



PORT EQUIPMENT

The fast and efficient transfer of cargo between ships and land-based modes of transport is the goal of ports throughout the world. Customized ship to shore solutions is required to enhance the efficiency of traffic movement through all terminals where variations dictate the need for flexibility in design.

The KPA range of port equipment offers a number of flexible options for access and for the management of traffic when loading or unloading ships.

Short harbour stop is a benefit to allow for cost saving operations at sea.

MOMBASA CONTAINER TERMINAL



Thursday, August 24, 2017

NEW SHIP TO SHORE GANTRIES



Thursday, August 24, 2017



PORT EQUIPMENT - PICTORIAL

SHIP TO SHORE GANTRIES OFFLOADING CARGO



Thursday, August 24, 2017

NEW RUBBER TYRED GANTRY CRANES – AT THE YARD



Thursday, August 24, 2017

TERMINAL RTGs



Thursday, August 24, 2017

A VESSEL SAILING OUT OF THE PORT OF MOMBASA



Thursday, August 24, 2017

ARRIVAL OF RUBBER TYRED GANTRIES



Thursday, August 24, 2017

REACH STACKER



Thursday, August 24, 2017



ROAD SWEEPERS & TERMINAL TRACTORS



Thursday, August 24, 2017

LOADING CONTAINERS



Thursday, August 24, 2017

SANY TRUCK AT BERTH 11



Thursday, August 24, 2017

HARBOUR CRANE & REACH STACKER



Thursday, August 24, 2017

LOW BED TRAILER – LOADING STEEL CARGO



Thursday, August 24, 2017

MOBILE CRANE



Thursday, August 24, 2017

LOADING STEEL BILLETS AT CONVENTIONAL CARGO



Thursday, August 24, 2017

SHIP BERTHING AT THE PORT



Thursday, August 24, 2017

16-TON FORKLIFT



Thursday, August 24, 2017

LPG TANKER AT SOT & FIRE FIGHTING MONITORS



Thursday, August 24, 2017

THANK YOU

THE END

Thursday, August
24, 2017

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INFRASTRUCTURE MAINTENANCE.

CONCRETE MATERIAL:

4.1 Introduction

Concrete is an intimate mixture of mineral aggregate and binding material such as Portland cement. The aggregate should be clean, hard, and durable, Graded from coarse to fine materials to increase density by filling voids. When strengthened with steel rods in structures, it is termed reinforced concrete (R.C) and is more widely used than any other material today. Its popularity over the last hundred years has been due to many factors, not the least .Being the ease with which it may be moulded, the concrete can simply be poured between shuttering or formwork and left to set. Its great strength is largely due to the cement used in its composition. The reader will need to know a great deal about this material and is strongly urged to consult the many publications and periodicals dealing with the subject.

Ordinary Portland cement is manufactured from limestone and clay ground together with water to form slurry which is burnt to a high temperature and then ground to powder. It is normally sold in 50kg paper bags. 100kg steel drums are also supplied. These are superior I humid climates but of course are more expensive. Apart from being cheaper and easier to handle, paper bags can be re – used to provide shade and protection and sometimes has a re – sale value where a paper is scarce.

There are several types of cement, normal Portland cement, which sets in a matter of hours, being the most widely used. Quick setting cement can, however, be manufactured if required. The quality of the cement should be tested according to B.S. 12, especially if supplies are imported from new or previously untried sources. Special cement used sometimes in humid conditions is called hydrophobic cement. This can be stored quite safely in damp conditions for long periods without becoming lumpy and is used in the same way as normal cement. it is worth consideration in countries where ordinary cement on site may cost up to three times factory price. When cement is scarce, air – set, or lumpy bags should not be discarded altogether; they may be broken down with shovel and used for temporary floors, loading bays, hard standings, and similar work

Aggregates are either crushed stone or gravel. Crushed stone is normally better, but sand may have to be added. Hand – broken stone is very good if obtainable and B.S.882 gives tests for suitable aggregates. Among other items they should not contain loam, loose laterite, dirt, or be coated with fine dust. Some stone quarries are equipped with washing plant for aggregates; if not the contractor may have to set up his own where labour plentiful, the simplest way is to shovel the stone into wicker baskets on to which water is hosed. The baskets are then head – panned to the stockpile. This method has the additional advantage of cooling the aggregate.

Coarse aggregate is that which is retained on a 4.75 mm sieve, after the fine aggregate has passed through. The normal size for reinforced concrete is 20 mm. The particle size distribution of soils ranging from clay to boulders is shown in chart form in Volume 2. The use of sea sand should be avoided if at all possible. Pit sand is best but should be free from roots, loams, fibres, and vegetable growth. Cool drinking water should be used for preference in the mixing. Sea water is suitable for plain concrete but is apt to rust steel when used to make reinforced concrete. It can also cause efflorescence. Aggregate exposed to strong sunlight should be water – sprayed before use.

4.2 Storage

Stock piles of sand and aggregate should be as large as possible and the bottom 500 mm should not be used. The materials should not be dumped straight on the ground. Laterite soil creates stains in the concrete which show in the finished work. If a hard surface is not available, then a thin concrete slab should first be laid. The sand and aggregate stock piles should be separated by a barrier of stout planks or concrete block-work.

On large works, especially in hot sunlight or during rainy season, it pays to erect a large single – pitch open shed or roof over the stockpile and the concrete mixer. Hot materials make a poor concrete. Apart from keeping the material cool and dry, a cover provides welcome shade for the concreting team.

Proper storage of cement is important. To dump the bags on dry ground next to the concrete mixer may be in order in hot dry climates or at some times of the

year, but precautions may have to be taken against damp, humidity and , of course, theft. A water proof sheet over bags on a concrete floor is not sufficient protection. A shed, preferably without windows and with a door on the lee side away from prevailing winds and rains, should be adequate. A boarded floor raised above the ground on short pillars is desirable. Bags should not be stacked above man – height and they should be used up in rotation. Where cement is imported this is imperative.

Humidity can be a serious problem in some areas and to use bags quickly is the best way to prevent cement from becoming lumpy. Another method is to use hydrophobic cement, although it is advisable to get a laboratory – tested samples first. Different types of cement should not be used together on the same site (see also Volume 3)

4.3 Mixing

Concrete may be mixed by hand or machine. Manual mixing is common in many areas. To obtain the correct proportion of materials a gauge box is usually used (Fig. 4.2). Thus, for a mix of 4: 2: 1, four boxes of coarse aggregate, two boxes of fine aggregate or sand, and one box of cement are measured out on a dry platform or banker board and mixed together. The material should be turned over completely with shovels twice and twice wet, where the use of local materials render this possible. Water is added through a watering can or spray for good mixing.

Gauge boxes are sometimes bottomless. In this case the empty box is filled level with aggregate and lifted vertically. The pile is roughly levelled and the empty box replaced on the pile and refilled as necessary. This is suitable when the materials can be stockpiled near the mixing bay

Machine mixing is now practiced universally, and there is a wide range of suitable equipment available. For medium – sized jobs, mixers are normally of two types – tilting drum and non – tilting. A tilting drum has only one opening and the drum may be raised or lowered as it revolves. It is fed by tipping the materials into drum while it revolves in a raised position. The non- tilting drum has two openings, one at the front and other at the back. Further reference to these is made in Volume 2.

As the concrete is mixed in the drum, the dry materials are measured into skip or hopper ready for the next batch. The wet concrete is delivered from the front opening by means of a chute. After this has been done, the skip is raised mechanically from the ground to enable it to empty the dry materials into the back opening of the drum. After a short period of dry mixing, water is added in the correct proportions. Mixing time varies, but is roughly about two minutes altogether. The reader, however, is advised to check this with the maker's printed instructions

For efficient operation, proper maintenance and cleanliness is essential. The drum should be thoroughly hosed out daily and the engine periodically maintained.

4.4 Batching

This operation is concerned with the measurement of dry materials and requires careful attention. To measure quantities by the shovel is wasteful and inaccurate. The simplest way of measuring materials is to use the gauge box (Fig. 4.2) which can be made to the old imperial ft³ in volume or the size can be worked out to suit a 50 kg bag of cement. Thus, for a 4: 2: 1 mix, using a bag as a measure, the box would be 0.071m³ in volume. This would give a cubic box with 420mm sides. The mix would then consist of two boxes of coarse aggregate, one box of fine aggregate and one bag of cement. Many building supervisors still prefer the old single cubic foot box complete with bottom as it is uncomplicated, easily handled, and can be used additionally for other proportions. Only one size of box should, however, be in use on the site if confusions is to be avoided.

Some machine mixers are fitted with skips or hoppers which weigh the materials, thus eliminating the need for measurement (see Volume 2). A large dial records the weight of the cement, sand, and aggregate as each is placed in the skip. When operated by a trained operative working under a capable site supervisor, it is quick and effective. The weight of the materials, however, needs to be checked daily against the volume as the moisture content can vary, particularly after heavy rain or after washing the aggregate.

Weigh – batch mixers, however, are not popular in all areas and through ignorance, this type of equipment is not always used, even though it may be in good working order. Site supervisors employing illiterate crews often prefer to use gauge boxes. To them this is not only an accurate and reliable measure, but it

overcomes the problem of having regularly to check and maintain the weighing mechanism. Large projects, however, frequently have weigh – batch mixers. Sometimes special mechanical hand shovels are also provided which scoop the aggregate from the stockpile towards the mixer and load it directly into the skip (Volume 2). This can effect a big saving in time and labour.

4.5 Bulking

When sand or fine aggregate is damp, it normally swells or bulks, and on important work the proportions are adjusted daily to allow for this. This bulking factor varies with the weather, but as a general rule may be taken to be 25 per cent in damp or humid conditions. Thus, using a 50 kg bag of cement and a nominal mix of 1:2:4 by volume, increases Volume sand from 2 to 2.5 metric Volume. The measuring boxes while the coarse aggregate would remain the same. Sand which is either wet or very dry does not bulk at all.

Fig 4.1 Slump test

- A 300mm
- B 200mm
- C 1000mm
- D Slump

Fig 4.2 Gauge box with bottom (size: 1 ft³ or 0.028m³)

Fig 4.3 Concrete pad base

- A Lean concrete blinding
- B Steel setting – out rods (left in)
- C 80 mm x 80mm starter frame

Fig 4.4 Column formwork with yokes

- A 30 mm formwork
- B 75 mm x 75 mm yokes at 380 mm centres
- C 16 mm diameter bolts

D Wedges

Fig 4.5 and 4.7a Column formwork with clamps

A 30mm formwork

B 30mm stiffeners

C Steel clamps (see Fig 4.6) at 380mm centres

Fig 4.6 Steel clamp

57mm x 8mm x 711mm (obtainable in various lengths)

Fig 4.7b Column form cut to receive a beam.

END

By Jared Okwar

Training in Bandari

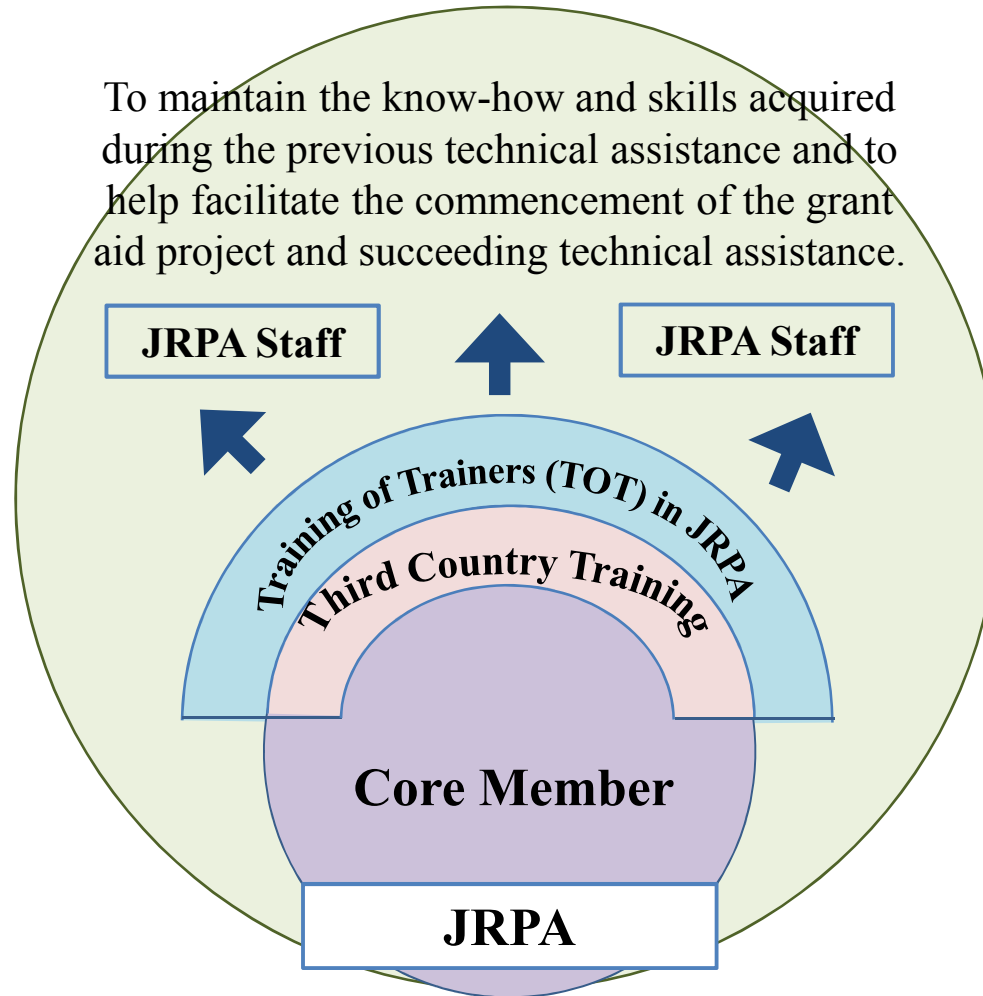
Training will be implemented on only the most important aspects of port management and operation due to limited resources

Objective	i) to maintain know-how and skills acquired during the former Technical Assistance ii) to help facilitate the commencement of the grant aid project and succeeding technical assistance
Priority Field	A. Cargo Handling B. Maintenance for Cargo Handling Equipment & Civil Facilities C. Port Procedures and Statistics
Two (2) Training Course	i) Operation and Maintenance of Cargo Handling Equipment & Maintenance of Port Facilities ii) Port Procedures and Statistics
Personal Target & Follow-up	Setting of a personal target by each trainee in advance Action Plan prepared by each trainee and Proposal for the next technical assistance by the experts

Subjects	A Training Course for Two (2) Weeks for Four (4) Trainees		A Training Course for One (1) Week for Two (2) Trainees	
	i-1) Training on Mechanized Cargo Handling		i-2) Maintenance of Cargo Handling Equipment & Civil Facility	
	Knowledge on Mechanized Cargo Handling Laws and Regulations related to Cargo Handling Kinds & Characteristics of Cargo Handling Equipment Electric & Hydraulic Control of Cargo Handling Equipment		Maintenance of Cargo Handling Equipment Maintenance & Inspection of Cargo Handling Equipment Repair of Cargo Handling Equipment	
	Safety in Cargo Handling		Maintenance Management of Civil Facilities (including Attached Facilities)	
	Method for Cargo Handling		Maintenance Management of Civil Facility	
	Cargo Handling using Crane and its Operational Exercise Cargo Handling using Forklift and its Operational Exercise Dangerous Cargo Handling		Maintenance & Repair of Civil Facilities and its Practical Exercise Maintenance & Repair of Interlocking and its Practical Exercise Maintenance & Repair of Asphalt Pavement and its Practical Exercise	
	Lectures using JRPA Operation Manual		Lectures using JRPA Operation Manual	
	Lectures using JRPA Operation Manual		Lectures using JRPA Operation Manual	
	Lectures on Monitoring Items which are conducted by JRPA			
			Port Procedures Entry/Exit Procedures and Documentation Port Statistics Laws and Regulations related to Port Statistics Items to be collected as Port Statistics Compilation Method of Port Statistics Practical Exercise for Compilation of Data using Computer	

Your Roles after going back to JRPA

To maintain the know-how and skills acquired during the previous technical assistance and to help facilitate the commencement of the grant aid project and succeeding technical assistance.



Monitoring after leaving of the project team



May XX, 2015
Akira KOYAMA
OCDI

Monitoring is very important for the next step

Monitoring Items

The JICA Project Team asked JRPA around two years ago to monitor the following items and to report the following items to the JICA South Sudan Office.

1. Progress of the authorization of river port policy and regulation
2. Establishment of a tariff committee
3. Periodical measurement of water level
4. Periodical updating of the equipment ledger
5. Recording of barges accommodated
6. Cleaning of port area as a routine work

Reporting system of monitoring items is as follows

Reporting of Monitoring Items

A sustainable reporting system for monitoring:

- Results of monitoring have to be reported to JICA South Sudan Office every three months.
- Responsible person for reporting is Mr. Simon of DTR for item 1 & 2 and Mr. Emmanuel of JRPA for item 3,4,5 & 6.
- Formats for reporting are prepared by the JICA project team.

Monitoring items under JRPA

JRPA is responsible for the following monitoring items. Leaders of each monitoring item have to report the results to **Mr. Emmanuel**. The leader for each monitoring item and interval for reporting are shown in the table below.

Formats for monitoring is prepared by the team

Monitoring Item	Leader for Reporting	Interval
3. Periodical measurement of water level	Mr. James Wani	Every two (2) weeks
4. Periodical updating of the equipment ledger	Mr. David Wani	Once a month
5. Recording of barges accommodated	Mr. Charles	Once a month
6. Cleaning-up of port area as a routine work	Mr. Santo	Once a month

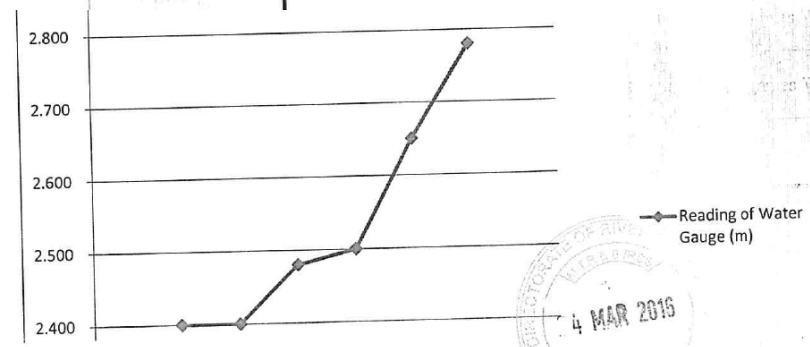
Monitoring Item 3: Water Level Survey

Check list Water Level Survey

Year	Date	Reading of Water Gauge (m)	Actual Elevation (m)	Remarks	Check By
2016	Ist of Jan				James Wani
2016	13th of Jan	2.400	451.196	453.596	James Wani
2016	27 th of Jan	2.400	451.196	453.596	James Wani
2016	10 th of Feb	2.480	451.116	453.596	James Wani
2016	24 th of Feb	2.500	451.096	453.596	James Wani
2016	10 th of Mar	2.650	450.946	453.596	James Wani
2016	24 th of Mar	2.780	450.816	453.596	James Wani



Reading of Water Gauge (m)



Monitoring Item 6 : Cleaning of Port Area

Monitoring Item 6: Cleaning of Port Area

Signed by: Emmanuel Eli

Year	Date	Cleaning Area	Checked by
2016	30/1/2016	motorboat	emmanuel
2016	27/2/2016	shipping	emmanuel
2016	10/5/2016	motorboat	



Monitoring Items under DRT

Monitoring Item 1: Progress of the authorization of river port policy and regulation

Reporting Format

Date (dd/mm/yy)	Progress of Status		Remarks
	Policy		
	Regulation		
	Policy		
	Regulation		
	Policy		
	Regulation		
	Policy		
	Regulation		

Mr. Simon has to report the results of monitoring to the JICA South Sudan office every three months.

Monitoring Items under DRT

Monitoring Item 2: Establishment of a tariff committee

Reporting Format

Date (dd/mm/yy)	Progress/Status for establishment	Remarks

Mr. Simon has to report the results of monitoring to the JICA South Sudan office **every three months**.

Than you for your Attention



Akira KOYAMA

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Regulation on the Use of the Public Property



Contents

- What is a port?
- Regulation on the Use of the Public Property

May 27, 2017
Akira KOYAMA
OCDI

What is a Port?

A Port is a place where ships load and unload goods or shelter from storms. (Oxford English-English Dictionary)

“Harbours means any harbour, whether natural or artificial, and any port, haven, estuary, tidal or other river or inland waterway navigated by going ships, and included a dock, a wharf, and in Scotland a ferry or boatslip being a marine work,” (Harbour Act 1964, United Kingdom)

What is a Port?

- Basic and Essential Infrastructure for Economic Activities
- Consolidated Body comprising Port Facilities/Equipment and a Certain Area (land area and water area)
- Various Activities are conducted by using the Facilities/Equipment in the Area.

What is a port?

- Port is a public property similar to a road, airport, railway and the like.
- Port is one of the most basic infrastructures to support the economic activities and daily lives of people.
- Port is a infrastructure which everyone has the right to use equally.
- Port has more roles and functions than most types of infrastructure.



Regulation on the Use of Public Property

Principle of Regulation

- Article 1. Public property shall be maintained in good condition and be dedicated to use by the public.

Application for use of public property

- Article 2. Those who intend to use public property shall complete an application form and submit it to the port manager.

Regulation on the Use of Public Property

Extent of permission of use

- Article 3. Use of public property shall be limited to the following cases.
 - i. to operate a restaurant or a shop on the public property for staff of port office or other customers.
 - ii. to be used for transportation business, water supply, electric supply or gas supply or other public service when there is no suitable alternative location
 - iii. to be used by the national or local governments for public purpose
 - iv. to erect an emergency facility or shelter in the event of a disaster or emergency
 - v. to be used by the port when the port manager deems it necessary or essential

Regulation on the Use of Public Property

Decision of user

- Article 4. A port manager shall not allow a person to use public property unless that person has sufficient capital, is trustworthy, and has the necessary skills to follow the conditions of usage.

Notification of permission or refusal of application

- Article 5. When a port manager receives an application for usage of public property, he shall promptly decide whether to approve or deny the application and inform the applicant of his decision.

Regulation on the Use of Public Property

Issue of usage permission

- Article 6. When a port manager shall issue a permit, following items shall be written in the permit.
 - (1) Banking account of the public property
 - (2) Place and address
 - (3) Category
 - (4) Volume and indication of area to be permitted to use
 - (5) Purpose and way of use
 - (6) Length of validity
 - (7) Usage fee and method of payment
 - (8) Conditions of use
 - (9) Conditions for withdrawal
 - (10) Return of public property
 - (11) Compensation for damage
 - (14) Other issues



Regulation on the Use of Public Property

Duration of public property use

- Article 7. Duration of public property use shall be one year. However, permission for usage can be renewed. In cases where the period of used is deemed unreasonably short, a port manager has the discretion to set the duration period at three years.



Regulation on the Use of Public Property

Amount of fee for use of public property

- Article 8. Amount of fee for use of public property shall be set in the following manner
 - i. land fee shall be set by a port manager based on the standard calculated amount by multiplying land price by 2.5/1,000 and referring to leasing fees of land in neighboring areas *of the public property*.
 - ii. house fee shall be set by a port manager based on the standard calculated amount by multiplying estimated price of house by 5.6/1,000 and referring to leasing fees of houses in neighboring areas of the public property.
 - iii. fee of items other than land or house shall be set by the port manager

Regulation on the Use of Public Property

Deadline for payment of fee

- Article 9. Deadline for payment shall be designated by the port manager.

Revision of public property use fee

- Article 10. When the amount of fee does not meet actual market price, the port manager shall revise it.



Regulation on the Use of Public Property

Obligation of public property user

- Article 11. A user of public property shall comply with the conditions listed below
 - i. a public property user shall maintain the public property in good condition.
 - ii. the public property shall be used only for the purpose stipulated on the permit
 - iii. the public property user shall not allow a third party to use it
 - iv. public property user shall not renovate or repair any facilities
 - v. When a port manager wishes to conduct a survey on the status of property use or request the users to report on the status of property use, user shall not refuse nor impede the survey or fail to report.

Regulation on the Use of Public Property

Cancellation of permission

- Article 12. A port manager shall cancel the permit for usage when the following occurs.
 - i. in case that national government or state government decides to use the property for public purpose.
 - ii. in case that a user fails to pay the usage fee for a period of three months.
 - iii. in case that a user violates the agreement on public property use



Regulation on the Use of Public Property

Invalidation of permit

- Article 13. When the permit shall be invalidated when the following occurred;
 - i. in case that user dies or goes missing
 - ii. in case that legal person as a user be abolished

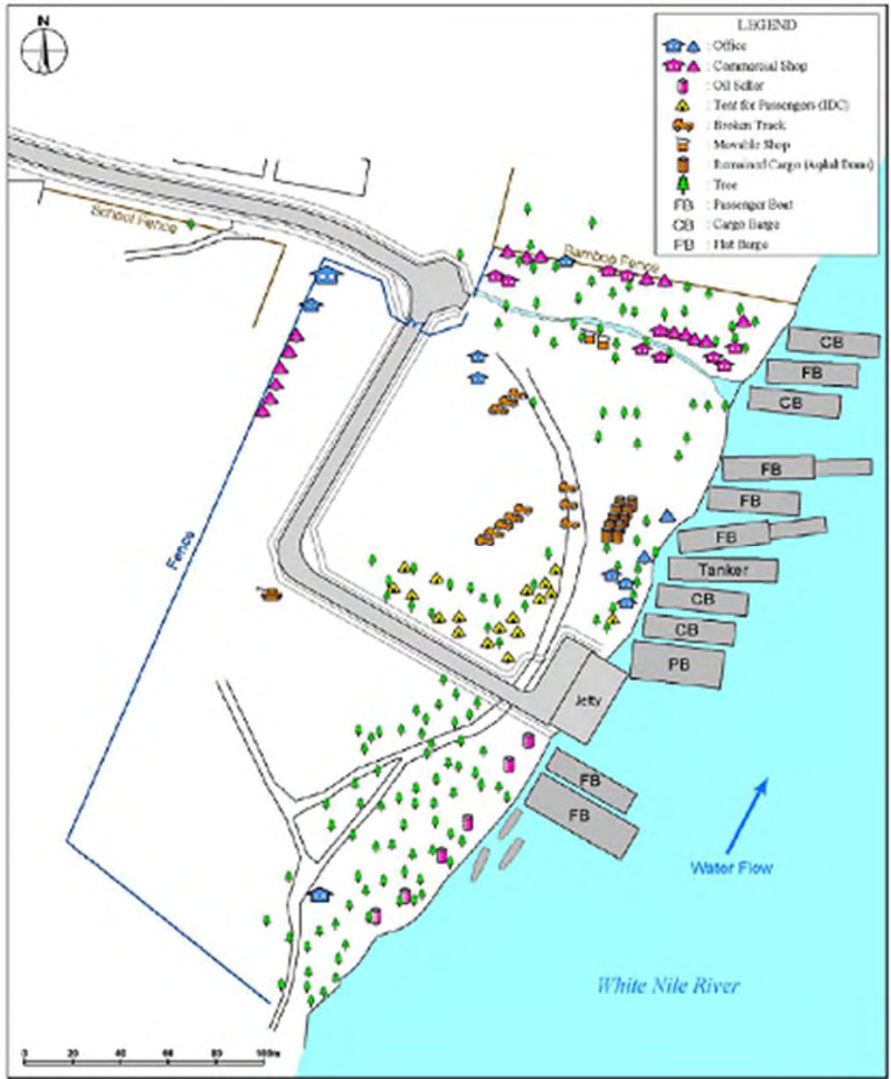
Compensation for damages

- Article 14. A user of public property shall pay compensation when he damages or loses public property by accident or by mistake, or by violating the agreement.

Dear My Friends



Thank you for your Attention



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Regulation on Cargo Handling Service Provider

Contents

1. Regulation on Cargo Handling Service Provider
2. Port Transport Business Act
3. Criteria of Port related Business



May XX, 2017, Akira KOYAMA, OCDI

1. Regulation on Cargo Handling Service Provider

In a draft of new river port act, regulation on cargo handling service provider in river port area is stipulated that;

- Any entity who is going to provide cargo handling service in river port area shall obtain permission from RSS.
- Cargo handling service means any activity related to movement or stock of cargo in river port area.
- RSS shall prepare and publish conditions for which permission is given to an entity. The conditions include safety measures of cargo handling , and measures to protect good environment of river port area.
- RSS shall give permission to the said entity, if the entity satisfies the said conditions.
- When an entity with permission violates any of the said conditions, RSS can confiscate its permission.

1. Regulation on Cargo Handling Service Provider

- Port cannot operated only by JRPA. Cargo is handled by stevedoring companies, shipping companies, etc.
- In most of the ports in the world, port related service providers are not entirely free to do their business in the ports. Some forms of regulation are normally imposed.
- This is because, without any regulation, some of “bad companies” might do bad conducts in the ports, hampering proper operation of the port.

1. Regulation on Cargo Handling Service Provider

- One common method of the regulation is “granting permission system”.
- When granting permission, it would be necessary to prepare clear conditions, specifically securing safety of cargo handling and protecting environment in river ports are essential.
- Details of the permission procedure and criteria for permission has to be determined.

1. Regulation on Cargo Handling Service Provider

- Based on stipulation of the draft of new act on River port, criteria for certificate shall be determined and introduced in consideration with securing safety and preserving environment in the port.
- Further discussion will be needed to finalize regulation on cargo handling service before the completion of the expansion project of Juba river port.

2. Port Transportation Business Act

- Japan has enacted an act on port transportation business.

Article 1: Purpose

The purpose of this act is to establish the order relating to port transportation, to undertake sound development of the port transportation business and to thereby promote public welfare.

Article 2: Definition

“Port transportation” shall mean any operation which is carried out to respond to other person’s demand and falls under any one of the following business.

2. Port Transportation Business Act

Article 3: Classification of Port Transportation Business

The port transportation business shall be classified into the following categories.

- ① General port transportation business
- ② Port stevedoring business
- ③ Lighter transportation business
- ④ Raft transportation business
- ⑤ Tallying business
- ⑥ Surveying business
- ⑦ Measuring business



2. Port Transportation Business Act

- ② Port stevedoring business is to load cargo onto a ship or unload cargo from a ship in a port. Taking account of the present Juba river port, stevedoring business is a key.



2. Port Transportation Business Act

- ① General cargo transportation business is to carry out a series of operations such as reception of cargo from the ship/the shipper or delivery of cargo to the shipper/the ship transported by the ship in a port.



- ③ Lighter transportation business is to transport cargo by a lighter in a port.

2. Port Transportation Business Act

- ④ Raft transportation business is to transport timbers made a raft in a port or to carry timbers into a timber pond in the form of raft.



- ⑤ Tallying business is to count the numbers of cargo shipped at the time of loading or unloading the cargo, or certifying the reception or delivery thereof.

2. Port Transportation Business Act

- ⑥ Surveying business is to certify, check and survey with respect to loading of shipped cargo.



- ⑦ Measuring business is to calculate the cubic capacity or weight of shipped cargo at the time of loading or unloading the cargo or certifying the same.

2. Port Transportation Business Act

Article 4: Certificate

Any person who intends to carry out port transport business shall obtain certificate of the Minister of Transport for each category of port transportation business and for each port.

Article 5: Application of Certificate

Any person who intends to obtain certificate for port transportation business shall submit to the Minister of Transport an application stating the following details:

2. Port Transportation Business Act

- 1) Name or trade name and address;
 - 2) Category of port transportation business;
 - 3) Ports
 - 4) Business plan as prescribed by the Ministry of Transport Ordinance.
- The applicant under the preceding Paragraph shall be accompanied with a document stating an income and expenditure estimate on the business and other details prescribed by the Ministry of Transport Ordinance.

2. Port Transportation Business Act

Article 6: Criteria for Certificate

The Minister of Transport shall, when he intends to grant certificate for port transportation business, examine whether the application satisfies the following criteria or not.

1) The applicant has, at least, such facilities and laborers as described by the Ministry of Transport Ordinance for each category of port transportation business and port.

2. Port Transportation Business Act

Article 6: Criteria for Certificate

- 2) That the business in question has an appropriate plan to perform the business.
- 3) That the management is in such style as can clarify the scape of responsibility of the person who carries put the business in question.
- 4) That the business in question has a sound financial base.

2. Port Transportation Business Act

Article 7: Fares and Charges

1. Any person engaged in port transportation business shall, in accordance with the provisions of the Ministry of Transport Ordinance, decide fares and charges and obtain approval of the Ministry of Transport. This shall also apply to any revision in the fares and charges.
2. The Ministry of Transport can order to the entity engaged in port transportation business any revision in the fares and charges when the fares and charges are discriminated unfairly against specific users and has a possibility to raise unfair competitions among port transportation business entities.

3. Criteria of port related Business

- The government and/or the port management body should regulates port related businesses. What kind of criteria can the PMB prepare when a private company requests permission to conduct business in the port?
- Purposes of regulating port related business are to prevent a bad company from entering into port business, to prevent an oversupply of service providers, to provide good services to port users as well as to ensure that a company can conduct port business safely and in an environmentally sound manner.

3. Criteria of Port related Business

- Preparation of criteria for according permission to a private company is very important to attain the purposes of regulating port related business.
- By preparing criteria, transparency and fair treatment can be secured and it will allow the government and/or port management body who has an authority to grant permission (Competent Authority) to easily make a judgment on which company is eligible for undertaking port related business.
- It is not necessary to examine a new act for criteria of port related business; however preparation of criteria itself is very important as mentioned above to judge the ability of an applying company properly and fairly.

3. Criteria of Port related Business

Possible or envisaged criteria are as follows; however this is only one example.

Criteria for a cargo handling service provider (port stevedoring business)

- Whether a company has a workable plan for cargo handling
- Whether a company has well maintained facilities and equipment
- Whether a company has skilled and sufficient labors
- Whether a company has measures to secure safety and
- conduct business in an environmentally sound manner
- Whether a company has a table of proper fares and charges*
- Whether a company has a reporting system of its activities to JRPA
- Whether a company has a contingency plan such as an accident, oil spill, fire and so on

(*: regarding “fares and charges”, an important issue is whether they are regulated fares and charges or not.)

3. Criteria of Port related Business

- Warehousing business is closely related to cargo handling service and port related business includes miscellaneous services other than those services such as warehousing business, water/fuel supply, garbage collection, kiosk, tug boat, towing and so on.
- Therefore, clear criteria or rules are required to manage and operate the port smoothly and efficiently.

Thank you for your Attention



Akira KOYAMA, OCDI, koyama@ocdi.or.jp

AGREEMENT

Draft for Consultation

AGREEMENT between JUBA RIVER PORT ADMINISTRATION and
STAKEHOLDERS of Juba River Port

Preamble

WHEREAS Juba River Port Administration (hereinafter referred to as “JRPA”) and the Stakeholders of Juba River Port (Shipping Companies, Small Boats Union, Loaders’ Union, and Truck’s Union) are jointly undertaking to determine the general rules of the use of the jetty area;

WHEREAS the Parties hereby covenant make a commitment to ensure the effective implementation and monitoring of the general rules of the use of the jetty area;

The Parties have agreed on the following;

General Rules for the Use of the Jetty Area

Sec. 1 (General Application)

Anyone who wishes to use the Jetty area shall understand and comply with the rules of Juba River Port Administration (JRPA).

Sec.2 (Definition)

- i. Jetty area means the area where a jetty covered with steel plates is located.
- ii. A floating property includes any barge, small boat, pusher and other floating body.

Sec.3 (Procedure for the Use of the Jetty Area)

- i. Anyone who wishes to use the Jetty area shall submit an application to JRPA and obtain written permission from JRPA prior to the use of the Jetty area (Application form is attached in this agreement).
- ii. Application forms are available at JRPA office.

Sec.4 (Procedure for the Use of the Jetty)

- i. Anyone who wishes to use the jetty shall submit an application to JRPA and obtain a written permission from JRPA prior to the use of the Jetty (Application form is attached in this agreement).
- ii. Application form is available at JRPA office.
- iii. Arrival notice of a floating property shall be submitted to JRPA by 2 pm one day before arrival.
- iv. Written departure notice shall be submitted by 2 pm one day before departure.

AGREEMENT

Sec.5 (Usage Charge for the Jetty area)

Anyone who wishes to use the jetty shall be levied usage charge in accordance with the type, size and duration of a floating property, and the type of cargoes.

Rates of usage charges for the jetty area are indicated in the Tariff Table (set forth previously by JRPA).

Sec. 6 (Manner of the Use)

- i. All the users shall use the port facilities and equipment in the Jetty area in a safe and efficient manner.
- ii. All the users shall clean the place and the facilities and equipment at their own expense upon completion of the use of the Jetty area

Sec. 7 (Mooring Rules)

- i. Anyone who uses the jetty shall moor his floating property in a safe and secure manner.
- ii. JRPA has a right to order the owner or a person to moor the floating property in a safe and secure manner.
- iii. No one is to leave unmoored floating property unattended in the port.
- iv. A floating property should not impact on adjacent area and facility.
- v. A moored floating property should prepare cushions between the jetty and the hull of the floating property to prevent damage of the facility.

Sec. 8 (Removal of floating property)

JAPR has a right to order the removal of floating properties when;

- i. A floating property stays idly after the cargo handling operation without a justifiable reason.
- ii. A floating property poses a threat and/or inconvenience to other floating properties.

Sec. 9 (Prohibited Activities)

The following activities are prohibited in the Jetty area.

- i. Causing damage to port facilities and equipment
- ii. Leaving debris, waste and harmful materials
- iii. Idling and parking of vehicles
- iv. Excessive noise and emissions
- v. Smoking and burning wood pieces and other flammable materials

Sec.10 (Responding Duty)

All the users have to respond to the inquiry of JRPA concerning the use of the Jetty area.

Sec.11 (Cargo Handling)

AGREEMENT

Anyone who handles cargo in the jetty area shall deploy necessary number of loaders with safety measure to handle cargo and prepare proper cargo handling machine or equipment which handles cargo efficiently and protect loaders from injury.

Sec. 12 (Handling of Dangerous Cargo)

- i. Anyone who handles dangerous cargo shall notify JRPA prior to handling such dangerous cargo.
- ii. JRPA has to grant the authorization to such a cargo handling operator prior to proceeding and will order the operator to prepare necessary measures such as installation of extinguishers.
- iii. JRPA has to inform the firefighting offices and comply with their regulation, if necessary.

Sec. 13 (Occupation of Water Area)

Anyone who intends to occupy water area in front of the jetty area shall obtain permission from JRPA

Sec. 14 (Compensation)

Anyone who damages the port facilities and equipment in the Jetty area has to pay compensation.

~~Sec. 15 (Penalty)~~

~~Anyone who violates this rule may be subject to penalties in accordance with ///////////////.~~

Sec. 15 (Come into force)

This agreement shall come into force on the day after the date of its last signature.

Signed by

Zubeir
Port Manager
Juba River Port

(Shipping Company)

AGREEMENT

Abministration

(Shipping Company)

(Shipping Company)

(Small Boat Union)

(Loaders' Union)

(Driver's Union)

Annex1: Application form for the use of the jetty area

Annex2: Application form for the use of the jetty

AGREEMENT

Annex 1

APPLICATION FORM FOR the USE of THE JETTY AREA

To Port Manager of JUBA River Port Administration

I would like to submit the application for using the jetty area.

I pledge to comply with “General Rules for the Use of the Jetty Area” issued on the date ////////////////.

Applicant	Name of Company	
	Contact Person	
	Mobile & E-Mail	
Duration of the Use	From	
	To	
Use of the Crane	Yes or No	
Type of Vehicles and Cargo		
Machine / Equipment brought in		

Received by

JUBA River Port Administration

AGREEMENT

Annex 2

APPLICATION FORM FOR THE USE OF THE JETTY

To Port Manager of JUBA River Port Administration

I would like to submit the application for the use of the jetty.

I pledge to comply with “General Rules for the Use of the Jetty Area” issued on the date ////////////////.

Applicant	Name of Company	
	Contact Person	
	Mobile & E-Mail	
Duration of the Use	From	
	To	
Name & Number of Barge		
Name of Pusher Boat		
Type & Volume of Cargo		

Received by

JUBA River Port Administration

Port Statistics

(Overview of the Statistics)

Contents

1. What is Port Statistics?
2. Importance of Port Statistics
3. 4 Fundamental Principles of Official Statistics
4. Statistics System in Japan
5. Port Statistics (Survey in Port & Harbor)
6. Showing Statistics Results in Visual Formats
7. Application of Statistics Results
8. Port Statistics in the World



May 27, 2017. Akira KOYAMA, OCDI

1. What are Statistics?

In General

Statistics refer to the collection, classification, analysis, and interpretation of **quantitative** facts , or their data.

Statistics Act in Japan

- ✓ Official Statistics are **critical information** for rational **decision making**
- ✓ 4 Fundamental Principles of Official Statistics

Systematic

Accessibility

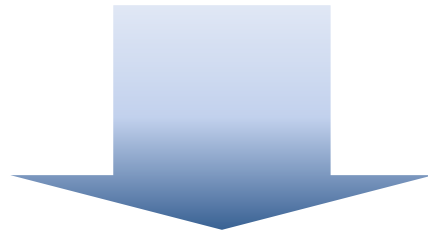
Neutrality & Reliability

Confidentiality

2. Importance of Port Statistics

With statistics, we can **UNDERSTAND** what is actually happening in/out of ports, and in/out of the country.

Also, we can **GUESS** what Will happen in the future.



Port Management can be more
efficient and **effective.**

2. Importance of Port Statistics

For example, in the case that congestion has occurred in the port area.

Approaches to coping with Congestion

1) To increase Capacity

Expensive, takes time ...

2) To use facilities more efficiently

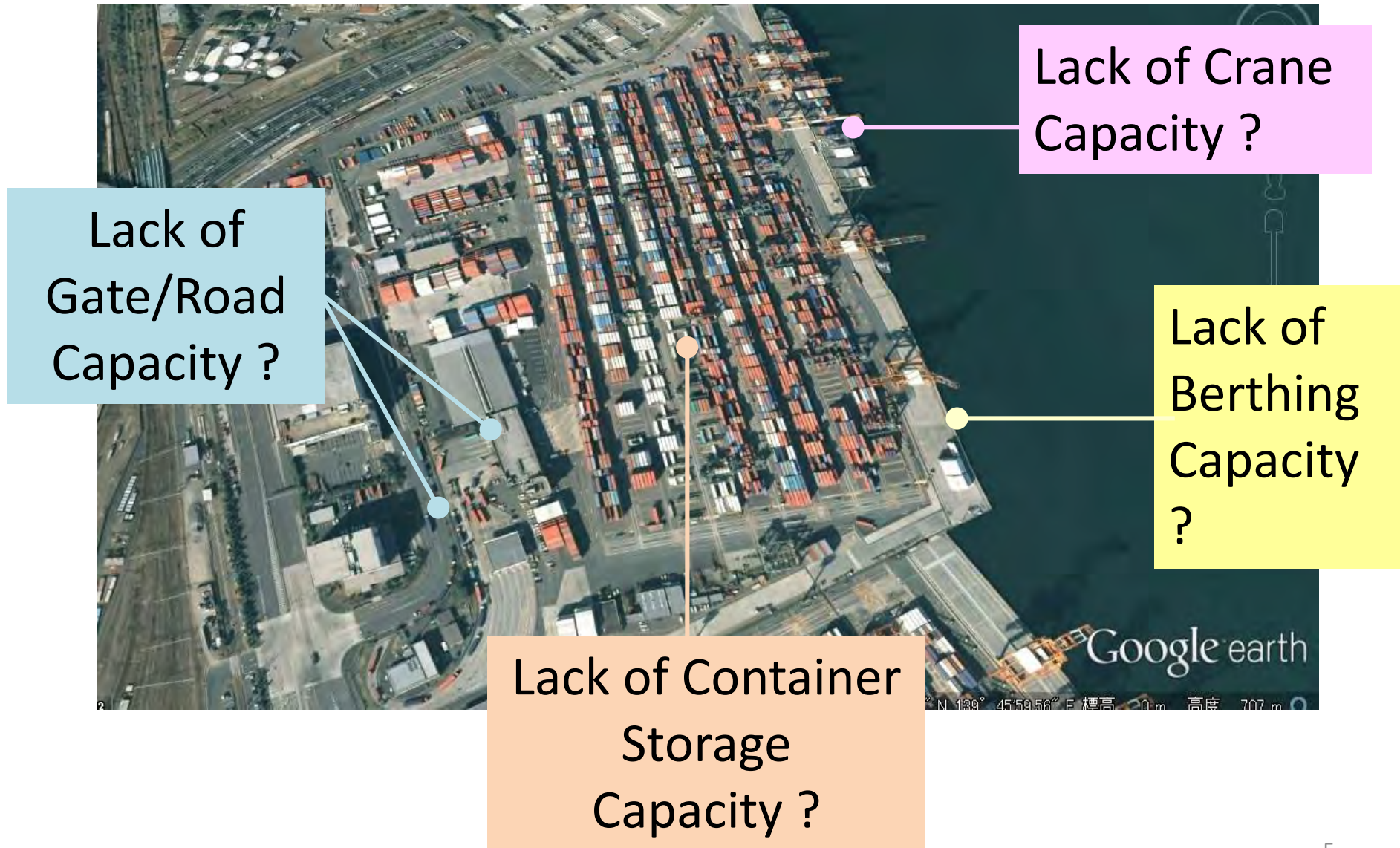
Relatively-easy, cost saving, limited effect ...

3) To raise Tariff

Depress demands, possible opposition ...



2. Importance of Port Statistics



3. 4 Fundamental Principles of Official Statistics

Systematic

Official statistics shall be developed systematically through mutual cooperation and the appropriate sharing of roles among administrative organizations, etc.

Neutrality & Reliability

Official statistics shall be produced with appropriate and reasonable methodologies, so as to ensure neutrality and reliability.

3. 4 Fundamental Principles of Official Statistics

Accessibility

Official statistics shall be easily accessible to citizens for effective use.

Confidentiality

Confidential matters concerning individuals or juridical persons, or other organizations that were used for producing official statistics shall be protected.

4. Statistics System in Japan

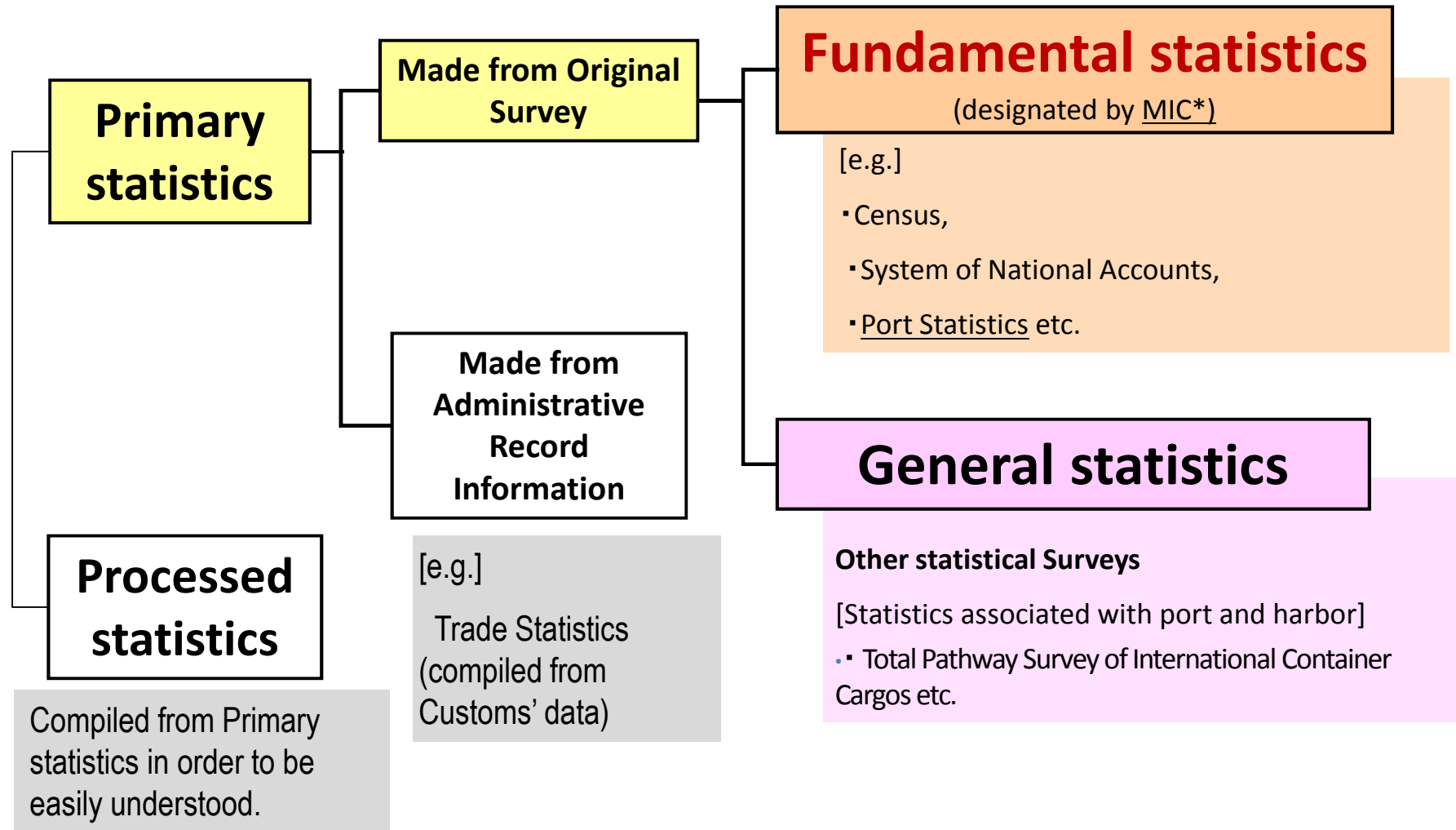
Statistics Act : Article 1 (Purpose)

Recognizing that official statistics are **critical information for rational decision making,**

The purposes of this Act are;

- to promote systematic and efficient development of official statistics,
- to ensure the usefulness thereof through specifying basic matters concerning the production and provision of official statistics, and
- thereby to contribute to **the sound development of the national economy and enhancement of the living standards of citizens.**

4. Statistics System in Japan



MIC*: Minister of Internal Affairs and Communications

4. Statistics System in Japan

Fundamental statistics

- Especially important statistics designated by Minister of Internal Affairs and Communications
[for example] Census, System of National Accounts, Port Statistics etc.
- There are penalties for those who fail to cooperate in surveys.
[for example]
Penalty of 500,000 yen or less in a case where questionnaires are not returned

General statistics

- Other statistical surveys conducted by governments
[e.g.]
Total Pathway Survey of International Container Cargos
- No penalties.

4. Statistics System in Japan

Port relate Statistics

Name of investigation	Enforcement grounds	Contents of investigation	Frequency
Survey on Port and Harbour	Fundamental statistics	<p>General and fundamental data of ports</p> <ul style="list-style-type: none"> • Number of vessels • Number of passengers • Volume of cargo • Items of cargo etc. 	Every year
Total Pathway Survey of International Container Cargoes	General statistics	<p>Details of the total pathway of International Container Cargoes</p> <ul style="list-style-type: none"> • Origin/Destination City • Loaded/Unloaded Ports • Transshipment Ports etc. 	Every five years
Total Pathway Survey of Unit-load Cargoes	General statistics	<p>Details of the flow of Export-Import and domestic Unit-load Cargoes</p> <ul style="list-style-type: none"> • Origin/Destination City • Loaded/Unloaded Ports etc. 	Every five years
Total Pathway Survey of Bulk Cargoes	General statistics	<p>Details of the flow of Export-Import and domestic Bulk Cargoes</p> <ul style="list-style-type: none"> • Origin/Destination City • Loaded/Unloaded Ports etc. 	Irregular (first investigation in 2009) 11

4. Establishing Statistics System

- Survey Items & their target periods (monthly/Annually)
- Prescribed formats for **Questionnaire / Summary Sheet**
- Defined terms
 - : **Vessel Types** (merchant vessel, ferry, fishing craft, others)
 - : **Cargo Items** (agricultural and fishery products, mineral ores,.....)
- **Instruct** to fill-in the formats
- **Compiling & Official Release**



Systematic / Reliable Statistics

4. Establishing Statistics System (Official Release in Japan)

National Government

- Release dates (both monthly and annual) are stipulated in the Ordinance
- Formats are not prescribed in advance
- Official Release contains the outline of the survey as well as data tables

Port Management Body (Prefectural Governments/Municipalities)

- Almost all PMBs release statistics even though they are not obliged to
- Statistics results are available on their internet sites
- Information for shipping companies and PR (public relations) are possible reasons

5. Port Statistics (Survey on Ports & Harbors)

Port Statistics Indicate Current Status

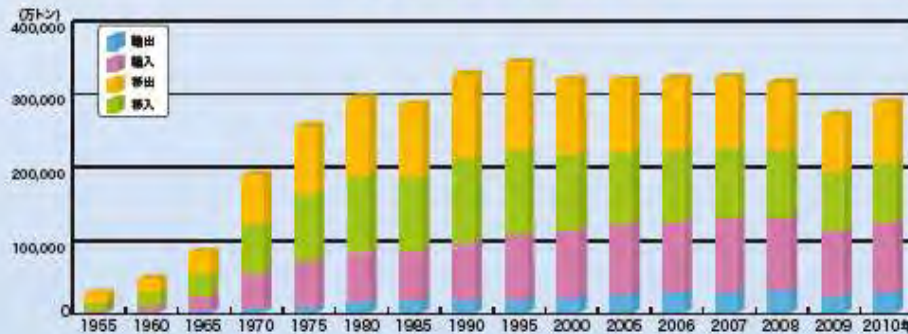
外貿輸送機関別分担率



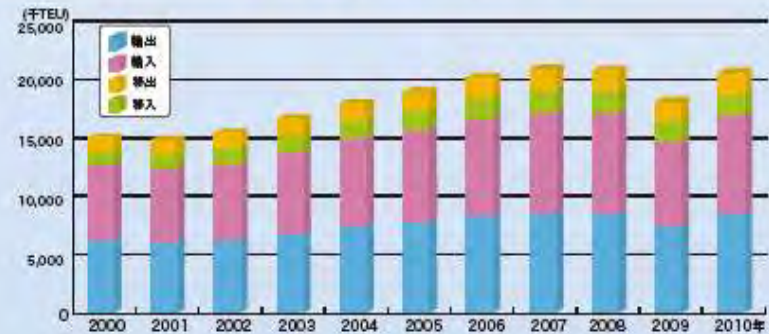
内貿輸送機関別分担率



港湾取扱貨物量の推移



コンテナ取扱個数の推移



Ports support the economy and lives of citizens

5. Port Statistics (Survey on Ports & Harbors)

Purpose of Survey on Ports & Harbors

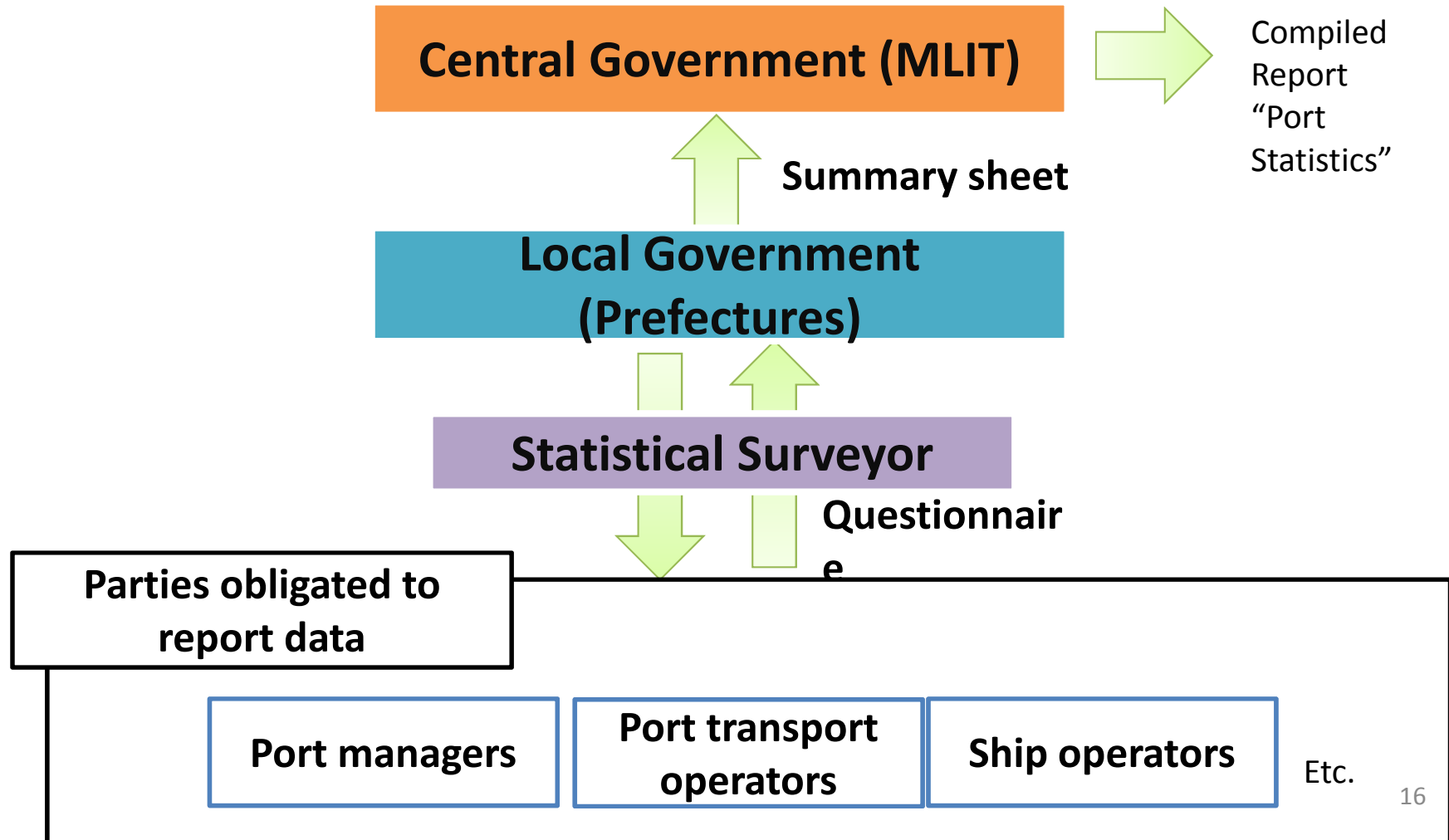
- ◆ in order **to grasp the situations** of ports and harbors
- ◆ In order to compile **fundamental data for developing and managing ports and harbors**

Target Ports and Survey items

- i. Vessels entered
 - ii. Passengers
 - iii. Cargoes
 - iv. Cargo handling
 - v. Mooring and anchoring
- CATEGORY B PORT:
relatively small ports**
yearly
- CATEGORY A PORT :
relatively large ports**
monthly

5. Port Statistics (Survey on Ports & Harbors)

Port statistics compiled by MLIT
based on data received from prefectures



6. Showing Statistics Results in Visual Formats

Statistics Results in a table format

	2007	2008	2009	2010	2011	2012
Container (TEU)	11,208	12,069	16,493	18,823	21,771	23,122
Passenger	24,404	34,779	9,258	38,680	32,829	33,834

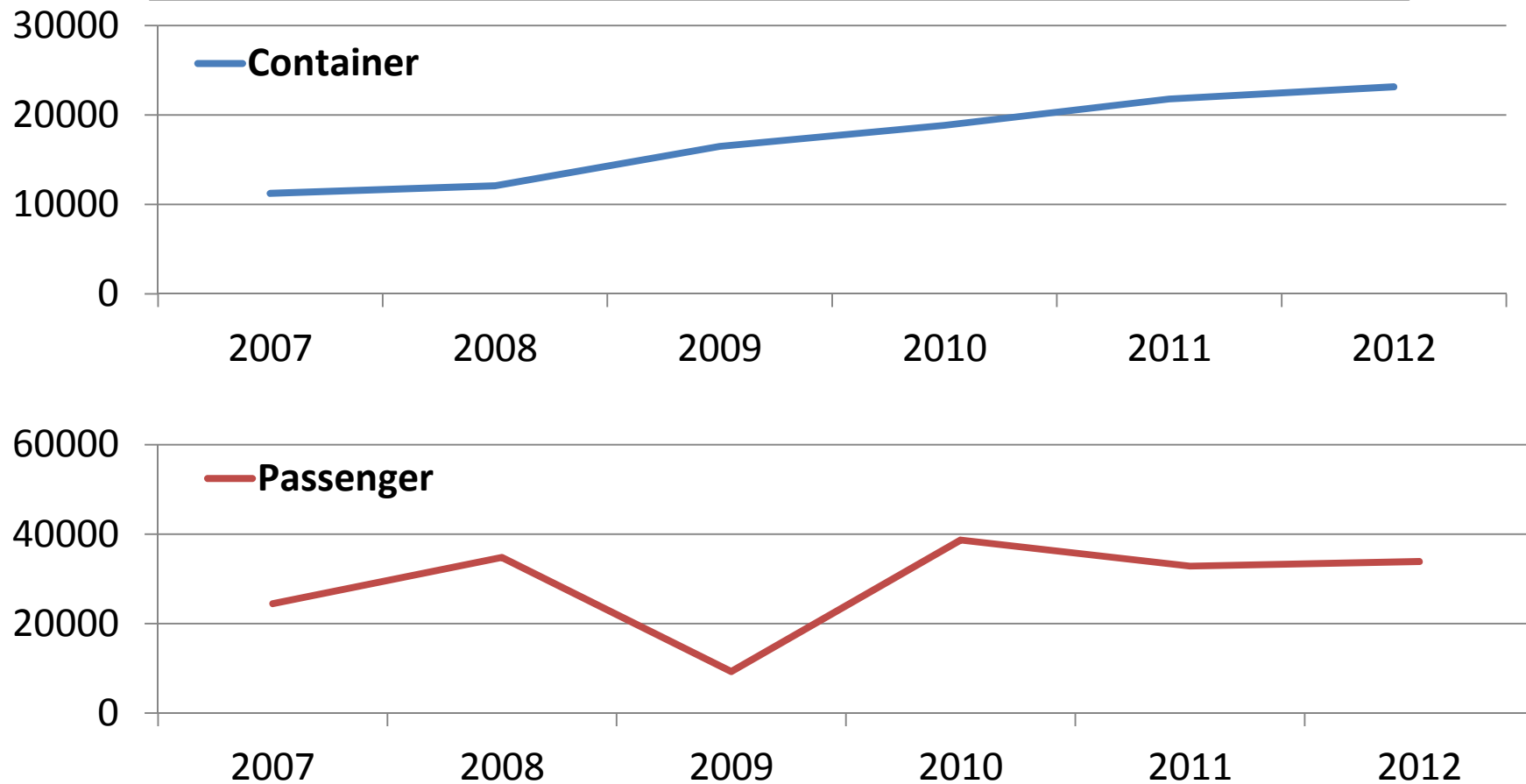
Statistics Results in a table format

- **Table enables a brief explanation in texts or bullet points.**
- **Table reduces work volumes when there are a lot of common items such as figures.**
- **Table is effective in explaining figures & descriptions contained with in a long text**

South Sudan	Value		
ITEMS	Males	Females	Total
Literacy rate, 15-24 years			
Ratio of literate females to males, 15-24 year olds			
Estimated life expectancy at birth			
Infant mortality rate per 1,000 live births (under 1)			
Child mortality rates (1- 4 years)			
Maternal mortality rate (per 100,000)			
Total fertility rate			
Proportion of births attended by skilled health personnel			
Total population, urban			
Total population, rural			18

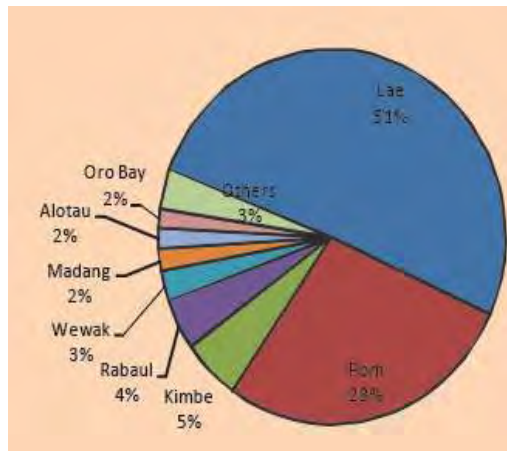
6. Showing Statistics Results in Visual Formats

Statistics Results in a graph format



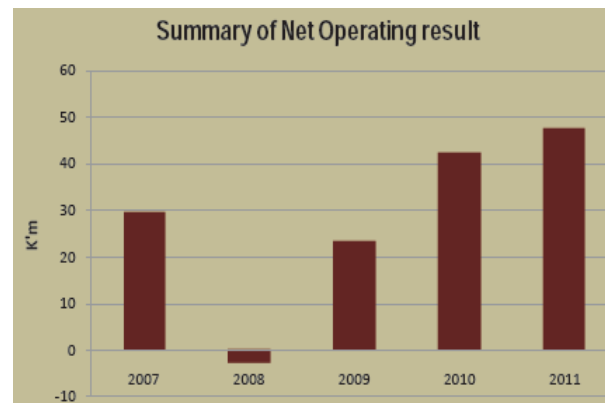
Statistics Results in a graph format

- Graph makes trends easier to grasp as statistics are presented in visual formats
- Typical graph formats are “Circle Graph”, “Bar Chart” and “Line Chart”
- Table is effective when we explain the entire spectrum and feature



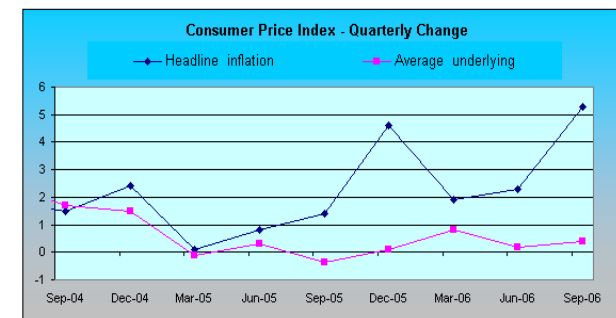
Circle Graph

Breakdown & Composition Ratio



Bar Chart

Match-up Figures



Line Chart

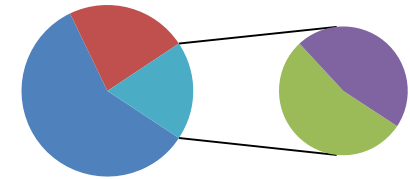
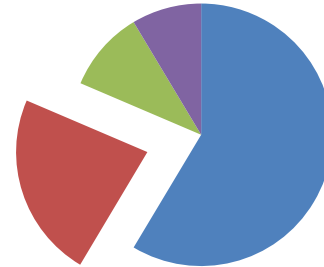
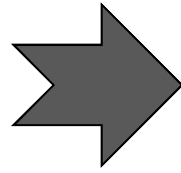
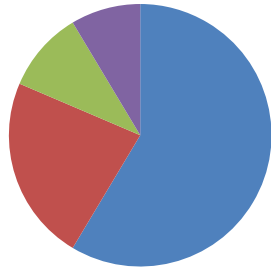
Changes of Figures

Statistics Results in a graph format

Circle Graph Breakdown & Composition Ratio

[Basic Type]

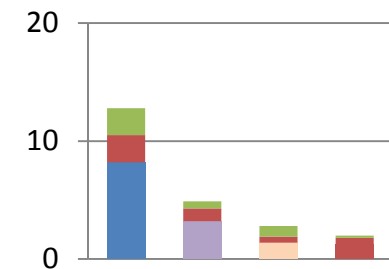
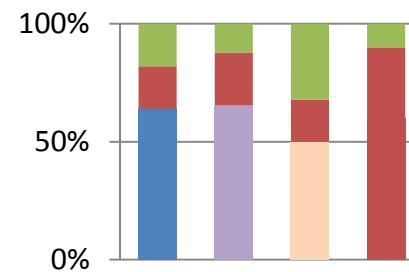
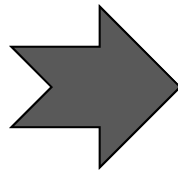
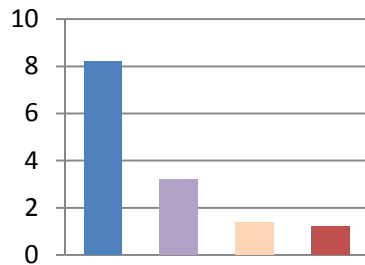
Class names
&
Their percentages



Bar Chart Match-up Figures

[Basic Type]

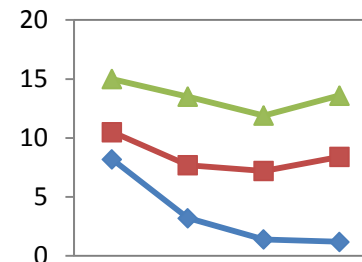
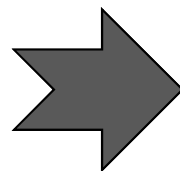
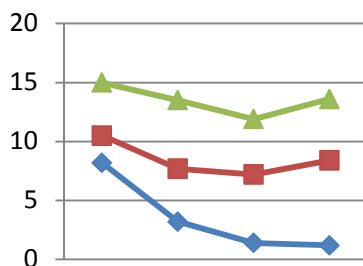
Class names
&
their figures



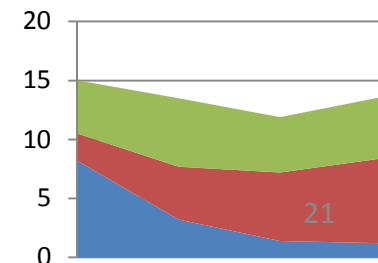
Line Chart Changes of Figures

[Basic Type]

grouping names
&
their series figures

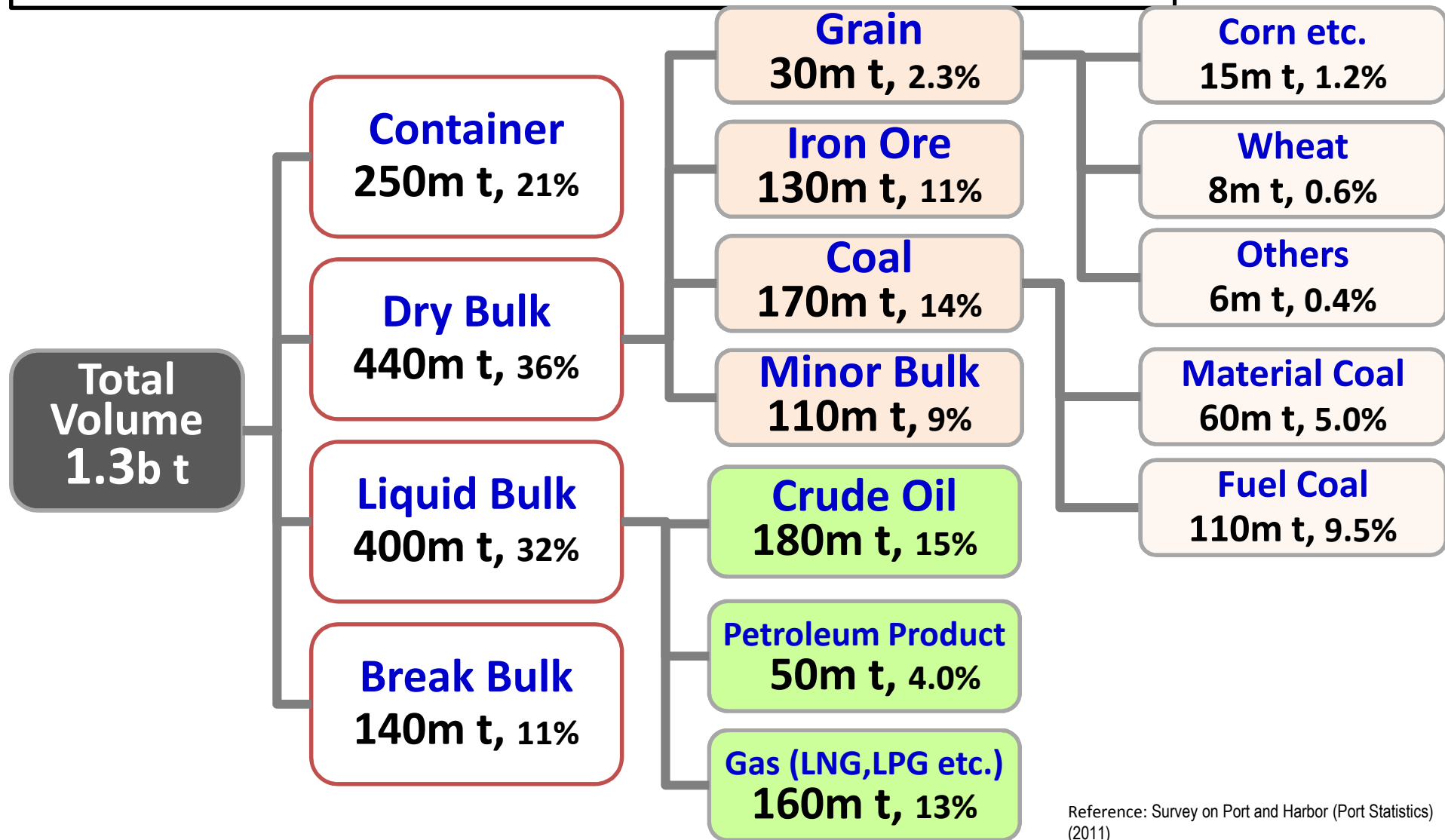


Area Chart



7. Application of Statistical Results

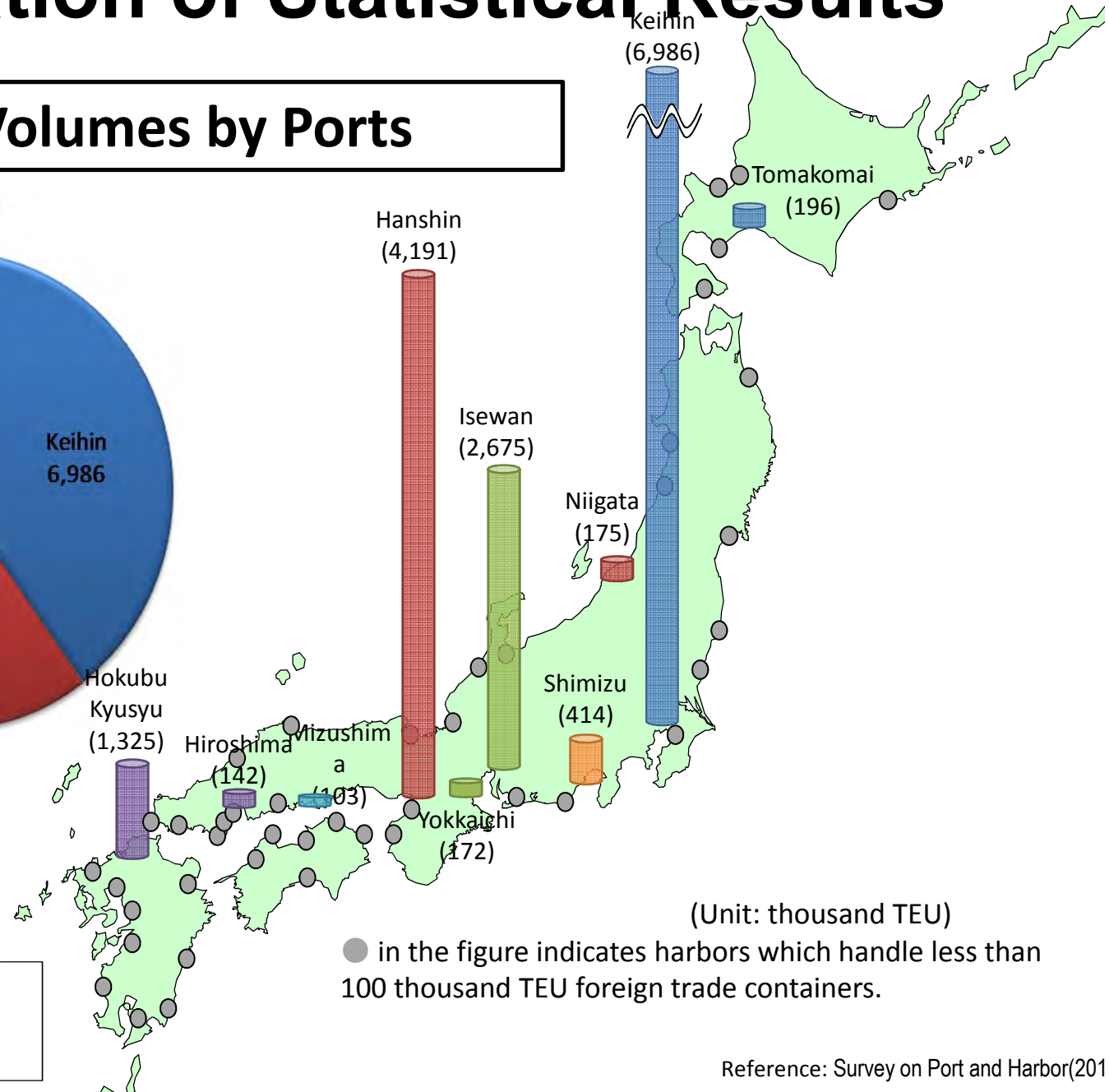
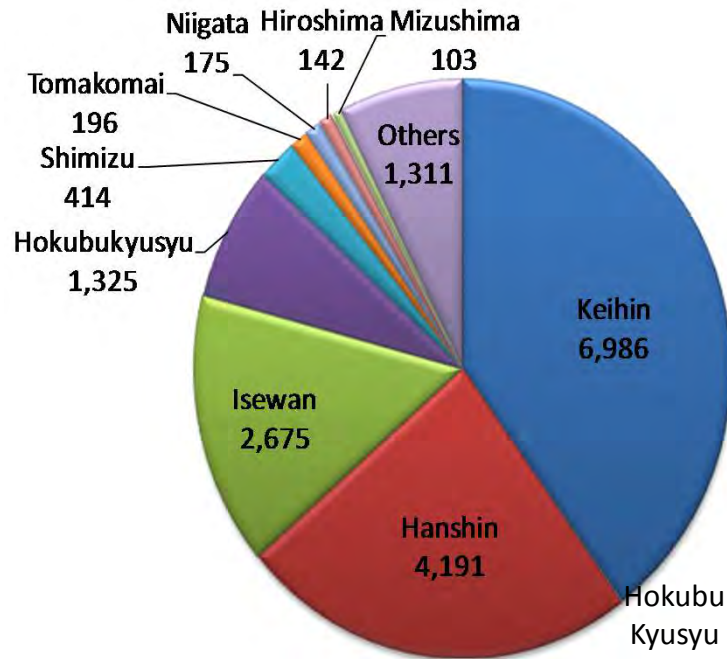
Composition of International Cargoes in Japan



Reference: Survey on Port and Harbor (Port Statistics)
(2011)

7. Application of Statistical Results

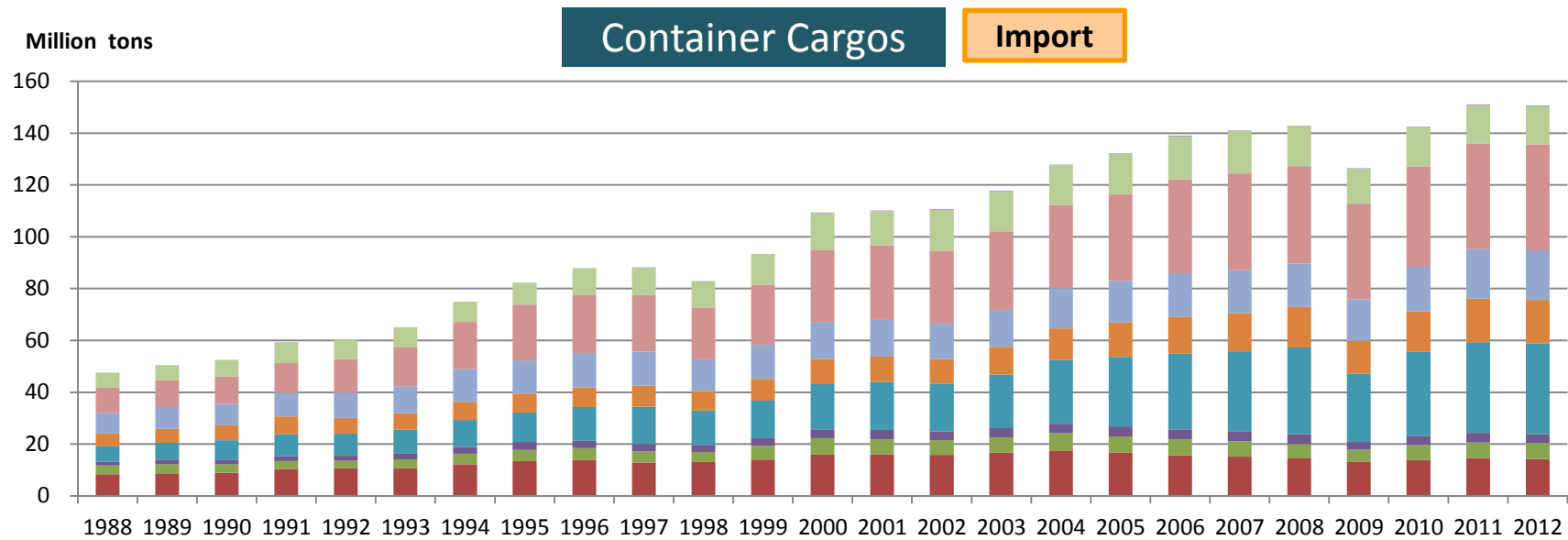
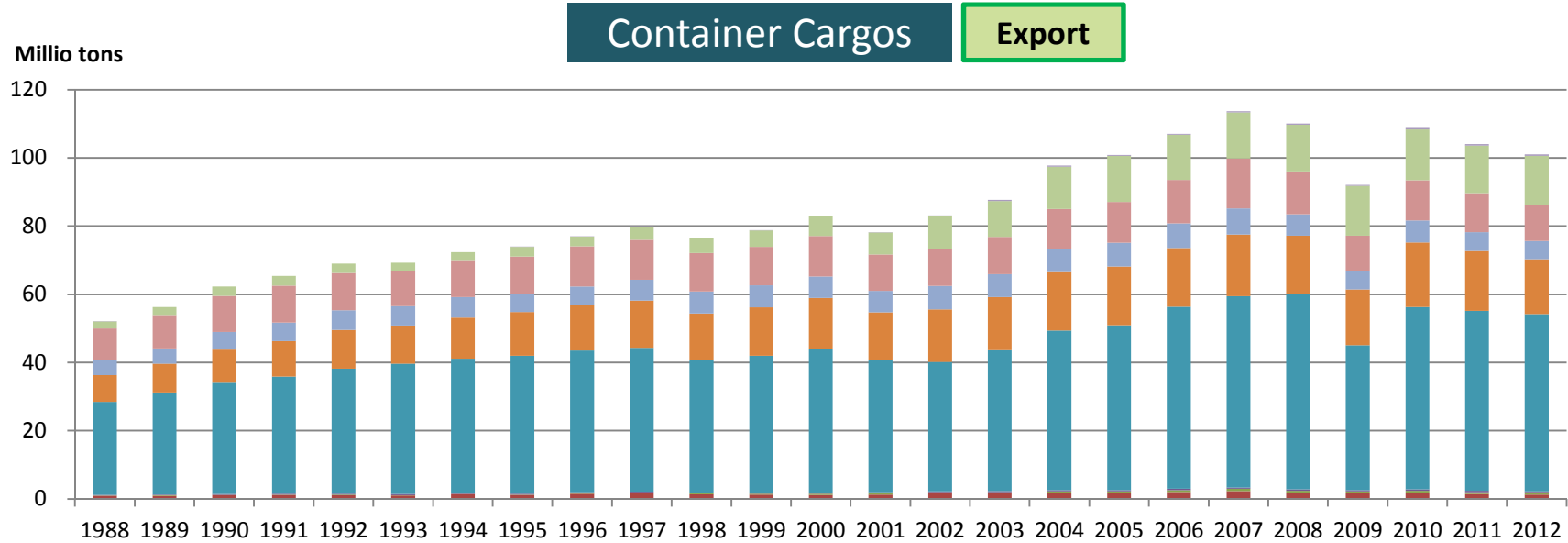
Container Volumes by Ports



(Unit: thousand TEU)

● in the figure indicates harbors which handle less than 100 thousand TEU foreign trade containers.

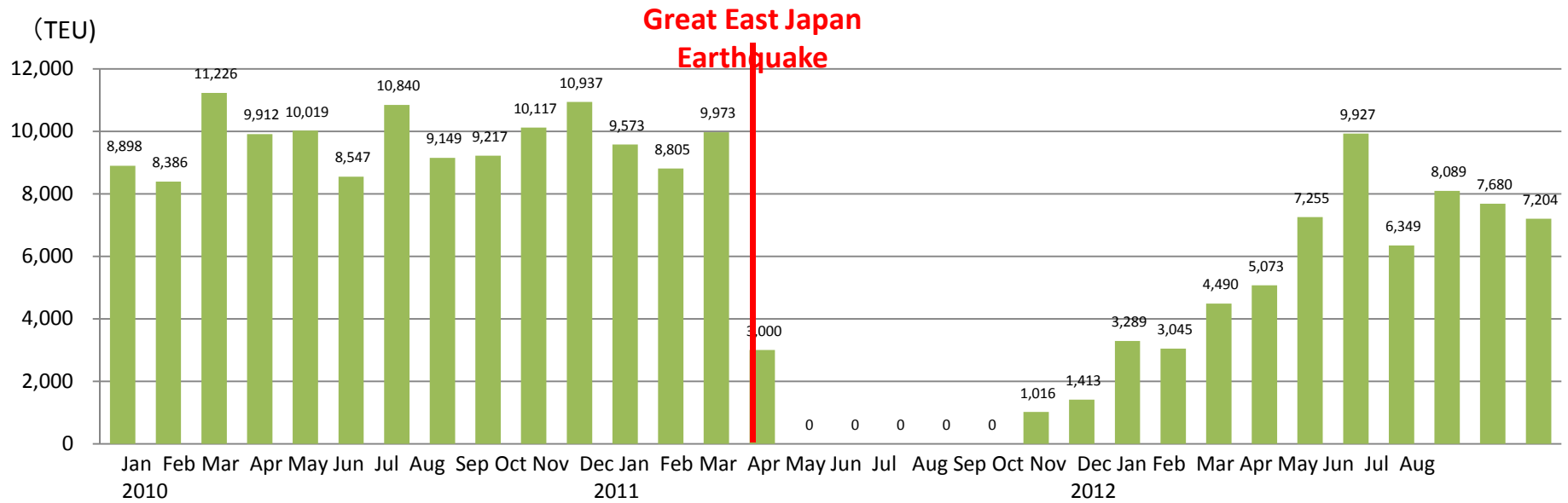
Composition of Container Cargoes in Japan



- Agricultural and marine products
- Forest products
- Mineral Products
- Metals and machinery products
- Chemical products
- Light industry products
- Miscellaneous industry products
- Special products
- Products that cannot be classified

Reference) Survey by port manager and Survey on Port and Harbor

Trend of Container Throughput at Port of Sendai-Shiogama



Reference) Survey by port manager and Survey on Port and Ha

Post-disaster situation at Port of Sendai-Shiogama



8. Port Statistics in the world

Issuing Institution and Methods in Major Nations

Issuing institution	A part of whole fields statistics in the nation	Respective Ports Statistics on Cargo Volumes
National Government etc.	Singapore, Oman, New Zealand	USA, Canada, Mexico, Panama, Brazil, Chile, Japan, South Korea, Hong Kong, Taiwan, Malaysia, Indonesia, India, Australia, European Union, Turkey, Israel, Egypt
Public Institution		China, The Philippines, Thailand, Vietnam, Saudi Arabia, Russia, South Africa
not available	Argentina, UAE, Sri Lanka	

8. Port Statistics in the world

Egypt

Name of Statistics : "Statistics-Port Traffic"

Publisher : Maritime Transport Sector, Ministry of Transport

Frequency : Annual, Monthly

Language : Arabic, English

ALL CARGO			
Total Volume	by Ports	by Items	by partner countries
Metric Ton	by ports	nil	nil

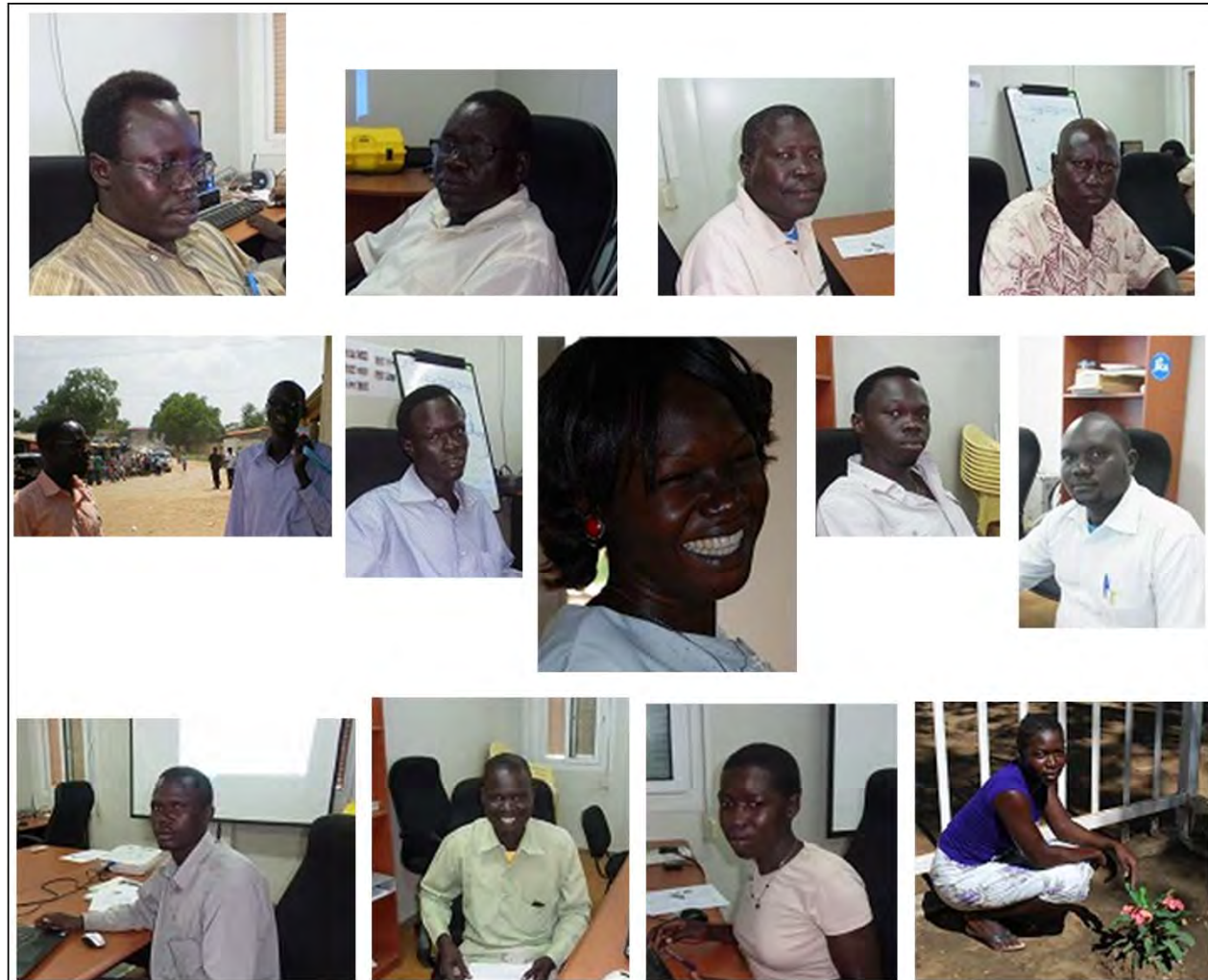
CONTAINER CARGO					
Total Volume	by Ports	by Items	by partner countries	by sizes	Transshipment countries
TEU (Laden/empty), Metric Ton	by ports	nil	nil	nil	given in breakdown

8. Port Statistics in the world

Brief Summary

- Many countries in the world developed port-related statistics and release summary of statistical results (not all the data) officially.
- Among the countries and regions, there are some discrepancies in terms of cargo units (metric ton/freight ton/revenue ton), cargo items classification and definitions of partner country (trade partner/destination or provenance country)
- In the case of container cargo, there are also discrepancies in terms of treatment of empty container, size of container and transshipment container.

Is every member fine? My good friends



JRPA の仲間たち : 上段左より Ayuen Samuel、Santo Chok、Michael Moga、David Wani、中段左より James Wani & Iskandar Hassen、Deng Malek、Moda Nelson、Deng Anyang、Romis Edward、下段左より Trovol Swaka Joseph、James Albino、Lamen Jane、Jeniffer

Thank you for your Attention



Akira KOYAMA, OCDI, koyama@ocdi.or.jp