

**Port Safety & Security Committee**

**Report on the Survey Results on Business  
Continuity Plan (BCP) in Ports,  
in the event of any Threats, Interruptions or Disasters**



**International Association of Ports and Harbors (IAPH)**

**May 2015**

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## FOREWORD

### **Report of the IAPH Survey Results on Business Continuity Plan (BCP) In Ports In the Event of Any Threats, Interruptions or Disasters**

Dear Members,


In 2014, The Port Safety and Security Committee Meeting in Sydney agreed to study the importance of a Business Continuity Plan (BCP) for ports in light of the recent disruptions in several ports worldwide caused by natural disasters and local emergencies.

Before the Committee embarked on further work related to the subject, it was necessary to establish if ports were already equipped with a BCP and how effective these plans were in ensuring disruptions to port operations are minimized and normal operations are restored at the earliest instance.

A total of 48 members from across the globe participated in the survey which touched on several key areas with regard to development and implementation of the BCP and the various contingency plans that contribute to the common objective.

It is hoped that the report will provide member ports guidance to develop new or improve existing BCPs in future. The findings will also enable the Committee to decide if further work is required on the subject to assist members.

Thank you.



Capt. K. Subramaniam,  
Chairman of Port Safety & Security Committee  
IAPH

# **Report of the IAPH Survey Results on Business Continuity Plan (BCP) in Ports in the event of any Threats, Interruptions or Disasters**

## **Executive Summary**

### **(Background and Purpose of the Survey)**

On March 11 2011, the Great Earthquake and Tsunami in East Japan damaged almost all facilities of ports in pacific coast of north-eastern Japan and deprived their port functions.

The breakdown of logistic systems caused from the disaster gave serious impact on manufacturing industries not only destroying their production facilities but also paralyzing their supply chain networks which cover and connect all over the world.

The Port Safety and Security Committee of the International Association of Ports & Harbors (IAPH) met in Sydney during IAPH midterm port conference in April 2014. The committee agreed to make a member ports' survey on Business Continuity Plan(BCP) with recognizing importance to establish BCPs in ports for addressing possible disasters and preparing for earliest recovery of port function after casualties.

### **(Response of the Survey)**

The survey questionnaires were sent to IAPH regular members in June 2014 and got 48 answers, which accounts for 30% of registered regular members.

### **(Summary of Answers)**

#### **1. Establishment of BCPs**

63% of respondents (or 30 members) already have their BCPs. They have about 2.1 BCPs per port in average. 42% of their BCPs (or 26 BCPs) are established in recent years (after 2011 year).

#### **2. Objectives of BCPs**

About 80% of BCP ports (or 22~26 ports) recognized following items as their objectives of BCPs.

- Mitigation of effects of emergency situations
- Preparation of measures to preserve life and minimize damage
- Restoration to normal port operation
- Providing guidance for port staffs on their roles or cooperative network in emergency

### **3. Threats identified in BCPs**

#### **-1) Natural threats**

Among natural threats identified in BCPs, Earthquake, Storms and Fire are considerably highly recognized (more than 60% of respondents having BCPs) as threats to be addressed in their BCPs. On the contrary, Tsunami and Volcano eruption are recognized comparatively low (less than 50%) in total as natural threats in their BCPs. Diversification of recognition ratio of these threats in BCPs seemed to be caused by geographical differences of ports.

#### **-2) Man-made threats**

Regarding man-made threats in BCPs, all threats inquired in the questionnaires as below(\*) are identified high (about 70%) by respondents having BCPs.

(\*)Release of hazardous materials, Criminal/Civil activity threats, Maritime accidents

#### **-3) Other threats**

Other threats (Public health threat and Interruption of infrastructure threat) got comparatively moderate identification (about 50%).

### **4. Drafting parties of BCPs**

While about 80% of the respondents with BCP reported that municipal parties (city or county department) participated in drafting, only 50% reported that ports or terminals participated in drafting BCPs.

### **5. Expected parties identified in BCPs to act in emergencies**

Municipal parties such as city or county department are identified in BCPs as most expected parties (97% of respondents having BCPs recognize) to act in emergencies.

### **6. Using BCPs in emergencies**

50% of BCP equipped ports already used their BCPs in emergencies. Almost all of them (87% of using ports) recognized their BCPs are useful.

### **7. Future plan to establish BCPs by no-BCP ports**

18 responding ports (37% of respondents) do not have their BCPs yet. About 80% of them answered their intention to establish BCPs in future.

## Table of Contents

Foreword-----	i
Executive Summary-----	ii
I. Introduction-----	1
II. Survey Questionnaires-----	1
III. Analysis of responses to the survey -----	1
1. Response ratio against IAPH regular members by region -----	1
2. Regional share of respondents -----	2
IV. Analysis of survey answers -----	3
<u>Q1: Does your port have BCPs?</u> -----	3
<u>Q2: Regarding BCPs prepared in ports</u> -----	4
1. Number of BCPs and their established years -----	4
2. Objectives or intentions of ports to establish BCPs (multiple answers) -----	6
3. Threats or Hazards being identified in your BCP -----	7
4. Parties joined for drafting BCPs -----	12
5. Parties expected to act when emergency occurred -----	14
6. Revision of BCP -----	15
7. Training or Exercise of BCP -----	15
8. Experience of using BCP in actual emergencies -----	16
9. Website link to BCPs in your port -----	17
<u>Q3: Regarding ports with No-BCPs established</u> -----	18
1. Future plan to establish their BCPs -----	18
2. Type of port authority who has No-BCPs yet -----	19
3. Expected Role of Land-owner-type Ports to be acted in emergencies -----	19
IV. Appendices	
1. Summary Table of Survey Results-All Region	
2. Respondents List of IAPH Members' Survey on BCPs	
3. List of Name or Title BCPs of IAPH Members	
4. Expected Role of Port Authority in Emergencies	
5. Form of Survey Questionnaire	

## I. Introduction

The Port Safety and Security Committee of International Association of Ports & Harbors(IAPH) had its meeting in April 2014 during IAPH Midterm Port Conference in Sydney, Australia and discussed various issues relating to safety and security in port. One of key issues discussed at the meeting was how to keep or maintain port function when disasters or hazards posed severe situations on ports. The Committee recognized the importance of establishing Business Continuity Plan(BCP) in ports to maintain or restore port function in short period when disasters or hazards deprived normal functions from their ports. The committee agreed to prepare a template of BCP or guidance for ports to establish their BCPs.

As not a few member ports having developed their BCPs, the committee considered it essential to grasp current situation or contents of BCPs already established in our member ports through IAPH member ports survey.

The survey was carried out in June 2014 with sending out questionnaires to our member ports.

## II. Survey Questionnaires

Survey questionnaires comprise total twelve (12) questions, which are categorized into following three (3) fields.

Q1: Whether ports or terminals have their own BCPs or not

Q2: (For ports or terminals which have their own BCPs already)

Contents of their BCPs, such as Objectives, supposed Threats or Hazards etc.

Q3: (For ports or terminals which do not have their own BCPs yet)

Future plan of establishing BCPs in their ports or terminals

Survey Form of Questionnaires is attached in the appendix ( ) of the report.

## III. Analysis of responses to the survey

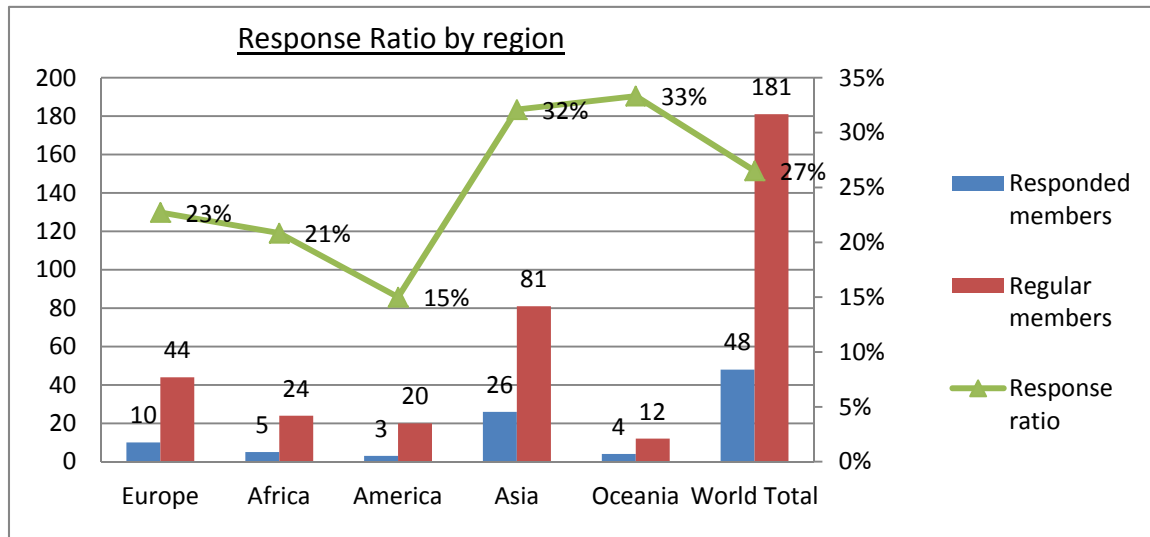
### 1. Response ratio against IAPH regular members by region

	Number of Members <u>Responded</u>	Number of <u>Regular member ports</u>	Response <u>Ratio (* %)</u>
Europe region:	10	44	(23%)
Africa region :	5	24	(21%)
America region:	3	20	(15%)
Asia region :	26	81	(32%)



Oceania region:	4	12	(33%)
Total :	48	181	(27%)

Response ratio(%): Ratio of responded members against numbers of registered regular members in each region.



Total 48 members answered the survey, which is 27% of total registered regular members. The response ratio of ports in America region was comparatively low(15%) and Asia and Oceania regions showed a relatively high responses(more than 30%) .

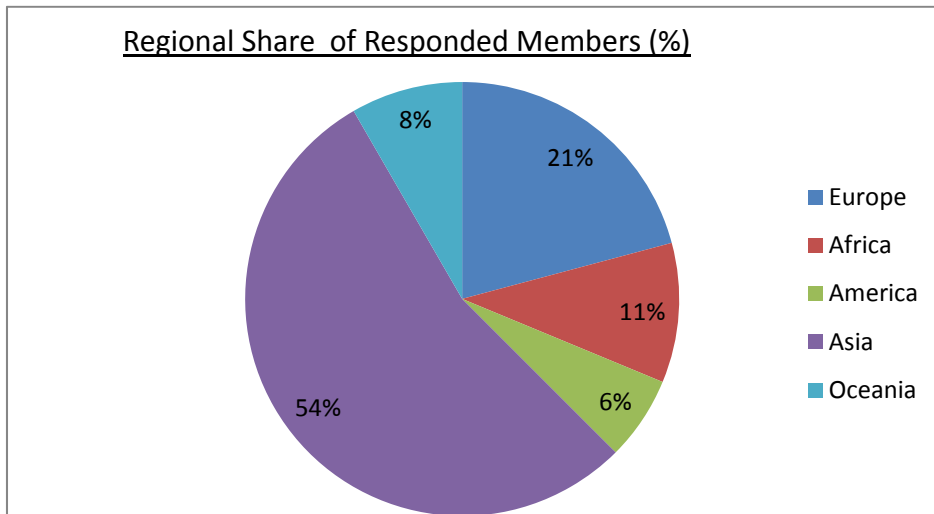
## 2. Regional share of respondents

	Number of Respondents(%*1)	Number of Ports responded(*2)	Number of Countries of respondents(*3)
Europe region:	10 (21%)	10(1.0)	8 (1.3)
Africa region :	5 (11%)	5(1.0)	5 (1.0)
America region:	3 (6%)	3(1.0)	1 (1.0)
Asia region :	26 (54%)	22(1.2)	5 (5.2)
Oceania region:	4 (8%)	4(1.0)	2 (2.0)
Total :	48 (100%)	44(1.1)	21(2.3)

(\*1): share among total respondents

(\*2) : average number of respondents per responded port in each region

(\*3) : average number of respondents per responded country in each region



Asia region shares 54% of total respondents, which was caused by high response from Japanese members. ( Respondents from Japanese ports share 35% of total respondents)

The above 48 respondents belong to 44 ports in 21 countries, which means there exist average 2.3 respondents from a country.

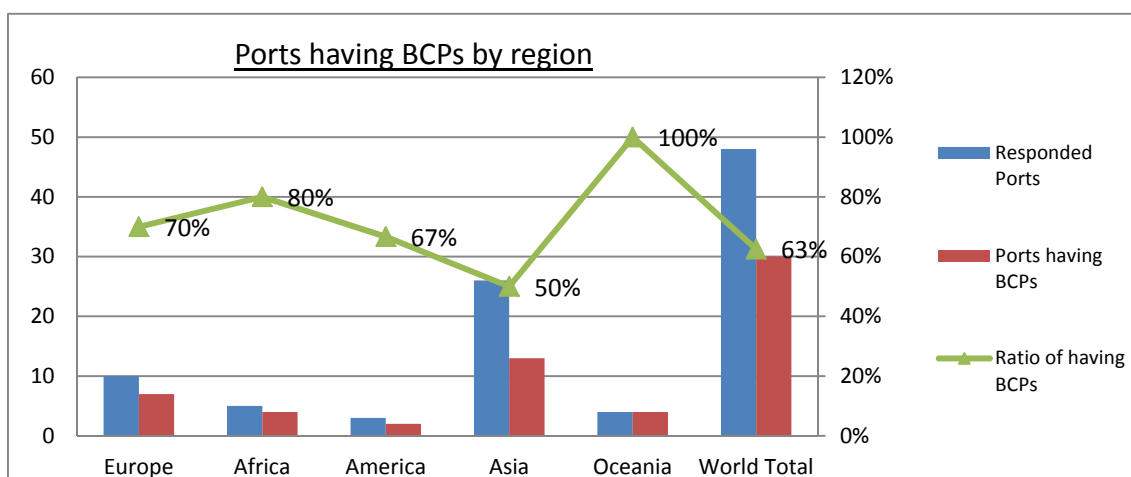
While average response ratio per responded country is 2.3, the ratio of Asian region is very high(5.2 responses per country),which was caused by high responses (17 responses) from Japanese ports.

#### IV. Analysis of survey answers

##### Q1: Does your port have BCPs?

	<u>Number of Ports having BCPs(%*)</u>	<u>Number of Ports with No-BCPs(%*)</u>	<u>Number of Ports Responded</u>
Europe region:	7(70%)	3 (30%)	10
Africa region :	4(80%)	1 (20%)	5
America region:	2(67%)	1 ( 33%)	3
Asia region :	13(50%)	13(50%)	26
Oceania region:	4(100%)	0 (0%)	4
<b>Total</b> :	<b>30(63%)</b>	<b>18(37%)</b>	<b>48</b>

(%\*): share among respondents in each region



While majority (63%) of responding ports have their BCPs already, ports in Asia region show comparatively low ratio (50%) of establishing BCPs, which was caused by low ratio (41%) of Japanese respondents having their BCPs. Excluding Asian ports, total 17 ports among 22 relevant respondents (77%) answered that they already established BCPs.

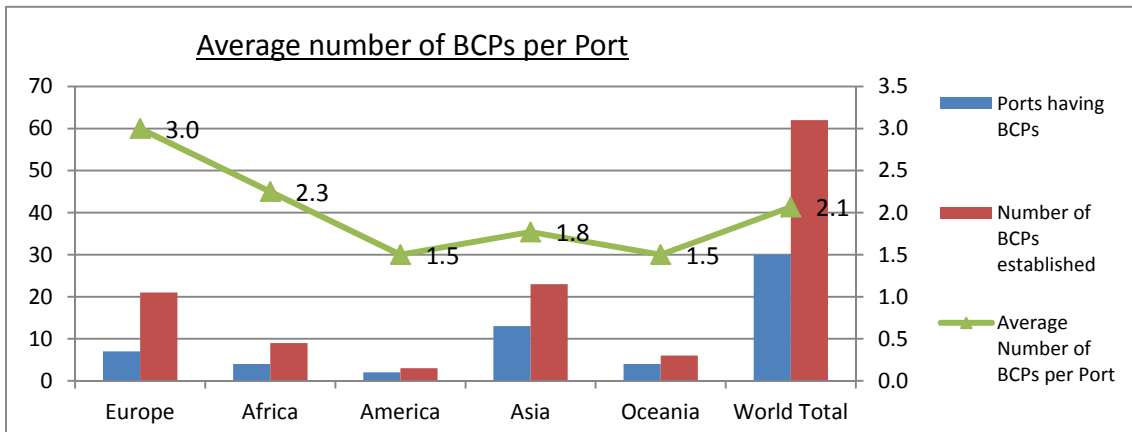
**Q2: Regarding BCPs prepared in ports**

**1. Number of BCPs and their established years**

**1) Number of BCPs / Region-wise**

	Number of Ports having BCPs	Number of BCPs established(%*)	Average number of BCPs per Port
Europe region:	7	21 (34%)	3.0
Africa region :	4	9 (14%)	2.3
America region:	2	3 ( 5%)	1.5
Asia region :	13	23 (37%)	1.8
Oceania region:	4	6 (10%)	1.5
<b>Total</b> :	<b>30</b>	<b>62(100%)</b>	<b>2.1</b>

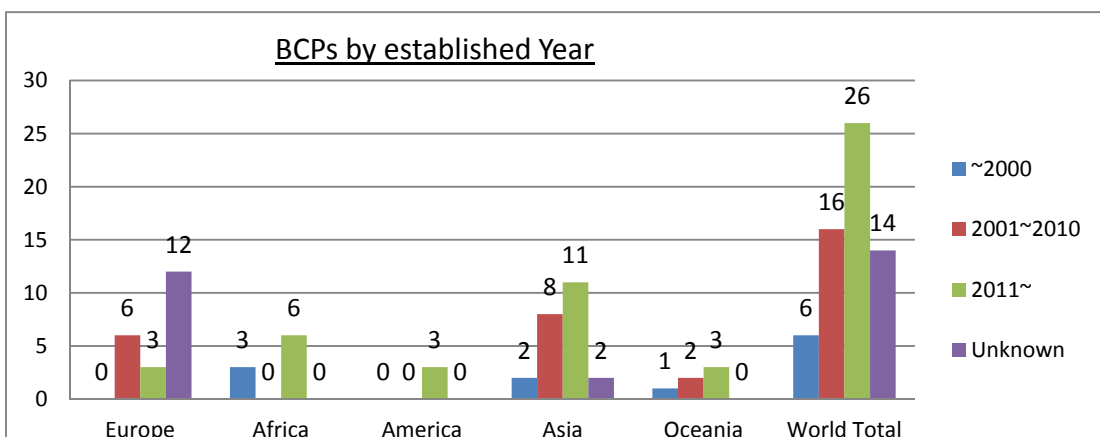
(%\*): share among total respondents



**Total 62 BCPs are reported to have been established by 30 ports or terminals, which means average 2.1 BCPs are prepared by port or terminal. Ports in Europe region have average 3.0 BCPs per port. On the other hand, ports in America and Oceania have comparatively small number of BCPs(1.5 BCPs) per port.**

## 2) Number of BCPs /by the Year of established

(Year of establishment)	~2000	2001~2010	2011~	Unknown	Total (share)
Europe region:	0	6	3	12	21
Africa region :	3	0	6	0	9
America region:	0	0	3	0	3
Asia region :	2	8	11	2	23
Oceania region:	1	2	3	0	6
<b>Total :</b>	<b>6</b>	<b>16</b>	<b>26</b>	<b>14</b>	<b>62</b>
(share)	(10%)	(26%)	(42%)	(22%)	(100%)



**Nearly half of BCPs(42%) were reported to be established in recent years.(on and after 2011~)**

## 2. Objectives or intentions of ports to establish BCPs (multiple answers)

	----- O b j e c t i v e s -----					Number of Ports
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>with BCPs</u>
Europe region:	7(100%)	6( 86%)	5(71%)	5(71%)	6(86%)	7
Africa region :	3(75%)	4(100%)	4(100%)	4(100%)	3(75%)	4
America region:	2(100%)	2(100%)	2 (100%)	2(100%)	2 (100%)	2
Asia region :	11(85%)	8(62%)	12(92%)	11(85%)	11(85%)	13
Oceania region:	3(75%)	2(50%)	2 (50%)	4(100%)	3(75%)	4
Total :	26(87%)	22(73%)	25(83%)	26(87%)	25(83%)	30

Objectives of BCPs:

### **a) Mitigation of effects of emergency situations**

=>Total 87% of ports and terminals raised a) as objective of establishing BCPs.

### **b) Preparation of measures to preserve life and minimize damage**

=>Total 73% of ports and terminals raised b) as objective of BCPs.

While ports in Europe, Africa and America regions raised this objective for establishing BCPs in high ratio(more than 85%), ports in Asia and Oceania regions show comparatively low recognition (62% & 50%) on this purpose.

### **c) Restoration to normal operation**

=>Total 83% of ports and terminals having BCPs answered c) as objective of BCPs. Only ports in Oceania region show low ratio(50%) for this objective.

### **d) Providing guidance for port staffs on their roles to be expected in emergency**

=>Total 87% of ports and terminals having BCPs raised d) as objective of BCPs.

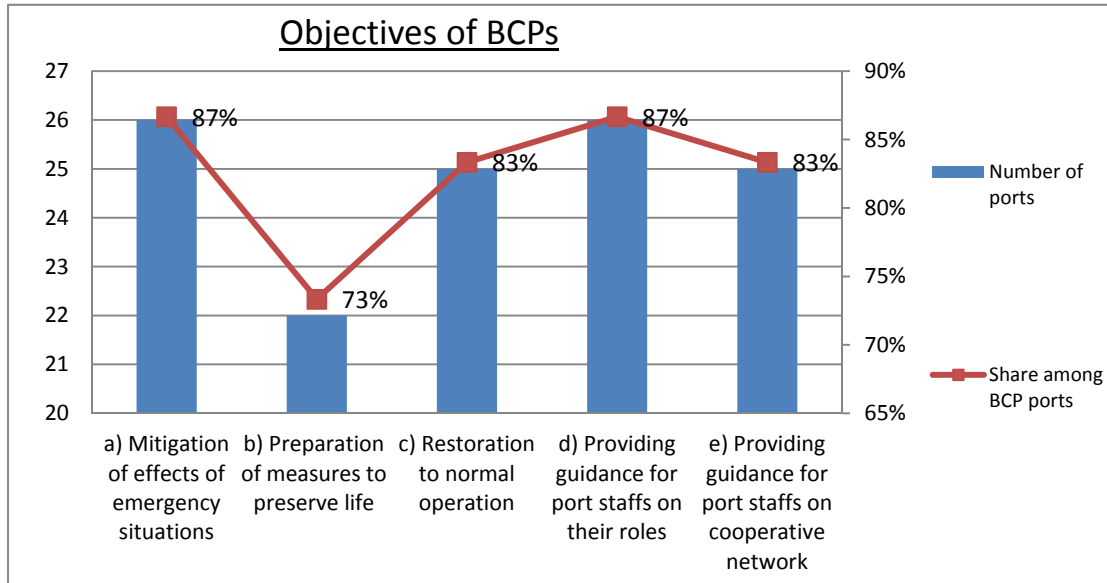
### **e) Providing guidance for port staffs on cooperative network of emergency response**

=>Total 83% of ports and terminals raised e) as objective of BCPs.

### **f) Others**

An Asian port raised following items as its objectives of establishing BCPs.

- Safety and security of port's related people and community people
- Protection of environment
- Protection of property
- Orderly continuation of mission of the port and business of its customers.



All five objectives listed above(a~e) are generally regarded essential for establishing BCPs by ports in all regions (ranging 73%~87% in all regions ).

Following three objectives are recognized high(71%~100%) by ports of every region.

- a) Mitigation of effects of emergency situations,
- d) Providing guidance for port staffs on their roles to be expected in emergency
- e) Providing guidance for port staffs on cooperative network of emergency response

Below listed objectives seemed to be not so highly recognized as essential by ports in Oceania region (50% for both items).

- b) Preparation of measures to preserve life and minimize damage
- c) Restoration to normal operation

### 3. Threats or Hazards being identified in your BCP

#### 1) Natural threats

	----- Natural Threats -----					Number of Ports with BCPs
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	
Europe region:	2(29%)	0(0%)	6(86%)	0(0%)	6(86%)	7
Africa region :	0(0%)	1(25%)	2(50%)	0(0%)	3(75%)	4
America region:	2(100%)	2(100%)	2 (100%)	0(0%)	2 (100%)	2
Asia region :	11(85%)	8(62%)	6(46%)	1(8%)	6(46%)	13
Oceania region:	3(75%)	3(75%)	4 (100%)	0(0%)	4(100%)	4
<b>Total</b>	<b>18(60%)</b>	<b>14(47%)</b>	<b>20(67%)</b>	<b>1(3%)</b>	<b>21(70%)</b>	<b>30</b>

#### **a) Earthquakes**

60% of ports having BCPs identified Earthquakes as their natural threats to address in their BCPs. Because of differences of geographical features of ports in regions, there are large gap of identification ratio of this threat in their BCPs among ports by region. While ports in America, Asia and Oceania regions recognize this threat as essential (75% and more), European and African ports seem to regard the threat less essential to be addressed (less than 30%).

#### **b) Tsunami or Tidal wave**

Only 47% of ports having BCPs identify Tsunami or Tidal wave as their essential risk to address. While ports in America, Asia and Oceania regions recognize this threat as essential (more than 60%), European and African ports seem to consider the threat less essential (less than 30%).

#### **c) Storms**

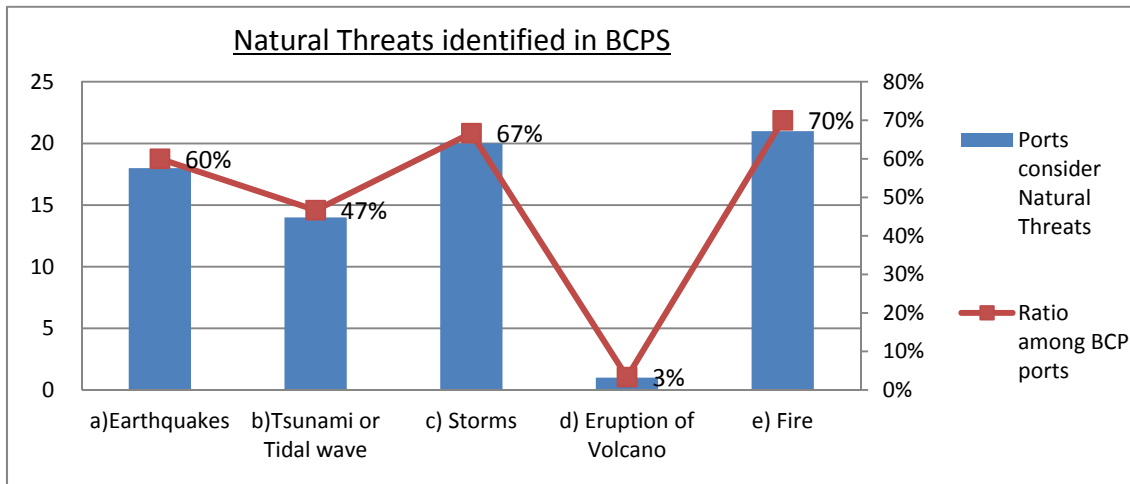
67% of ports having BCPs identified Storms as their natural threats to address. While ports in Europe, America, and Oceania regions recognize this threat as essential (more than 85%), African and Asian ports do not identify the threat much in their BCPs (50% and less).

#### **d) Eruption of Volcano**

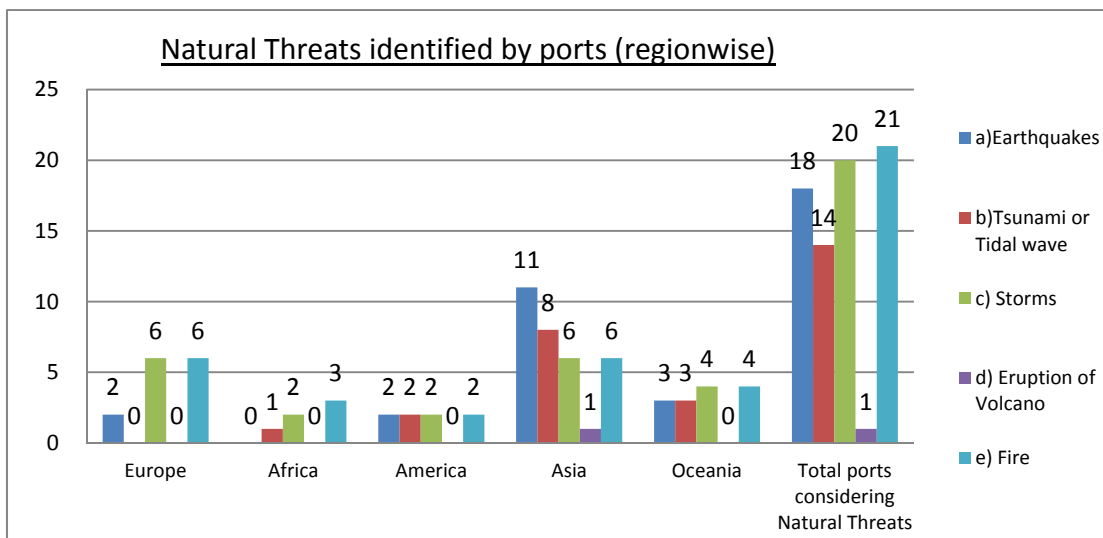
Only one port (3%) in Asia identifies Eruption of Volcano as its natural threats to address in BCPs.

#### **e) Fire**

While 70% of ports having BCPs identified Fire as their natural threats to address, ports in Japan did not seem to consider that Fire was one of their threats to be tackled in their BCPs.



a) Earthquakes, c) Storms and e) Fire are responded as recognized natural threats in their BCPs with getting considerable high affirmative ratio (60%~70%) in total.  
 b) Tsunami or Tidal wave and d) Eruption of Volcano, on the contrary, are recognized less as natural threats in BCPs, especially d) Eruption of Volcano is identified by only one BCP port.



Geographical feature of land where port locates seemed to have caused wider diversification of natural threats being identified in port's BCP.

- High identification of a) Earthquake and b) Tsunami risks in BCPs were found in ports of America (100% both, \*1), Japan (100% & 71%) and New Zealand (100% both).
- On the other hand, ports in Europe and Africa regions showed little identification of a) Earthquake (29% & nil) and b) Tsunami risks (nil & 25%) in their BCPs.

(\*1) Responding ports of America region were all US west coast ports.



**2) Man-made threats**

	----- Man-made Threats -----			Number of Ports <u>with BCPs</u>
	<u>a</u>	<u>b</u>	<u>c</u>	
Europe region:	7(100%)	7(100%)	6(86%)	7
Africa region :	4(100%)	3(75%)	3(75%)	4
America region:	2(100%)	2(100%)	1 (50%)	2
Asia region :	4(31%)	6(46%)	7(54%)	13
Oceania region:	3(75%)	3(75%)	4 (100%)	4
Total :	20(67%)	21(70%)	21(70%)	30

**a) Release of Hazardous Materials**

While comparatively high rate(67%) of identification is seen in general, ports in Asia region showed low recognition(31%) to this threat. The low identification in Asian ports seemed to be caused by no recognitions of this threat by Japanese ports.

**b) Criminal/Civil activity threats**

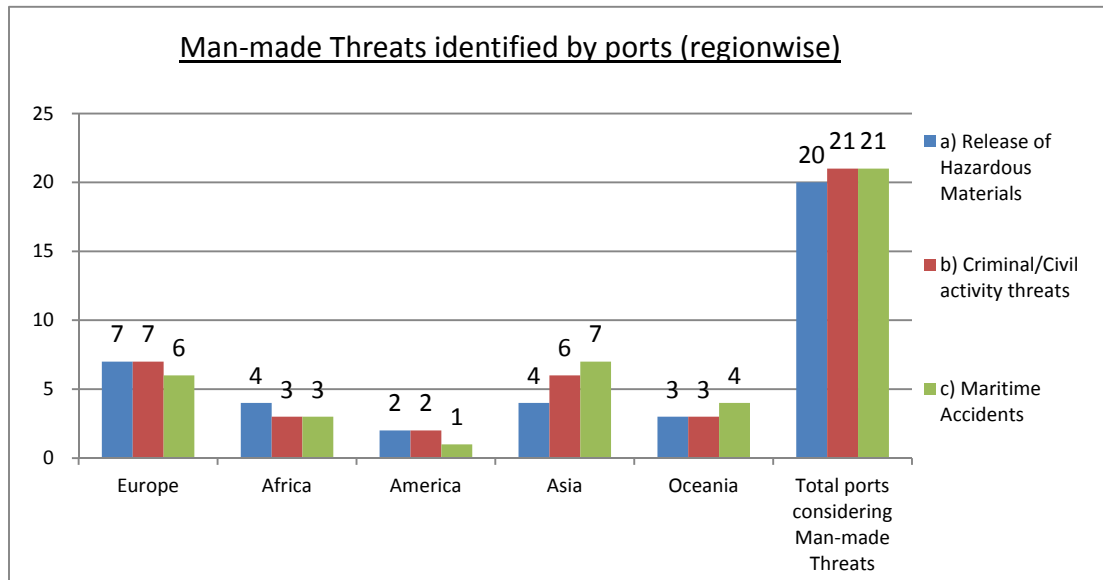
While comparatively high ratio(70%) of identification on this threat is seen in general, ports in Asia region showed low recognition(46%) to this threat. The low identification in Asian ports seemed to be caused by no recognitions of this threat by Japanese ports.

**c) Maritime Accidents**

While comparatively high rate(70%) of identification is seen on this threat in general, ports in America and Asia regions showed low recognition(50%&54%) to this threat. The low identification in these regions seemed to be caused by few recognitions of this threat by American port(1 port) and Japanese port(1 port).

**d) Others**

An American port raised “Aircraft Crash” as its one of man-made threats in BCP.



While above three man-made threats were identified comparatively high (about 70%) in BCPs in total of all regions, Asian ports showed low ratio (31%~54%) of identification of these man-made threats in their BCPs. One of reasons of these low ratio in Asia region seemed to be caused by specific low recognition of these threats by Japanese ports (0~14%).

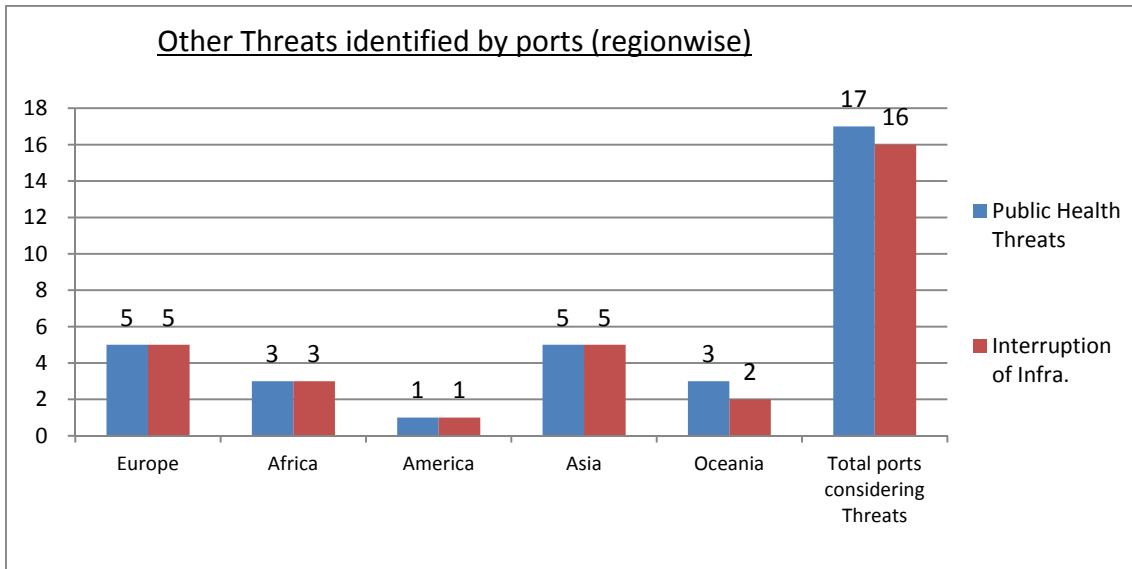
### 3) Public health threats

	<u>Public health threat</u>	<u>Number of ports with BCPs</u>
Europe region:	5(71%)	7
Africa region :	3(75%)	4
America region:	1(50%)	2
Asia region :	5(38%)	13
Oceania region:	3(75%)	4
Total :	17(57%)	30

More than half of ports having BCPs answered Public health threat as one of essential risks to be identified in their BCPs. Asian ports showed specific low recognition ratio(38%) on this threat, which seemed to be caused by no identification of this threat by Japanese ports.

#### 4) Interruption of infrastructure

	<u>Interruption of Infrastructure threat</u>	<u>Number of ports with BCPs</u>
Europe region:	5(71%)	7
Africa region :	3(75%)	4
America region:	1(50%)	2
Asia region :	5(38%)	13
<u>Oceania region:</u>	<u>2(50%)</u>	<u>4</u>
Total :	16(53%)	30



Around 53% of ports having BCPs recognized Infrastructure interruption as essential risk to be addressed in their BCPs. Asian ports showed relative low recognition ratio(38%) on this threat, which seemed to be caused by low identification(14%) by Japanese ports.

#### 4. Parties joined for drafting BCPs

	----- Participating Parties-----				Number of Ports <u>with BCPs</u>
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	
Europe region:	1(14%)	7( 100%)	0(0%)	0(0%)	7
Africa region :	2(50%)	3(75%)	0(0%)	1(25%)	4
America region:	2(100%)	2(100%)	0 (0%)	0(0%)	2
Asia region :	6(46%)	9(69%)	0(0%)	6(46%)	13
<u>Oceania region:</u>	<u>4(100%)</u>	<u>2(50%)</u>	<u>0 (0%)</u>	<u>0(0%)</u>	<u>4</u>
Total :	15(50%)	23(77%)	0(0%)	7(23%)	30

**a) Your port or terminal**

Total 50% of ports having BCPs answered that their ports or terminals themselves participated in establishing BCPs. Such participation ratios of ports are high(100%) in ports of America and Oceania regions and low(14%) in European ports.

**b) City or County department**

City or county department considered high participation(total average 77%) in drafting BCPs among ports having BCPs. While ports of all regions regarded city’s participation high in drafting BCPs, ports in Oceania region showed comparatively low participation of city or county participation(50%).

**c) Residents**

There were no ports having responded that their residents joined to draw BCPs.

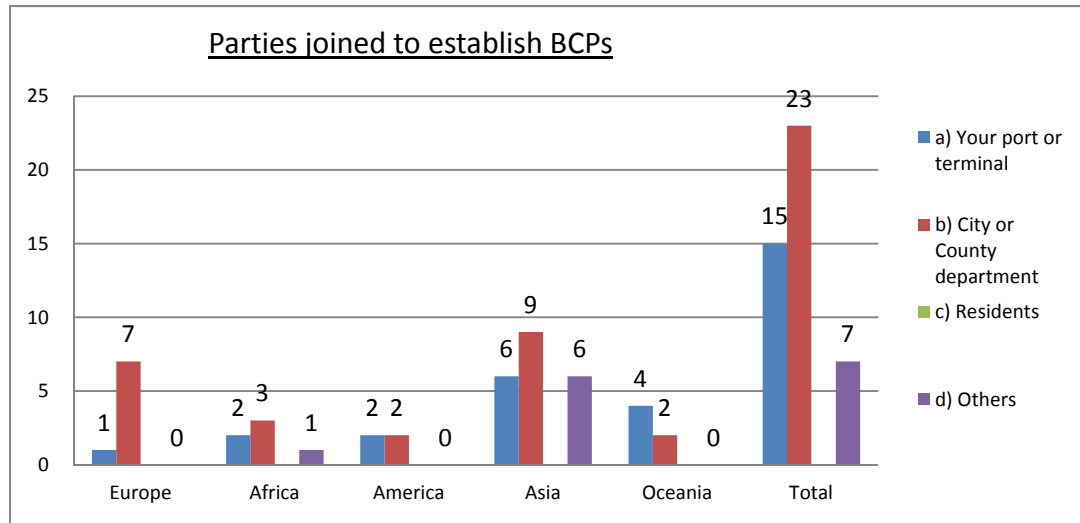
**d) Others**

An African port raised following parties as its joining parties to drafting BCPs.

-Ministries, departments and Agencies of its government.

Some Asian ports answered following parties as one of their drafting parties.

-Consultants and port related private parties including customs broker, stevedore and warehouse.



From the above survey results, it seemed that majority of BCPs in ports were drafted by parties led by municipal department(77%) with cooperation of ports(50%).

There were no cases to show that residents in relevant city of ports participated in drawing BCPs.

## 5. Parties expected to act when emergency occurred

	-- Expected Parties to act in emergency--				Number of Ports
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>with BCPs</u>
Europe region:	2(29%)	7(100%)	0(0%)	0(0%)	7
Africa region :	2(50%)	4(100%)	0(0%)	0(0%)	4
America region:	2(100%)	2(100%)	0 (0%)	0(0%)	2
Asia region :	3(23%)	12(92%)	2(15%)	8(62%)	13
<u>Oceania region:</u>	<u>4(100%)</u>	<u>4(100%)</u>	<u>0 (0%)</u>	<u>0(0%)</u>	<u>4</u>
Total :	13(43%)	29(97%)	2(15%)	8(27%)	30

(%\*): ratio against number of ports having BCPs in each region

### a) Your port or terminal

In total, 43% of BCP ports expected in their BCPs that their ports or terminals are to act in case of emergency. While ports in America and Oceania regions showed high expectancy(100%) on ports' action on emergency, ports in Europe(29%) and Asia(23%) regions showed low expectancy(less than 30%) on their activities.

### b) City or County department

Municipal departments of city or county are recognized high(97%) in their BCPs as parties expected to act in such emergencies.

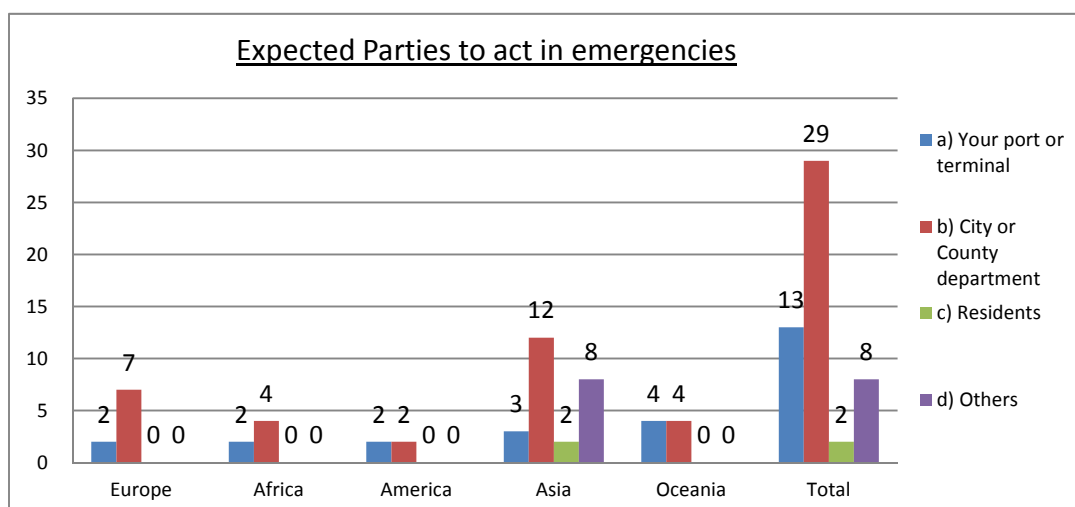
### c) Residents

Only 2 ports in Asia region recognized in their BCPs that residents are expected as acting parties in emergency cases.

### d) Others

Some Asian ports answered following parties are expected to act in emergencies.

- Port staffs and their families
- Port related parties(Customer, vendors, tenants etc)
- Government agencies including Navy
- Nearby ports



Municipal departments of city or county are generally expected as acting parties when emergency cases occurred. Almost half of BCP ports(43%) consider in their BCPs that ports and terminals are also expected to act in such emergencies.

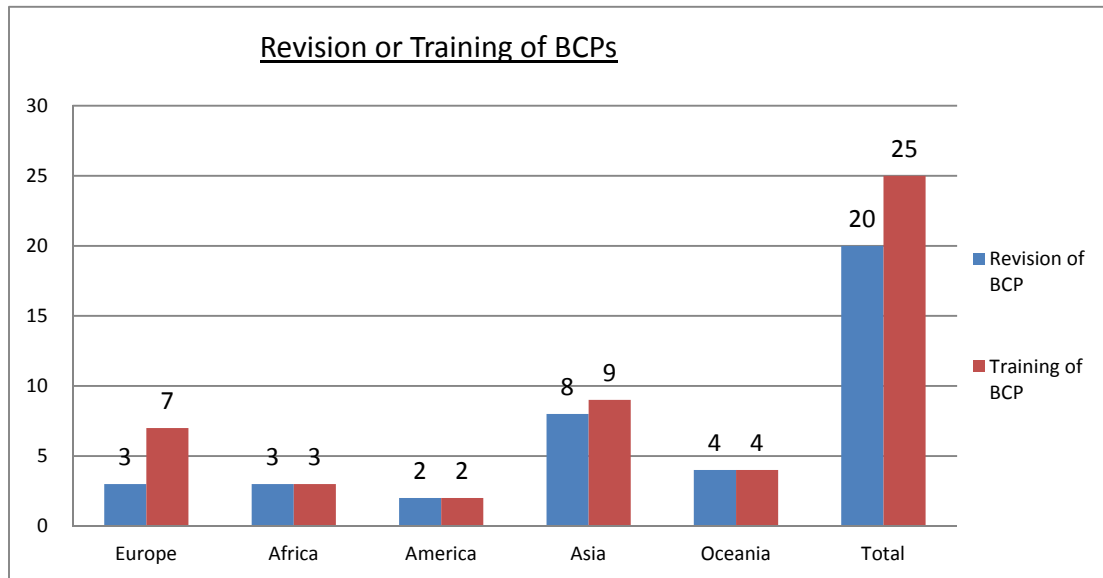
#### 6. Revision of BCP

	<u>Amended BCPs already</u>	<u>Number of ports with BCPs</u>
Europe region:	3(43%)	7
Africa region :	3(75%)	4
America region:	2(100%)	2
Asia region :	8(62%)	13
Oceania region:	4(100%)	4
<b>Total :</b>	<b>20(67%)</b>	<b>30</b>

More than half(67%) of ports in total BCP ports reported that they revised their BCPs. While ports in America and Oceania regions show high ratio(100%) of revision BCPs, European ports show low revision ratio(43%)

#### 7. Training or Exercise of BCP

	<u>Training or Exercise</u>	<u>Number of ports with BCPs</u>
Europe region:	7(100%)	7
Africa region :	3(75%)	4
America region:	2(100%)	2
Asia region :	9(69%)	13
Oceania region:	4(100%)	4
<b>Total :</b>	<b>25(83%)</b>	<b>30</b>



While low practicing ratio(43%) among Japanese ports are seen, BCP ports in total show high ratio of practicing BCP training (more than 83%).

## 8. Experience of using BCP in actual emergencies

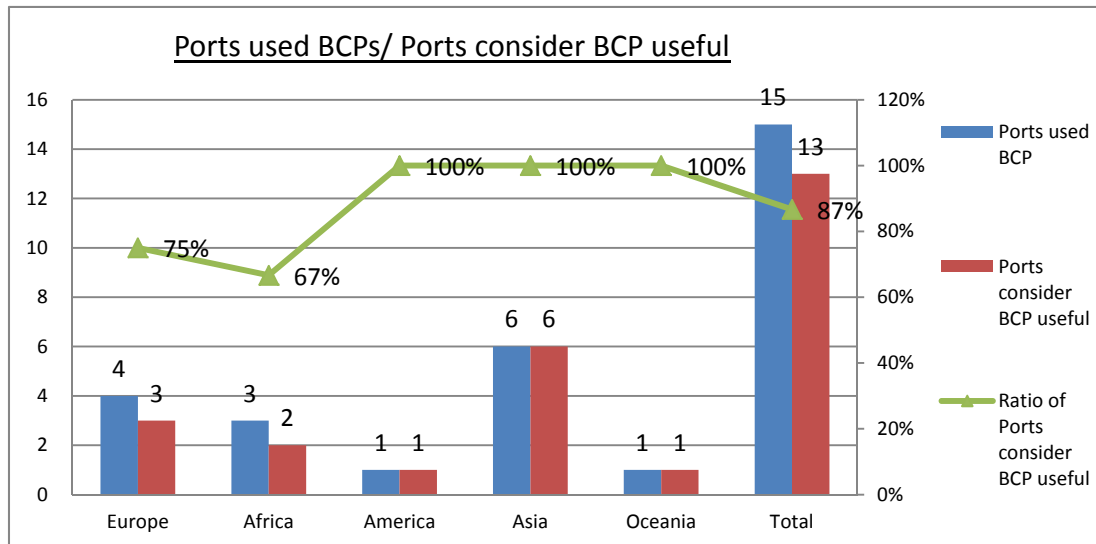
### 1) Using BCPs in emergency cases

	<u>Used BCPs in emergencies</u>	<u>Number of ports with BCPs</u>
Europe region:	4(57%)	7
Africa region :	3(75%)	4
America region:	1(50%)	2
Asia region :	6(46%)	13
Oceania region:	1(25%)	4
Total :	15(50%)	30

Half of ports having BCPs reported that they actually used their BCPs in emergencies. While there are only limited cases using BCPs in actual emergency in Japan(14%) and Oceanic ports(25%), more than half of ports in Europe and Africa regions show their usage of BCPS in actual emergencies.

**2) Is BCP useful in actual emergency cases?**

	Ports considered BCP useful(a) <i>(Ratio among BCP used ports=a/b)</i>	Ports used BCPs(b) <i>(Ratio among BCP ports=b/c)</i>	Number of ports with BCPs(c)
Europe region:	3 (75%)	4(57%)	7
Africa region :	2 (67%)	3(75%)	4
America region:	1(100%)	1(50%)	2
Asia region :	6 (100%)	6(46%)	13
Oceania region:	1(100%)	1(25%)	4
<b>Total</b> :	<b>13(87%)</b>	<b>15(50%)</b>	<b>30</b>



Many ports (87%) which used BCPs in emergency cases consider their BCPs are useful, especially all ports in America, Asia and Oceania regions considered them useful.

**9. Website link to BCPs in your port**

Following ports showed their website linking to their BCPs.

- Jawaharlal Nehru Port Trust: *Emergency Action Plan(EAP)*  
<http://www.jnport.gov.in/writereaddata/PDF/JNPTPDFEmergency%20Action%20Plan458.pdf>
- Tokyo Metropolitan Government(Tokyo port)& Tokyo Port Terminal Corporation:  
*Action plan of Tokyo Port after attacked by an earthquake occurring directly above its epicenter* (in Japanese only)  
<http://www.kouwan.metro.tokyo.jp/jigy/shingokoudou/honbun.pdf>



**Q3: Regarding ports with No-BCPs established (total 18 ports)**

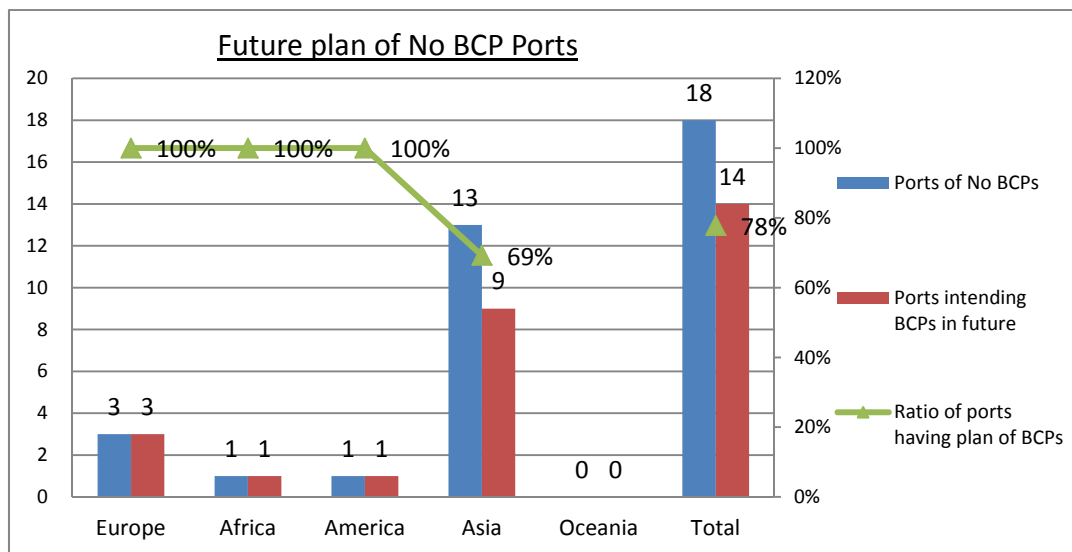
**1. Future plan to establish their BCPs**

	Number of Ports <u>with BCPs in future(%.*1)</u>	Number of Ports <u>no plan of BCPs(%.*2)</u>	Number of Ports <u>with No-BCPs</u>
Europe region:	3(100%)	0(0%)	3
Africa region :	1(100%)	0(0%)	1
America region:	1(100%)	0(0%)	1
Asia region(*3) :	9(69%)	3(23%)	13
Oceania region:	0(0%)	0(0%)	0
<b>Total :</b>	<b>14(78%)</b>	<b>3(17%)</b>	<b>18</b>

(\*1): Share of ports having plan to establish BCP in future among No-BCP ports

(\*2): Share of ports having no-plan to establish BCP in future among No-BCP ports

(\*3): As a port in Asian region did not respond to this question, total number of responded ports will not meet to total number of No-BCP ports.



**In total,78% of No-BCP ports have intention to establish BCPs in future.**

**Three ports in Asia region(17% of total) have no plans to establish BCPs in future.**

**Two ports among above three No-Planning ports raised “No sufficient resources to establish BCP” as their reasons of no intension of having BCPs in future.**

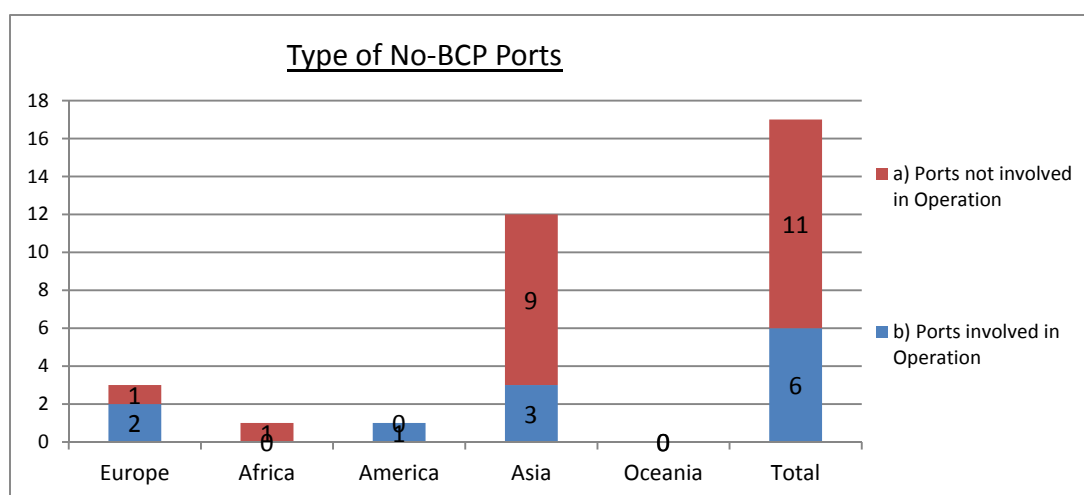
## 2. Type of port authority who has No-BCPs yet

	Number of Ports Involved in <u>Port Operation(%,*1)</u>	Number of Ports Not Involved in <u>Port Operation(%,*2)</u>	Number of Ports with <u>No-BCPs</u>
Europe region:	2(67%)	1(33%)	3
Africa region :	0(0%)	1(100%)	1
America region:	1(100%)	0(0%)	1
Asia region(*3) :	3(23%)	9(69%)	13
Oceania region:	0(0%)	0(0%)	0
<b>Total :</b>	<b>6(33%)</b>	<b>11(61%)</b>	<b>18</b>

(\*1): Share of ports involved in port operation among No-BCP ports

(\*2): Share of ports not-involved in port operation among No-BCP ports

(\*3): As a port in Asian region did not respond to this question, total number of responded ports will not meet to total number of No-BCP ports.



In total, 61% of them (11 ports) are not involved in daily port operation(=land-owner type ports).

## 3. Expected Role of Land-owner-type Ports to be acted in emergencies

- An African port : -Responsibility to ensure continuation of port function in the event of interruption.
- An European port: -Port emergency planning
  - Centralization of alert messages
  - Ship & barge traffic management
  - Safe berth sharing
  - Constant dialogue with State & Local authorities

- Oil & Chemical pollution fighting operations
- Dangerous goods policing
- Road traffic control inside harbor area
- Rescue systems for PCS software
- Securing communication measures in emergencies
- Asian ports : -Coordinated action with respective port managers activating the emergency and contingency plans.
- Grasp damage situation and workable port facilities in port area
- Notice to port users of incident related port information
- Ensure communication among port related parties
- Restoration planning of damaged port facilities
- Coordination with port related parties for repair port facilities and restoration of port function

**In emergency cases, they are expected to act as coordinators between public agencies of municipalities and ports/terminals for soonest resumption of port functions.**

**Restoration of port function is mainly expected to such type of port authorities with making arrangement for repair of damaged port facilities in close coordination with relevant departments of state, city and county.**

### Summary Table of Answers to IAPH Survey on Business Continuity Plan (BCP)

Region		Europe	Africa	America	Asia	Oceania	World Total
Country		8	5	1	5	2	21
Port		10	5	3	22	4	44
Organization		10	5	3	26	4	48
<i>(share among total)</i>		21%	10%	6%	54%	8%	100%
<b>Q1: Business Continuity Plan (BCP) in your port</b>							
Does your port/terminal have BCP? <i>(YES/NO)</i>		YES	NO	YES	NO	YES	NO
1		7	3	4	1	2	1
<i>(Ratio of Yes)</i>		70%		80%		67%	
						50%	
						100%	
						63%	
<b>Q2: Regarding BCPs in your port</b>							
1		Name of BCPs & their established year					
		Please see the list of BCPs (*1)					
2		Objective of BCPs (multiple choice)					
		<i>Ports having BCPs</i>					
		7	4	2	13	4	30
1)		To mitigate the effects of emergency situations					
		7	3	2	11	3	26
		<i>(Share among BCP ports in the region)</i>					
		100%	75%	100%	85%	75%	87%
2)		To prepare measures for preserving life & minimizing damage					
		6	4	2	8	2	22
		<i>(Share among BCP ports in the region)</i>					
		86%	100%	100%	62%	50%	73%
3)		To recover to normal operation in short period					
		5	4	2	12	2	25
		<i>(Share among BCP ports in the region)</i>					
		71%	100%	100%	92%	50%	83%
4)		To provide guidance for port staff on their role responding to emergencies					
		5	4	2	11	4	26
		<i>(Share among BCP ports in the region)</i>					
		71%	100%	100%	85%	100%	87%
5)		To provide guidance about cooperative network of emergency response					
		6	3	2	11	3	25
		<i>(Share among BCP ports in the region)</i>					
		86%	75%	100%	85%	75%	83%
6)		Others					
					4		4
		<i>(Share among BCP ports in the region)</i>					
		0%	0%	0%	31%	0%	13%
3		Threats or hazards identified as potential risk in BCP (multiple choice)					
		<i>BCP Ports</i>					
		7	4	2	13	4	30
<b>Natural Threats</b>							
1)		Earthquake					
		2		2	11	3	18
		<i>(Share among BCP ports)</i>					
		29%	0%	100%	85%	75%	60%
2)		Tsunami/Tidal Wave					
			1	2	8	3	14
		<i>(Share among BCP ports)</i>					
		0%	25%	100%	62%	75%	47%
3)		Storms					
		6	2	2	6	4	20
		<i>(Share among BCP ports)</i>					
		86%	50%	100%	46%	100%	67%
4)		Eruption of Volcano					
					1		1
		<i>(Share among BCP ports)</i>					
		0%	0%	0%	8%	0%	3%
5)		Fire					
		6	3	2	6	4	21
		<i>(Share among BCP ports)</i>					
		86%	75%	100%	46%	100%	70%
6)		Others					
			1		2		3
		<i>(Share among BCP ports)</i>					
		0%	25%	0%	15%	0%	10%
<b>Man-made Threats</b>							
1)		Release of Hazardous materials					
		7	4	2	4	3	20
		<i>(Share among BCP ports)</i>					
		100%	100%	100%	31%	75%	67%
2)		Criminal/Civil Activity threats					
		7	3	2	6	3	21
		<i>(Share among BCP ports)</i>					
		100%	75%	100%	46%	75%	70%
3)		Maritime Accidents					
		6	3	1	7	4	21
		<i>(Share among BCP ports)</i>					
		86%	75%	50%	54%	100%	70%
4)		Others					
				1			1
		<i>(Share among BCP ports)</i>					
		0%	0%	50%	0%	0%	3%
<b>Public health threats</b>							
		Infectious disease					
		5	3	1	5	3	17
		<i>(Share among BCP ports)</i>					
		71%	75%	50%	38%	75%	57%
<b>Interruption of infrastructure</b>							
		Water,gas,electricity,etc stoppage					
		5	3	1	5	2	16
		<i>(Share among BCP ports)</i>					
		71%	75%	50%	38%	50%	53%
<b>Others</b>							
		<i>(Share among BCP ports)</i>					

Region		Europe	Africa	America	Asia	Oceania	World Total						
<b>4</b>	<b>Parties joined to draw BCP</b>												
1)	Your port/terminal	1	2	2	6	4	15						
	(Share among BCP ports)	14%	50%	100%	46%	100%	50%						
2)	City or county department	7	3	2	9	2	23						
	(Share among BCP ports)	100%	75%	100%	69%	50%	77%						
3)	Residents												
	(Share among BCP ports)	0%	0%	0%	0%	0%	0%						
4)	Othes		1		6		7						
	(Share among BCP ports)	0%	25%	0%	46%	0%	23%						
<b>5</b>	<b>Expected Parties to act when emergencies</b>												
1)	Your port/terminal	2	2	2	3	4	13						
	(Share among BCP ports)	29%	50%	100%	23%	100%	43%						
2)	City or county department	7	4	2	12	4	29						
	(Share among BCP ports)	100%	100%	100%	92%	100%	97%						
3)	Residents				2		2						
	(Share among BCP ports)	0%	0%	0%	15%	0%	7%						
4)	Othes				8		8						
	(Share among BCP ports)	0%	0%	0%	62%	0%	27%						
<b>6</b>	<b>Revision or Amendment of BCPs</b>												
	Did you amend your BCP (YES/NO)	YES 3	NO 4	YES 3	NO 1	YES 2	NO	YES 8	NO 5	YES 4	NO	YES 20	NO 10
	(Share among BCP ports)	43%		75%		100%		62%		100%		67%	
<b>7</b>	<b>Training or Exercise based on BCP</b>												
	Training or exercise ever made based on BCP (YES/NO)	YES 7	NO	YES 3	NO 1	YES 2	NO	YES 9	NO 4	YES 4	NO	YES 25	NO 5
	(Share among BCP ports)	100%		75%		100%		69%		100%		83%	
<b>8</b>	<b>Using BCPs in actual emergencies</b>												
	Ever used BCP in actual disaster ? (YES/NO)	YES 4	NO 2	YES 3	NO 1	YES 1	NO 1	YES 6	NO 5	YES 1	NO 3	YES 15	NO 12
	(Share among BCP ports)	57%		75%		50%		46%		25%		50%	
1)	Is BCP useful in actual case? (YES/NO)	YES 3	NO	YES 2	NO 1	YES 1	NO	YES 6	NO 2	YES 1	NO	YES 13	NO 3
	(Share among BCP-used ports)	75%		67%		100%		100%		100%		87%	
	(Share among BCP having ports)	43%		50%		50%		46%		25%		43%	
2)	If above 1) is NO, what is the reason of being not useful?												
a)	Staffs were not advised of BCP												
b)	Staffs were not trained before												
c)	Smooth communication was difficult												
d)	Loss of office or manpower												
e)	Others												
<b>9</b>	<b>Website link to your BCP (if available)</b>												
	(Share among BCP ports)							3				3	
	(Share among BCP ports)							23%				10%	

Region		Europe		Africa		America		Asia		Oceania		World Total	
<b>Q3 : Regarding port/terminal without BCPs</b>													
<b>No-BCP ports</b>		<b>3</b>		<b>1</b>		<b>1</b>		<b>13</b>		<b>0</b>		<b>18</b>	
<b>Future Plan to establish BCPs in your port</b>													
1	Do you intend to establish BCP in future? (YES/NO)	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
		3		1		1		9	3			14	3
	(Share among No-BCP ports)	100%		100%		100%		69%				78%	
<b>No-future BCP Plan Ports</b>		<b>0</b>		<b>0</b>		<b>0</b>		<b>3</b>		<b>0</b>		<b>3</b>	
<b>If NO to above 1,what is the reason? (Why don't you intend to have BCPs in future?)</b>													
1)	No specific need												
2)	Difficulty to establish practical BCP												
3)	No sufficient resources to make BCP							2				2	
	(Share among No-Future BCP planning ports)							67%				67%	
4)	Others							1				1	
	(Share among No-Future BCP planning ports)							33%				33%	
<b>Type of Port Authority</b>													
2	Are you as Port Authority, involved in daily port operation? (YES/NO)	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
		2	1		1	1		3	9			6	11
	(Share among No-BCP ports)	67%		0%		100%		23%				33%	
	If NO to above 2,what is your Role in the port when emergency occurred? (Please see the attached sheet *2 for details of comments)			1Comments				8 Comments				9 Comments	

### Respondents List

	Region	Country	Organization
1	Europe	Belgium	Harbour Masters Office Antwerp, Port of Antwerp
2	Europe	Bulgaria	Bulgarian Ports Infrastructure Company, Port Burgas
3	Europe	Bulgaria	Bulgarian Ports Infrastructure Company, Port Varna
4	Europe	Denmark	Port of Aalborg Ltd.
5	Europe	Finland	Vuosaari Harbour, Port of Helsinki
6	Europe	France	Harbour Master's Office of Port of Le Havre Authority(GPMH)
7	Europe	France	Marseille-Fos Port Authority
8	Europe	Israel	Ashdod Port Company Ltd.
9	Europe	Latvia	Freeport of Riga Authority
10	Europe	The Netherlands	Port of Amsterdam
11	Africa	Angola	Port of Cabinda
12	Africa	Cote d'Ivoire	Abidjan Port Authority
13	Africa	Nambian	Nambian Ports Authority (Port of Walvis Bay)
14	Africa	Republic of Mauritius	Mauritius Ports Authority ( Port Louis)
15	Africa	Sierra Leone	Sierra Leone Ports Authority (Port of Freetown)
16	America	U.S.A.	Los Angeles Port Police of Port of Los Angeles
17	America	U.S.A.	City of Long Beach- Harbor Department (Port of Long Beach)
18	America	U.S.A.	Georgia Ports Authority (Garden City Terminal)
19	Asia	China	A Container Terminal Co.(Hong Kong Port)
20	Asia	China	Marine Department, HKSAR
21	Asia	China	Keelung Harbor Authority (Port of Keelung, Taiwan)
22	Asia	India	Jawaharlal Nerhu Port Trust
23	Asia	Japan	City of Yokohama ( Yokohama Port)
24	Asia	Japan	Hakata Port & Harbour Bureau, City of Fukuoka
25	Asia	Japan	Hakata Port Terminal Co.,Ltd.
26	Asia	Japan	Ibaraki Prefectural Government (Ibaraki port, Kashima port)
27	Asia	Japan	Ishikari Bay New Port Authority
28	Asia	Japan	Kobe-Osaka International Port Corporation (KOIPC)
29	Asia	Japan	Nagoya Port Authority
30	Asia	Japan	Nagoya Port Terminal Corporation
31	Asia	Japan	Port & Harbour Bureau, Shimonoseki City Government
32	Asia	Japan	Port of Kitakyushu (Seaport & Airport Bureau, City of Kitakyushu)
33	Asia	Japan	Shizuoka Prefectural Government (Omaezaki port)
34	Asia	Japan	Shizuoka Prefectural Government (Shimizu port)
35	Asia	Japan	Shizuoka Prefectural Government (Tagonoura port)
36	Asia	Japan	Tokyo Metropolitan Government, Tokyo Port Terminal Corporation
37	Asia	Japan	Tomakomai Port Authority
38	Asia	Japan	Toyama Prefectural Government (Port of Fushiki-Toyama)
39	Asia	Japan	Yokkaichi Port Authority
40	Asia	Korea	Incheon Port Authority
41	Asia	Malaysia	Johor Port Authority
42	Asia	Malaysia	Northport (Malaysia) Bhd.
43	Asia	Malaysia	Port Klang Authority
44	Asia	Malaysia	Sabah Ports Sdn Bhd
45	Oceania	Australia	Port Authority of New South Wales (Sydney Ports)
46	Oceania	New Zealand	Port Nelson Ltd.
47	Oceania	New Zealand	Ports of Auckland Ltd.
48	Oceania	New Zealand	South Port New Zealand Ltd.

## List of Business Continuity Plan (\*1)

Region	port	Name of BCP	Year of Established	
Europe	a port	1	General Contingency Plan(of the city, port included)	
		2	Business & Risk Analysis	
		3	ICT & Data Disaster Recovery Plan	
		4	Port Security Plan	
		5	Evacuation Plan	
		6	Oil Response Plan	
	b port	7	Regional Plan for Disaster Protection	2012
		8	Port Security Plan	2009
	c port	9	Regional Plan for Disaster Protection	2013
		10	Port Security Plan	2009
	d port	11	Dangerous Good Safety Plan	
		12	Plan for Flooding	
		13	Plan for Electricity Blackout	
		14	Oil Pollution Emergency Plan(Municipal)	
		15	ISPS Plan	
		16	Contingency Plan(Municipal)	
	e port	17	General Safety File & Port Emergency Response Plan	2008 (renewed 2014)
	f port	18	Civil Protection Plan	2012
		19	Port Facility Security Plan	2004
	g port	20	Contingency Plan(for the all port area for all involved parties)	2004
		21	Contingency Plan for port authority and its staffs	2004
7 ports	21 plans			
Africa	h port	1	Port Disaster Management Plan	1985
		2	Harbour Oil Spill Response Plan	1995
	i port	3	Business Contingency Plan of the Port	2012
		4	Contingency plan of Human resources, Communication etc.	2012
		5	Contingency plan of Finance, ICT etc.	2012
	j port	6	National Contingency Plan	1995
		7	Port Facility Security Plan	2002
	k port	8	I.O.P.	2013
		9	Port Facility Security Plan	2011
4 ports	9 plans			
America	l port	1	Business Continuity Incident Management Plan	2011
	m port	2	Port Emergency Plan	revised 2014
		3	Harbor Department Continuity of Operations Plan	2014
2 ports	3 plans			
Asia	n port	1	Business Continuity Plan for Freezone & Dangerous Goods Transaction	2013
		2	Port Emergency Response Plan	2004
	o port	3	Port Business Continuity Management	2013
		4	Port Business Continuity Plan Manual	
	p port	5	Crisis Plan	1995
		6	Emergency Management Programme	2007
	q port	7	Various plan(not named)	
	r port	8	Emergency Response Manual	2005
	s port	9	Emergency Action Plan	revised 2014
		10	Local Oil Spill Contingency Plan	2008
		11	International Ship & Port Facility Security Plan	2004
		12	Strike Contingency Plan	2012
	t port	13	Business Continuity Plan in Port when attacked by an directly-above-epicenter	2013
	u port	14	Port function continuity plan	2014
		15	restoration program from earthquake damage	2008
	v port	16	Port function continuity plan	2014
	w port	17	Port function continuity plan	2014
	x port	18	Business Continuity Plan for Port Authority	2014
		19	Action Plan for logistics of emergency goods in port	2014
	y port	20	Port Business Continuity Plan	2012
	z port	21	Crisis Management Manual	2000
		22	Response Plan to Strong Wind	2006
		23	Response Manual to Electric Blackout	2012
13 ports	23 plans			
Oceania	y port	1	Port Business Continuity Plan	2013
	z port	2	Port Safety Management Manual	2004
		3	Port Security Plan	2004
	aa port	4	Port Business Continuity Plan	2012
		5	Port Emergency Procedures	2000
	bb port	6	Emergency Mnanaegement Plan	2013
4 ports	6 plans			



Total	30 ports	62 plans
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(Appendix 4: Expected Role of Port Authority in Emergencies)

Expected Role of Port Authority (Land-Owner-Type) in Emergency (\*2)

Region	Port	Role of Port Authority in Emergency
Africa	a port	Full responsibility in ensuring the continuation (of port function) as a president of administration board of an operating port in the event of an interruption.
Asia	b port	Assisting the general manager office to coordinate with the respective port manager in activating the emergency and contingency plan.
	c port	Check for grasping damaged conditions of port facilities
		Restoration efforts of port facilities
		Coordination for smooth communication among relevant parties
		Restoration efforts of port facilities
		Coordination for smooth communication with port users
		Restoration of port facilities in soonest
		Strengthening of port facilities against possible disasters
		Coordination for smooth communication
	d port	Restoration of port facilities
	e port	Restoration of port facilities
	f port	Check for grasping damaged conditions of port facilities and cargoes in port
		Condition check of facilities fit for operation
		Advices to port users on port condition and damage situation
Planning and action for restoration of port facilities		



**IAPH Questionnaire on Business Continuity Plan (BCP) in Port/Terminal in the event of any Threats, Interruptions or Disasters (IAPH Port Safety and Security Committee)**

Dear IAPH Members (Port authorities, Terminal operators),

The Port Safety and Security Committee during its April, 2014 meeting in Sydney, Australia discussed the importance of ports and terminals to develop a Business Continuity Plan (BCP). This is to ensure that in the event of an interruption caused by an incident, threat or disaster, contingencies are available to restore port services within the shortest possible time. It was proposed that the Safety and Security Committee develop a template and guidelines to assist ports in developing such a plan.

It was also acknowledged that many ports/terminals may already have a BCP and therefore before embarking on the proposal, the Committee would like to enquire from our member ports /terminals regarding current situation on BCP by way of a member port/terminal survey. Please answer following questionnaire on BCP in your port or terminal preparing for prompt recovery or continuation of port/terminal operation from probable threats, interruptions or disasters in future.

If you have any questions on this survey, please feel free to contact us. ([subra@pka.gov.my](mailto:subra@pka.gov.my) or [survey@iaphworldports.org](mailto:survey@iaphworldports.org) )

With Best Regards,

Captain Subramaniam Karuppiah  
Acting Chair of IAPH Port Safety and Security Committee

**Q1: Business Continuity Plan (BCP) in your port**

1. Does your port/terminal have Business Continuity Plan (BCP)? (including Port/Terminal Recovery Plan, Harbor Department Emergency Plan)
- Yes → go to Q2
  - No → go to Q3

**Q2: (Only for those who chose YES in Q1)**

1. What is the name/title of your BCP? When was the plan established?
- Name/title of your BCP: \_ \_ \_
  - Year of established: \_ \_
- If your port/terminal has other BCPs, please specify.
- Name/title of other BCPs: \_ \_ \_
  - Year of established: \_ \_
2. What is the objective or purpose of your BCP? (multiple choices are ok)
- To mitigate the effects of emergency situations/disasters beforehand
  - To prepare measures for preserving life and minimizing damage beforehand
  - To recover and restore to normal operation in short period as possible when your port/terminal gets actual threats or hazards
  - To provide guidance for port/terminal staff on their roles and responsibilities in responding to emergencies when your port/terminal faces actual threats or hazards
  - To provide guidance regarding cooperative network of emergency response activities beyond port/terminal organization such as municipal or regional organization
  - Others (please specify): \_ \_ \_
3. What kind of Threats or Hazards are identified as potential risks to be addressed in your BCP? (multiple choices

are ok)

● Natural Threats

- Earthquake
- Tsunami/Tidal Wave
- Storms (Typhoon or Hurricane, with relevant Flooding)
- Eruption of Volcano
- Fire/Wildfire
- Others (please specify): \_ \_

● Man-made Threats

- Release of Hazardous or Polluting Material (Chemical, Radioactive, Biological, Explosives, Oil etc)
- Criminal/Civil Activity Threats (Labor dispute/Strike, Terrorist attacks etc)
- Maritime Accidents (Collision, Aground etc)
- Others (please specify): \_ \_

● Public Health Threats

- Infectious Disease etc
- Interruption of Infrastructure such as Utilities
- Water, Gas and Electric Power and Communications Systems
- Others (please specify): \_ \_

4. What kind of parties or agencies participated in drawing up your BCP? (multiple choices are ok)

- Only your port/terminal
- Municipal departments of City or County (City department, Police department, Fire/Rescue department, Public health department, Coast guard, Harbor master etc)
- Residents in your city
- Others (please specify): \_ \_

5. Which parties or agencies are involved in your BCP to be expected to participate or respond during emergencies? (multiple choices are ok)

- Only your port/terminal departments
- Municipal departments of city or county (such as Police department, Fire/Rescue department, Public health department, Coast guard, Harbor master)
- Residents in your city
- Others (please specify): \_ \_

6. Were there any amendments or reviews made after the plan was established?

- Yes  No

7. Did you conduct periodic trainings or exercises based on your BCP after adoption of the plan?

- Yes  No

8. Have you ever used the BCP for actual case of disaster in your port/terminal?

- Yes → Do you consider the BCP useful or effective for addressing actual threats/risks in your port/terminal?
  - Yes
  - No → Why do you think it is ineffective?(multiple choices are ok)
    - Port/terminal staffs were not sufficiently advised of the BCP beforehand
    - Port/terminal staffs did not get training or exercises based on the BCP beforehand
    - Smooth communication was difficult in actual case due to interruption of communication systems
    - Loss of office or manpower/staff during disaster hampers effective execution of the plan
    - Others (please specify): \_ \_
- No

9. If available, please advise relevant website linking to your BCP for our members information: \_ \_

**Q3: (Only for those who chose NO in Q1)**

1. Do you intend to develop a BCP in future?

Yes

No → Are there any specific reasons for not-developing BCP? (multiple choices are ok)

There are no specific needs to have BCP in our port/terminal

It is difficult to establish a BCP which is practical and useful in actual case of disaster

There are not sufficient resources (work forces, support networks, organizations etc) to prepare for establishing BCP

Others (please specify): \_ \_

2. As a Port Authority, are you not involved in day to day port operation? (such as Landlord type port authority)

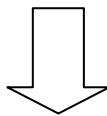
Yes

No → Please describe your role in ensuring the continued operation of the port in the event of an interruption:  
 \_\_\_\_\_

**About Yourself**

Please specify your port or terminal and yourself below.

Your Name	(given name)	(family name)
Your Title		
Your Organization		
Your Port		
Your Country		
Your Fax Number		
Your e-mail address		



Please return to [survey@iaphworldports.org](mailto:survey@iaphworldports.org)

**Contact info for inquiries**

Please send the **answer-saved MS Word file** back to [survey@iaphworldports.org](mailto:survey@iaphworldports.org). If you have any questions, please feel free to contact [subra@pka.gov.my](mailto:subra@pka.gov.my) or [survey@iaphworldports.org](mailto:survey@iaphworldports.org)

**Thank you for your cooperation!!**