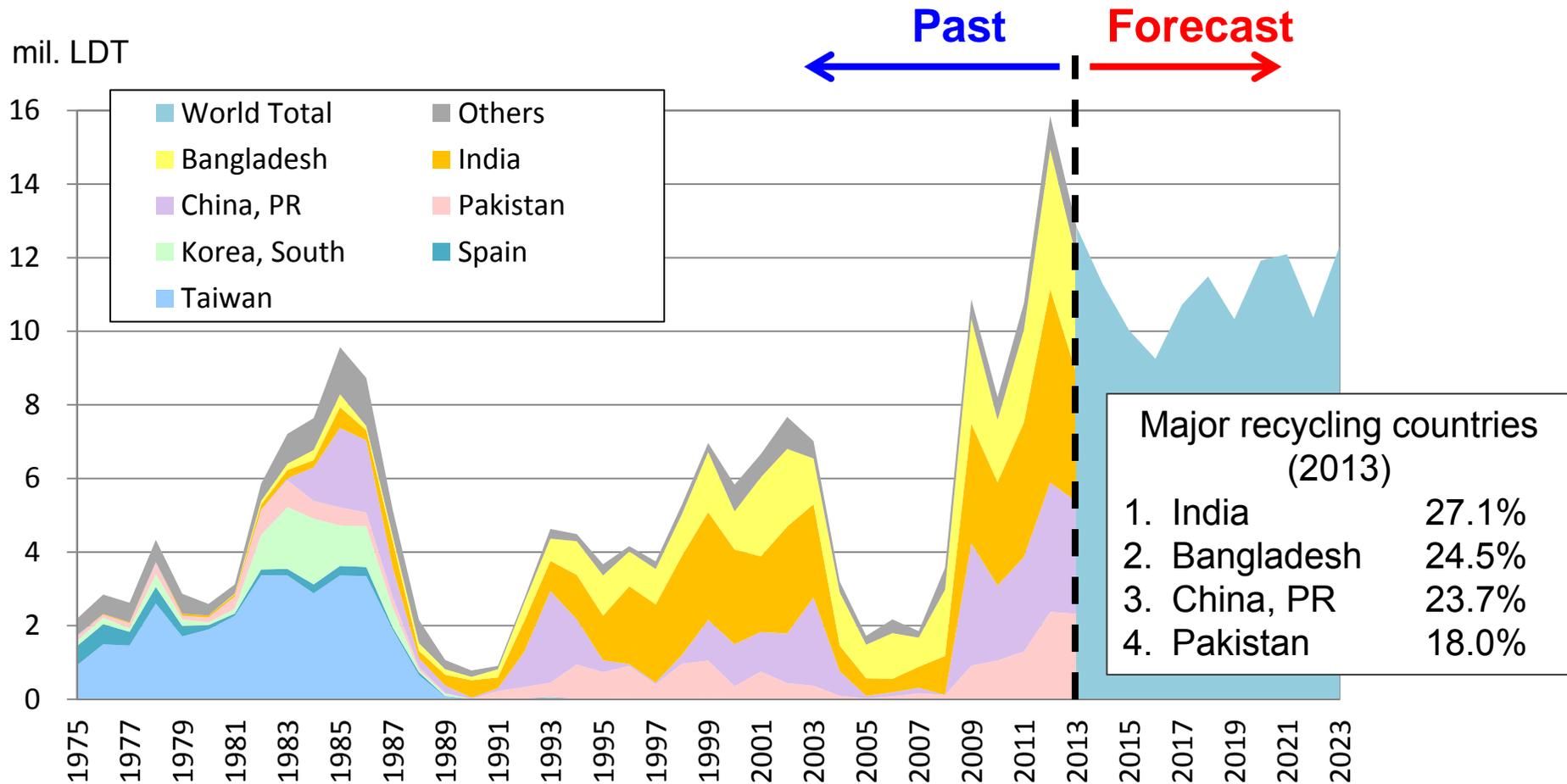
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Development of Global Ship Recycling



Ship recycling plays a significant role in the maritime industry to ensure sustainable development of seaborne trade.

Hong Kong Convention (adopted in May 2009)

The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ship, 2009 (HKC)



Purpose: Ensuring safety and environmental protection of ship recycling yards



Minimizing environmental and OSH (Occupational Safety and Health) risks while enabling replacement of old ships

Comprehensive framework for ship recycling

- Covers from the cradle to the grave
 - Every stakeholder involved: equipment manufacturers, shipyards, ship operators, Ship Recycling Facilities (SRFs)
- Aims to control
 - **Hazardous materials on board ships**
 - **Various risks at SRFs**



□ Control of hazardous materials on board:

Identify hazardous materials on board

- Prohibition/restriction of use of hazardous materials
- Development of Inventory of Hazardous Materials (IHM)
- Keeping record of types, quantities and locations of hazardous materials

□ Control of risks at Ship Recycling Facilities (SRFs):

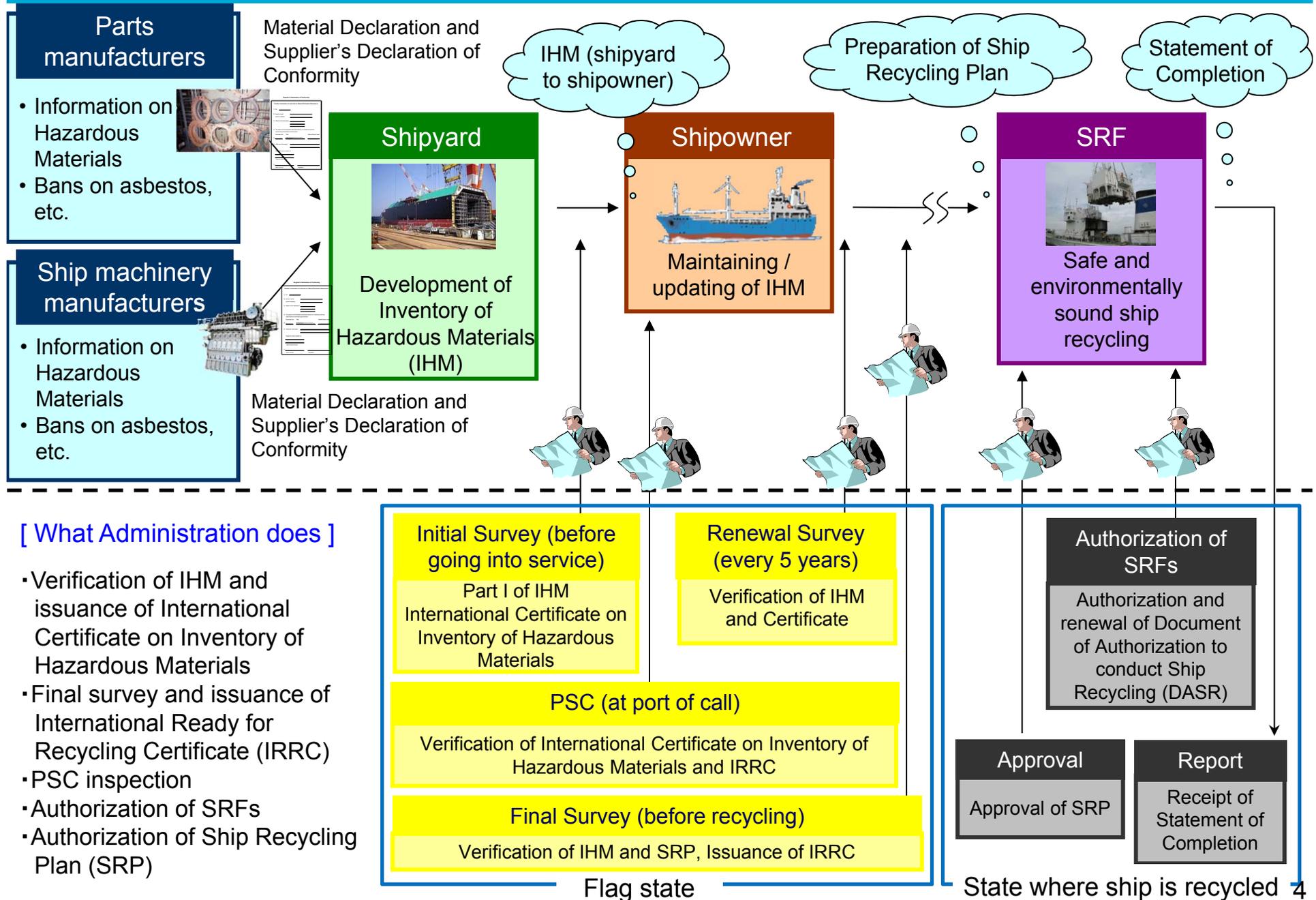
Minimize risks of workers' safety and environmental impact

- Policy ensuring safety and protection of human health and environment
 - e.g.) Personal protective equipment and clothing
- Program for appropriate information and training of workers
 - e.g.) Appropriate training and familiarization prior to recycling operation
- Management of hazardous materials
 - e.g.) Description of hazardous materials storage and processing facilities
- And more...



Implementation of HKC ensures safety and environment protection at yards.

Regulations from shipbuilding to recycling



Conditions for entry into force

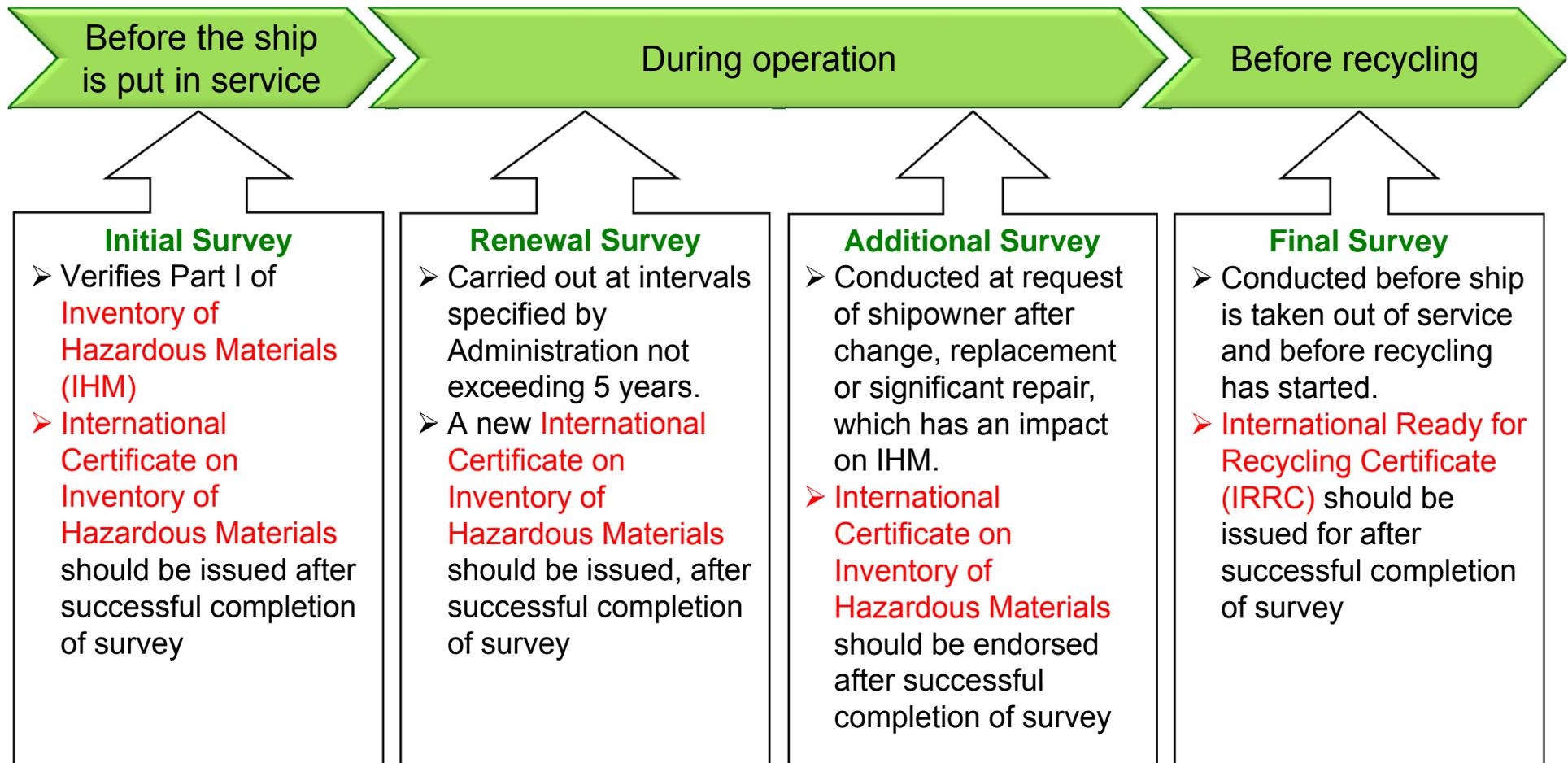
HKC's application and conditions for entry into force

- Applicable ships: International ships of 500 GT or more
- Conditions necessary for entry into force
 1. No. of contracting parties: 15 states
 2. Fleet: 40% of GT of the world's merchant shipping
 3. Recycling capacity: Maximum annual ship recycling volume of the signing states during the preceding 10 years constitutes not less than 3% of GT of the states.
- The HKC will enter into force 24 month after when the above conditions are met.
- Three states have acceded (ratified): Norway, Congo, and France (as of 1st Nov., 2014)

Inventory of Hazardous Materials and Surveys

Guidelines for the Survey and Certification under the Hong Kong Convention assists Administrations and recognized organizations in the uniform application of the provisions of the Convention, in terms of the process of conducting surveys and issuing and endorsing certificates.

Timeline and types of surveys



Port State Control (PSC)

Guidelines for the Inspection of Ships under the Hong Kong Convention provides basic guidance for conducting PSC inspections in compliance with HKC and to afford consistency in conducting these inspections, recognizing deficiencies and applying control procedures.

Overview of PSC

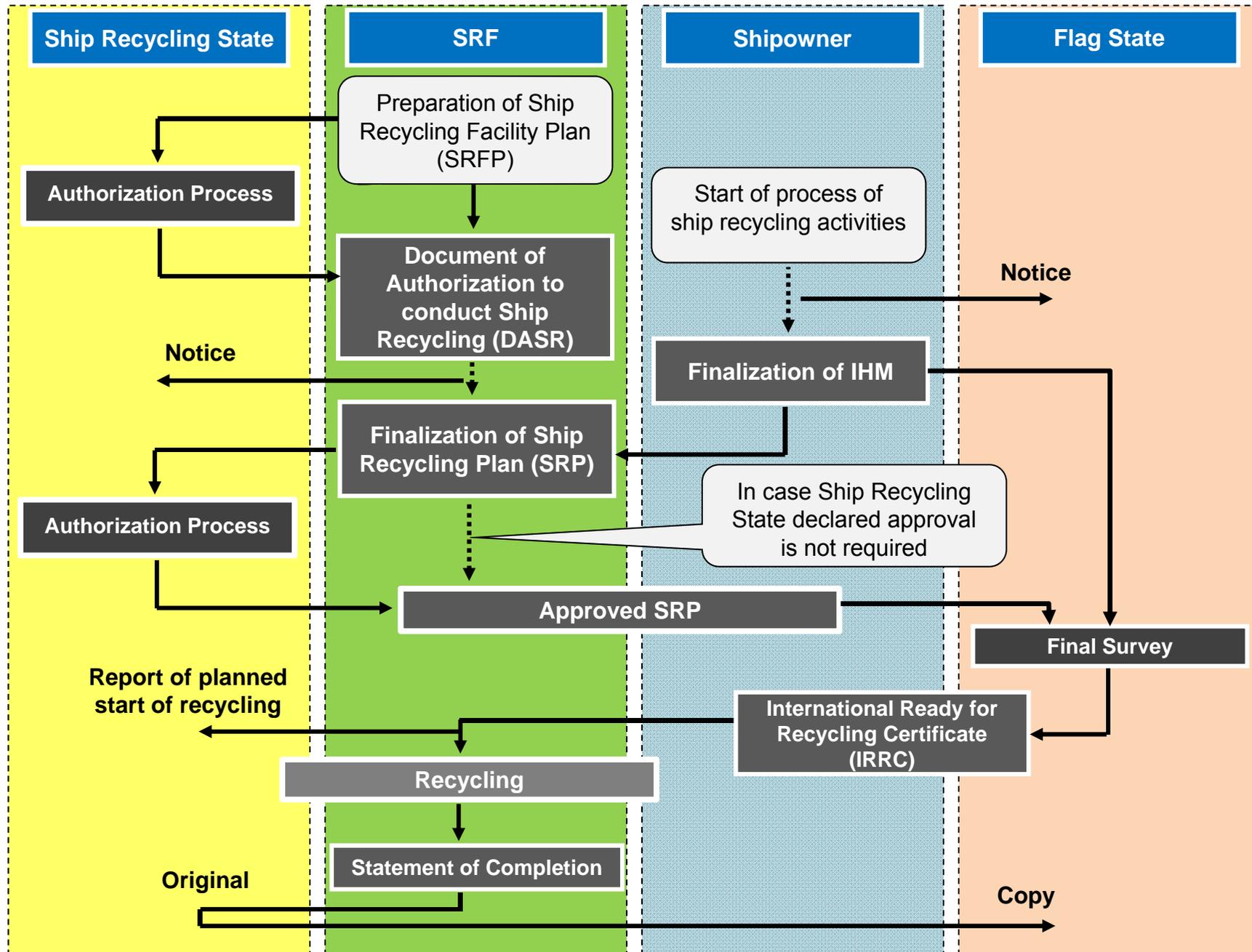
- Verifies that there is the International Certificate on Inventory of Hazardous Materials or International Ready for Recycling Certificate (IRRC) (including IHM) on board ship.
- Examines reports of previous PSC inspections.
- PSC Officer (PSCO) may proceed to more detailed inspection if there is a clear evidence for:
 1. Certificate required by Convention is missing or clearly invalid
 2. IHM is missing or clearly invalid
 3. Absence of structure or equipment identified in part I of IHM
 4. Absence of entry in part I of IHM for structure or equipment that PSCO believes contains Hazardous Materials listed in appendices 1 and 2 to Convention
 5. Failure to conduct procedures on board for maintaining part I of IHM.



PSCO may determine detention of the ship if they note,

1. failure to carry valid International Certificate on Inventory of Hazardous Materials, or, if appropriate, valid International Ready for Recycling Certificate
 2. non-compliance with control measures for Hazardous Materials* listed in appendix 1 to Convention.
- (*) Asbestos, Polychlorinated biphenyls (PCB), Anti-fouling compounds and Ozone-depleting substances

Process of Ship Recycling



Requirements of HKC for SRFs

◆ Development of Ship Recycling Facility Plan (SRFP)

Guidelines for Safe and Environmentally Sound Ship Recycling

1. Policy ensuring workers' safety and protection of human health and the environment
2. System for ensuring the HKC's requirements
3. Identification of roles and responsibilities for employers and workers
4. Program for providing information and training of workers
5. Emergency preparedness and response plan
6. System for monitoring the performance
7. System for record-keeping
8. System for reporting discharges, emissions, incidents and accidents
9. System for reporting occupational diseases, accidents, injuries, etc.

Requirements of HKC for SRFs

◆ Development of Ship Recycling Plan (SRP)

Guidelines for the Development of the Ship Recycling Plan

1. Description of specific preparatory work prior to ship arrival
2. Procedures for on-board check when ship arrives
3. Management plan of hazardous materials
4. Procedures for safe-for-entry and safe-for-hot-work
5. Dismantling sequence

Ship recycling yards using beaching method

Leela Ship Recycling Pvt. Ltd. (Alang, Gujarat, India)



- Well maintained facilities
- Properly divided work areas
- Impermeable floor (concrete)
- Drainage areas
- Workers' protective equipment

- ❑ Many of the recycling yards using beaching method would become HKC-competent yards with reasonable improvement on facilities, equipment and management.
- ❑ Japan is willing to provide technical and financial assistance to recycling yards making effort to comply with the HKC.

EU Regulation

Outline of EU Regulation



- | | |
|--------------------------|---|
| ✓ Scope | (1) Ships, (2) Ship Recycling Facilities (SRFs),
(3) Reporting requirement |
| ✓ Applied Ships | EU flagged commercial ships greater than 500GT |
| ✓ Requirements for ships | (1) Control of Hazardous Materials
(2) Inventory of Hazardous Materials (IHM)
(3) Surveys |
| ✓ Requirements for SRFs | (1) Authorization and inspection of SRFs
(2) Listing in "European List" |

- ◆ In order to recycle EU flagged ships, SRFs located outside of EU shall be listed in "European List".
- ◆ Requirements in line with HKC
 - ✓ Appropriate safety and environment management
 - ✓ Development of Ship Recycling Facility Plan (SRFP) etc.
- ◆ **Additional Requirements**
 - ✓ Control of any leakage in intertidal zones
 - ✓ Handling of Hazardous Materials only on impermeable floors with effective drainage systems
- ◆ Necessary procedures to be listed in "European List"
 - ✓ Under consideration by EC

Requirements of EU Regulation for SRFs

EU-flagged ships

[SRFs located in EU countries]

[SRFs located in non-EU countries]

1) Compliance with requirements for SRFs stipulated (Regulations 16-24 of Annex to HKC)

2) Authorization by Competent Authority where SRF is located (Article 16 of HKC)

3) Additional requirements for SRFs than HKC

Requirements for SRFs

- Control of any leakage in intertidal zones
- Handling of Hazardous Materials only on impermeable floors with effective drainage systems

Requirements for waste management facilities

- Demonstration of safe and environmentally sound waste treatment based on the standards equivalent to EU regulation

4) Additional requirements on authorization procedures : Inclusion in “European List” (*)

→ SRFs should comply with the requirement 3) in addition to requirements of HKC

EU Member State’s authorization and communication to EU is enough for inclusion.

SRF shall apply to EC, undergo site inspection and get certified by an independent verifier.

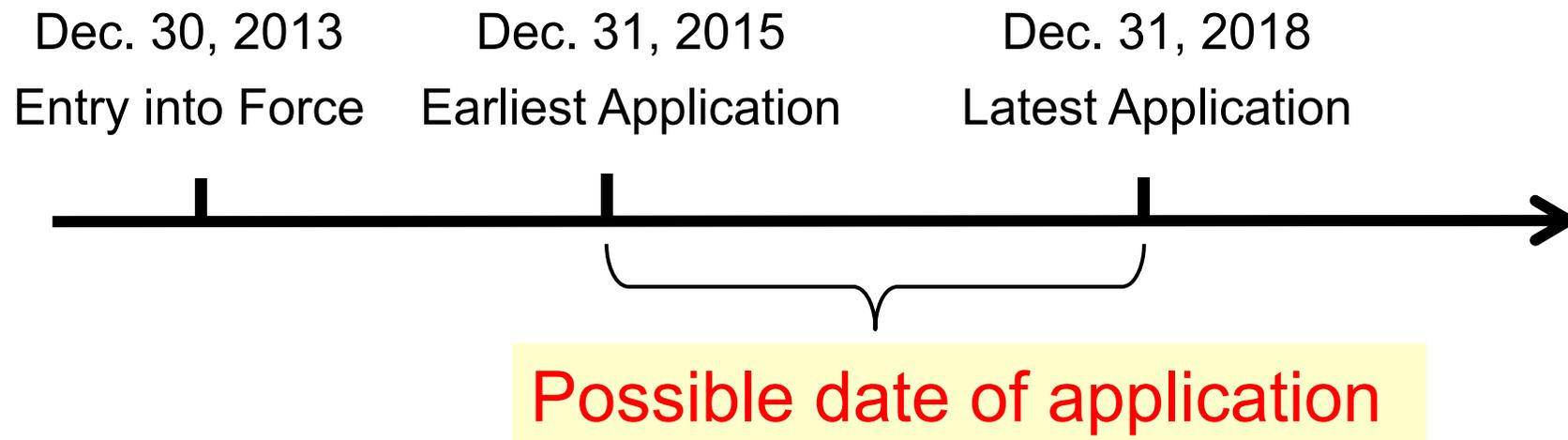
Recycling

(*) “European List” shall be published in Official Journal of EU not later than 36 month after date of entry into force of EU regulation.13

EU Regulation: Application Schedule (1)

- ◆ This Regulation shall apply from the earlier of the following two dates, but not earlier than 31 December 2015:

- (a) 6 months after combined maximum annual ship recycling output of SRFs included in European List constitutes not less than 2.5 million LDT; or
- (b) on 31 December 2018

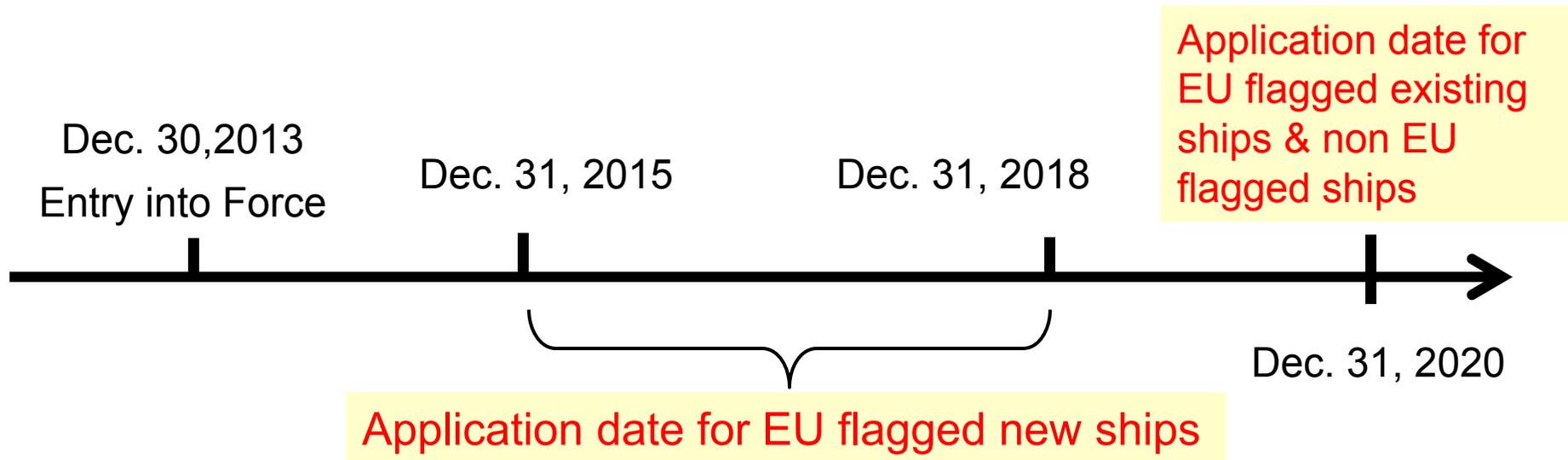


EU Regulation: Application Schedule (2)

◆ Application date for IHM requirements

When calling at a port or anchorage of a Member State, a ship flying the flag of the third country shall have on board an IHM.

- EU flagged new ships: After application
- EU flagged existing ships: Dec. 31, 2020
- Non EU flagged ships: Dec. 31, 2020



EU Regulation: Remarks on Application Date (1)

Key points of EU regulation

EU-flagged ships shall be only recycled at SRFs that are included in European List (Article 6.2 (a) of EU Regulation).

→ Recycling is possible at the SRF which is located outside EU/OECD, if the SRF is included in European List.

* Such SRF shall apply to EC, undergo site inspection and get certified by an independent verifier.



When will this provision come into effect?

Transitional Provision (Article 26 of EU Regulation) shall apply from 31 December 2014.

Article 26

As of the date of publication of the European List, Member States may, prior to the date of application of this Regulation, authorise the recycling of ships in ship recycling facilities included in the European List. In such circumstances, Regulation (EC) No 1013/2006(*) shall not apply.

(*) Regulation on shipments of waste compatible with the Basel Convention



Not only date of application, but also date of publication of European List should be considered to analyze when EU regulation substantively will come into force.

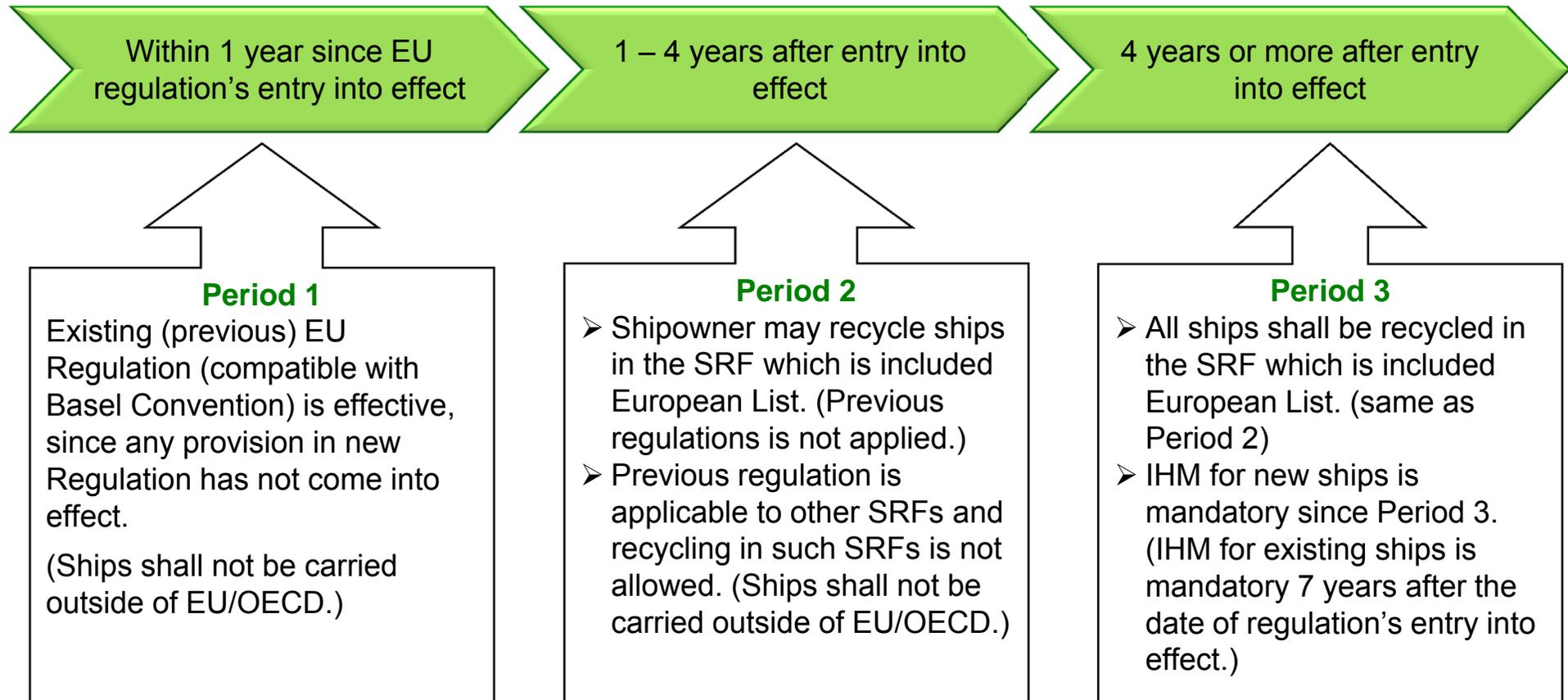
EU Regulation: Remarks on Application Date (2)

Case study

Assumptions

- Date of application: 4 years after the date that (new) EU regulation comes into effect
- Date of publication of European List: 1 year after the date that EU regulation comes into effect

Timeline



Implication of EU Regulation

1. Consistency with the HKC

- Some requirements of the EU Regulation are different from those of the HKC.
- In order to promote smooth development of the safe and environmentally sound yards and to avoid unnecessary confusion, the EU Regulation should be implemented in consistency with the HKC, insofar as possible.

2. Impact on SRFs

- Some ship recycling yards may have to lose their recycling work, since the EU Regulation stops European shipowners from recycling their ships in the yards not complying the EU Regulation.
 - EU regulations could facilitate the upgrading of existing yards?

Conclusion

- Ship recycling plays a significant role in the maritime industry to ensure sustainable development of seaborne trade.
- HKC ensures safe and environmentally sound ship recycling.
- Recycling ships in HKC-compatible SRF will send an image that the shipowner is keen on health, safety and environment (HSE) of ship recycling.
- Geological distribution of SRFs is important for shipowners; SRFs should be available in many countries for the convenience of shipowners.
- Reasonable extent of financial investment and technical improvement will enable the compliance with the HKC.
- Non-compliance with the HKC would cause significant decrease of business.
- Reasonable investment in SRFs will pay off.
- In order to ensure safe and environmentally sound ship recycling capacity, Japan is willing to support recycling yards making effort to comply with the HKC.